



# DRY CARGO *international*

ISSUE NO.163 OCTOBER 2013



## FEATURES

■ European Coal Trades

■ Hamburg–Le Havre

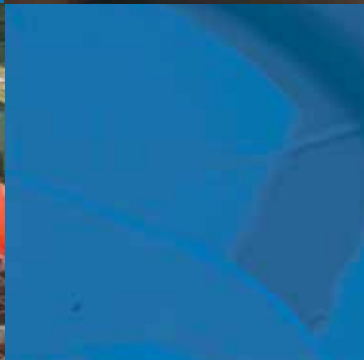
■ Self-Unloaders

■ Stockyard Equipment

■ Bulk Handling Drives, Systems & Controls

*The world's leading and only monthly magazine for the dry bulk industry*

# VERSTEGEN



**GRAB**  
**MORE**  
**MORE**  
**GRAB**



Verstegen Grippers B.V. • P.O. Box 1014 • 3430 BA Nieuwegein • The Netherlands  
tel: +31-30-6062222 • fax: +31-30-6060657  
email: [info@verstegen.net](mailto:info@verstegen.net) • website: [www.verstegen.net](http://www.verstegen.net)



*Main photo: Coeclerici Floating Transfer Stations (FTS) Bulk Celebes. Bottom left: the FTS Bulk Borneo, Bulk Java and Bulk Sumatra. The units have been developed by Coeclerici logistics division and they are currently operating in East Kalimantan in Indonesia for PT Berau Coal.*

*Coeclerici Spa  
Piazza Armando Diaz 7  
20123 Milan- Italy  
Tel: +39 02 624 69451  
E: [newprojects@coeclerici.com](mailto:newprojects@coeclerici.com)  
W: [www.coeclerici.com](http://www.coeclerici.com)*

## PUBLISHERS

**Jason Chinnock**  
[jason@dc-int.com](mailto:jason@dc-int.com)  
**Andrew Hucker-Brown**  
[andrew@dc-int.com](mailto:andrew@dc-int.com)

## EDITORIAL

**Louise Dodds-Ely** Editor  
[louise@dc-int.com](mailto:louise@dc-int.com)  
**Jay Venter** Deputy Editor  
[editorial@dc-int.com](mailto:editorial@dc-int.com)  
**Samantha Smith** Directories  
[directories@dc-int.com](mailto:directories@dc-int.com)  
**Stephanie Hodgkins** Office Manager  
[accounts@dc-int.com](mailto:accounts@dc-int.com)

## SALES

**Lourens van Emmenis** Sales Director  
[sales@dc-int.com](mailto:sales@dc-int.com)  
**Matthew Currin** Senior Sales Executive  
[sales2@dc-int.com](mailto:sales2@dc-int.com)

## CORRESPONDENTS

Brazil **Patrick Knight**  
Canada **Ray Dykes**  
India **Kunal Bose**  
Asia **David Hayes**  
Europe **Barry Cross**  
Malaysia **Wira Sulaiman**  
Philippines **Fred Pundol**  
South Africa **Iain McIntosh**  
Thailand **David Turner**  
UK **Maria Cappuccio**  
UK **Michael King**  
UK **Richard Scott**  
USA **Colby Haines**  
USA **Walter Mitchell**

## ADMINISTRATIVE OFFICE

Business Publishing International  
Corporate House, 11 Sinembe Crescent  
La Lucia Ridge, South Africa, 4051  
Tel: +27 31 583 4360  
Fax: +27 31 566 4502  
Email: [info@dc-int.com](mailto:info@dc-int.com)

## HEAD OFFICE

Trade Publishing International Limited  
Clover House, 24 Drury Road,  
Colchester, Essex CO2 7UX, UK  
Tel: +44 (0)1206 562560  
Fax: +44 (0)1206 562566  
Email: [info@dc-int.com](mailto:info@dc-int.com)  
Website: [www.dc-int.com](http://www.dc-int.com)  
ISSN 1466-3643

Trade Publishing International Ltd does not guarantee the information contained in Dry Cargo International, nor does it accept responsibility for errors or omissions or their consequences. Opinions expressed herein are not necessarily those of Trade Publishing International Ltd

© Trade Publishing Int'l Ltd 2013



©Coeclerici logistics division/all rights reserved.

OCTOBER 2013 issue

featuring...



## TRADE & COMMODITIES

Stronger grain and soya trade emerging	2
Indonesian coal producers struggle in the face of heavy challenges	4
India reaps the rewards of favourable monsoon	5
EUROPEAN COAL TRADES 2013	7

## SHIPPING & TRANSPORT

Permanent underwater repairs to all types of propellers	17
MacGregor's MacRack technology for five Greek bulk carriers	19
PSM offers tank gauging solutions for all ships & applications	21
SELF UNLOADING VESSELS: AN UPDATE	27

## PORTS, TERMINALS & LOGISTICS

Port Północny opens the Polish market to Capesize cargoes	39
Richards Bay to receive longer block trains	41
Interacid diversifies into dry bulk	45
HAMBURG-LE HAVRE RANGE: STRUGGLE TO MAINTAIN BULK VOLUMES	51

## ENGINEERING & EQUIPMENT

Terex Port Solutions' cranes impress Brazilian operator	81
Liebherr's LHM 600 wins the hearts of Latin America	83
Real-time measurement of conveyed material	85
STOCKYARD EQUIPMENT: STACKING, RECLAIMING & CONVEYING	87
TELESTACK SYSTEM INSTALLED IN LIBERIA	131
FAR BEYOND DRIVEN: DRIVES & CONTROL SYSTEMS	143

## COAL HANDLING DIRECTORY

149

## SUBSCRIPTION RATES

	1 year	2 years	3 years
UK	£170.00	£280.00	£365.00
Europe	£210.00	£355.00	£460.00
USA & ROW	£260.00	£445.00	£580.00

If you do not subscribe, this copy of Dry Cargo International could be your last. Please complete the order form on p148 to guarantee delivery of your regular monthly copy.

# Stronger grain and soya trade emerging

**A** more cheerful picture of the global economy has been taking shape recently. This outlook augments other signs pointing to growing dry bulk trade amid some notable positive influences among importers in various parts of the world. Indications of increasing grain and soya volumes add to the upwards trend in industrial commodity movements.

The latest (early September) OECD forecasts are slightly more encouraging than previous assessments. In the advanced economies group (mainly USA, Japan, South Korea and European Union) second quarter 2013 GDP growth sharply improved, exceeding 2% annualized, and this stronger pace is expected to be maintained during the second half of the year. China's growth has slowed but a pickup now seems to be unfolding.

## GRAIN

World grain trade could increase by about 2% in the present 2013/14 crop year which started in July, reaching 269mt (million tonnes), according to International Grains Council calculations. But this predicted outcome is heavily dependent upon expectations of a large expansion of China's wheat, corn and barley imports. These are forecast to rise by 86%, to 17.1mt. An expected stronger advance in soya trade also reflects larger Chinese imports. US Dept of Agriculture estimates summarised in table 1 show global soyabeans and meal movements, in marketing year 2013/14 beginning October, rising by over 9%, to 163mt. Lower domestic production of beans in China, coupled with rapidly growing meal and oil consumption trends and relatively low stocks could boost import demand.

## IRON ORE

Sharply different production experiences, among steel mills in the principal raw materials importing countries, underline contrasts among iron ore purchasers. Some noticeable output reductions have been seen in the first eight months of this year, when EU crude steel production declined by 5%, to 109.3mt compared with last year's same period, and South Korea's output was 6% lower at 43.5mt.

Conversely, during the January–August 2013 period,

Japan's steel industry raised its output by 1% to 73.2mt, while China's mills achieved a remarkable 8% expansion to 521.8mt. Together with the beneficial impact of relatively low iron ore port stocks and competitive international prices, iron ore imports into China in the same months also rose by 8% to 526.1mt. Many forecasters see this positive pattern continuing.

## COAL

Global import demand for steam coal, comprising the largest part of seaborne coal trade, still derives valuable advantages when new coal-fired power stations start up in countries dependent on foreign supplies. The latest example is in Japan, where a major plant is being commissioned.

This new Japanese power station consists of two generating units with a combined capacity of 1,600 megawatts. Over a full year's operation, assuming that demand for the electricity generated utilizes the plant's capacity fairly fully, well over 3mt of coal from foreign sources could be required. The added volume will support Japan's imports amid continued closure of most of the nuclear power plants.

## MINOR BULKS

Steel products trade (coil, sheet, plate and other items) is a major component of the minor bulk commodities sector. According to some estimates, seaborne volumes may increase by around 10mt during 2013 as a whole, reaching around 290mt. One especially strong element is European Union imports, which reports suggest are likely to jump rapidly this year.

## BULK CARRIER FLEET

The global fleet of Panamax (65–99,999dwt) bulk carriers could prove the fastest growing size group in the current year. Newbuilding deliveries are expected to decline, as shown in table 2, but scrapping also seems set to diminish. The outcome is likely to be about 9% fleet expansion during 2013, to just under 186m dwt at year-end. This modest deceleration follows 12–13% annual expansion in the past three years.

**TABLE 1: WORLD SOYABEANS AND SOYAMEAL IMPORTS (MILLION TONNES)**

	2008/09	2009/10	2010/11	2011/12	2012/13*	2013/14*
European Union	34.2	33.6	34.3	32.9	30.4	32.2
China	41.3	50.4	52.6	59.3	59.5	69.0
Other Asia	23.1	25.8	27.2	27.6	28.1	29.5
Others	30.3	30.2	31.2	30.5	31.3	32.0
<b>World total</b>	<b>128.9</b>	<b>140.0</b>	<b>145.3</b>	<b>150.3</b>	<b>149.3</b>	<b>162.7</b>
% change from previous year	–3.2	+8.5	+3.8	+3.5	–0.7	+9.0

source: US Dept of Agriculture (12Sep13)

Oct/Sep marketing years

\*forecast

**TABLE 2: PANAMAX (65–99,999DWT) BULK CARRIER FLEET (MILLION DEADWEIGHT TONNES)**

	2008	2009	2010	2011	2012	2013*
newbuilding deliveries			14.4	22.2	26.9	22.0
scrapping			0.7	5.2	8.7	6.0
losses			0.0	0.2	0.0	0.0
plus/minus adjustments			0.7	0.3	–0.1	0.0
<b>world fleet at end of year</b>			<b>134.6</b>	<b>151.7</b>	<b>169.8</b>	<b>185.8</b>
% change from previous year-end			+12.0	+12.7	+11.9	+9.4

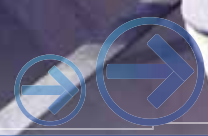
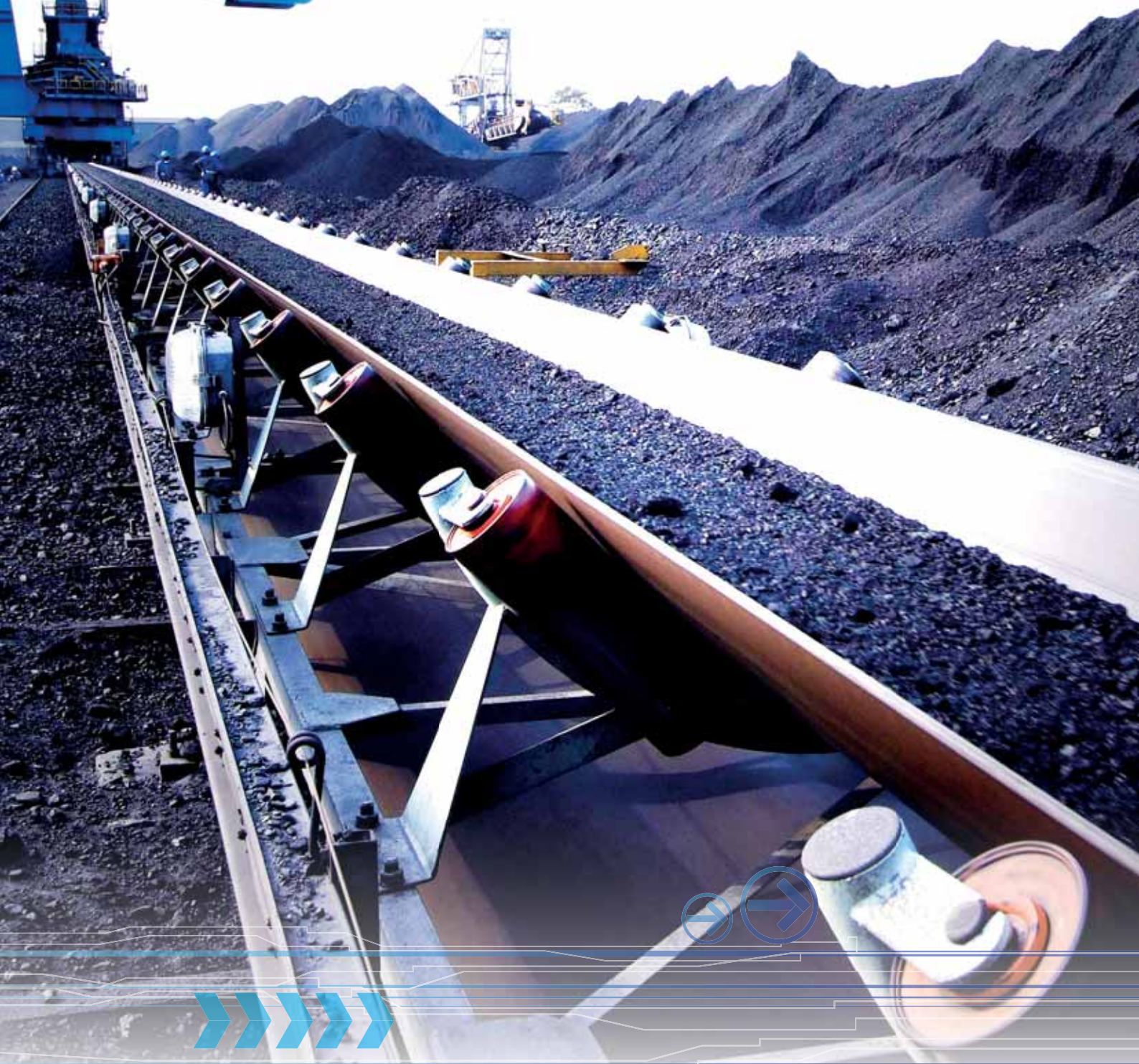
source: Clarksons (historical data) & BSA 2013 forecasts

\*forecast

by Richard Scott, Bulk Shipping Analysis, Tel: +44 (0)12 7722 5784; Fax: +44 (0)12 7722 5784; e-mail: bulkshipan@aol.com



# Experience the power of integrated freight logistics solutions



For comprehensive freight logistics, shipping and trading solutions for minerals, coal and ore. For a network of terminals strategically situated across southern Africa providing total cargo flow management from pit to port as well as storage, ship loading, discharging, stevedoring, clearing, forwarding and stock management. For a complete Corridor Management facility, expertly moving cargo by rail and road as well as a large modern fleet of dry bulk vessels operating worldwide. For specialist worldwide procurement, physical movement and distribution of industrial raw materials. We have the expertise, and capabilities to make it happen.

  
**GRINDROD  
LIMITED**

[www.grindrod.co.za](http://www.grindrod.co.za)

 **Freight**  **Trading**  **Shipping**  **Financial**

**Integrated logistics solutions from a single provider**



# Indonesian coal producers struggle in the face of heavy challenges

Indonesia's coal producers are being buffeted from all sides at present, and not just by the global decline in coal prices. Low freight rates have diminished their shipping advantage to key Asian markets vis-à-vis more distant thermal coal suppliers in Australia and the Americas, while regulatory uncertainty and political risk are making long-term balance sheet forecasts difficult.



Indonesia's coal giants saw margins deteriorate almost across the board in the first half of 2013 as the drop in coal prices hurt bottom lines and Chinese demand for power production was hit by slowing industrial output. This saw prices at discharge ports in China drop to four year lows earlier this year as domestic suppliers slashed prices in a bid to gain market share.

Although the competitiveness of Indonesian coal — not least against US exporters which have been finding some joy on the periphery of Asian markets — has been aided by the rupiah's rapid depreciation against the US dollar, the Australian dollar has also weakened considerably, allowing Australian producers to lower prices and hold back production cutbacks.

Some Indonesian producers offset lower profits per tonne of output by boosting sales in the first half of the year. Bumi Resources and State-owned Bukit Asam, for example, both increased sales by some 20% in the first six months of 2013 but saw the price received per tonne decline by around a fifth compared to a year earlier.

The net effect of these efforts to prop up revenue streams by boosting production was a 21% year-on-year increase in exports from Indonesia in the first five months of 2013 when volumes shipped reached 164mt (million tonnes), according to the latest figures available from Indonesia's Trade Ministry.

Some analysts expect weakening Chinese demand and excess coal supply to further dampen the pricing outlook for miners for at least the rest of 2013. China imported 187mt of coal in the first seven months of the year, up around 12% year-on-year. However, this was far below the growth of almost 30% racked up in 2012 versus 2011 and import demand has been slowing as the year has progressed. Indeed, in June total imports fell 22% compared to May and almost 20% compared to June 2012. With domestic producers continuing to cut prices, slower growth rates for imports are expected to continue for at least the remaining months of 2013.

As well as facing global headwinds, Indonesia's coal sector is also battling a number of home grown challenges — corruption is endemic and there continues to be a lack of co-ordination between mining operations and forestry regulations, and between central and provincial governments. The endless wave of draft regulations emanating from Indonesia's legislators is also frightening away investors and coal buyers, unfortunately just as Indonesia needs them most as the economy takes a turn for the worse.

With elections scheduled for next year and foreign capital an easy target, the government of President Susilo Bambang Yudhoyono is currently threatening to increase royalties payable on some mining permits next year. Other legislative proposals that could impact the coal sector include a threatened export

tax, a further tightening of rules governing foreign ownership of mining rights and land, and a requirement that minerals be processed before export. In coal's case the latter would mean upgrading low rank coals before export, a major problem given that upgrading technology on a mass scale is unproven, that about 90% of Indonesia's coal output is classed as low to medium rank, according to figures from the Ministry of Energy and Mineral Resources.

"The perception of the investment climate in the Indonesian mining sector is deteriorating, mainly due to uncertainties in regulatory activity, said pwc analyst Sacha Winzenried, at this year's Coaltrans Asia exhibition and conference in Bali, Indonesia.

Macquarie Capital Securities analyst Riaz Hyder believes the pricing and regulatory challenges facing Indonesia's miners will see some smaller producers drop out of the market, offsetting increases in production by larger suppliers which will more easily be able to generate supply chain cost savings to retain competitiveness.

"While coal prices have now fallen below the crucial cost support level of \$80–85 per tonne, we are still yet to see any material supply cuts on the seaborne market," he explained. "The Indonesian coal industry can be divided into the large producers — mostly still profitable — and smaller producers which are finding it difficult to break even, with thinner margins historically and less efficient supply chains given a basic 'truck-and-shovel' approach is typically employed.

"We continue to believe the Indonesian government would be in favour of consolidation to preserve Indonesia's coal assets long term for domestic consumption while also helping to firm pricing. Moreover, the 2014 election we suspect is an important part of the proposed regulatory changes."

Hyder said one factor constraining an upside to coal pricing remains the ability of closed mines in Indonesia and elsewhere to resume operations if pricing improves, but he forecast that pricing would stabilize in the medium and long term. "We are encouraged by the lack of investment in new capacity from a pricing perspective," he added.

And there are other positives for Indonesia's miners to cling onto. Despite sufferings its own economic travails, the demand outlook from India remains positive, with imports jumping over 50% year-on-year in June and surging to 76mt over the first half of the year, up 28% compared to a year earlier.

Another bonus for Indonesia suppliers was their exclusion from a new 3% tax on low rank thermal coal imports to China which came into force on 31 August this year. A free trade agreement between China and the Association of Southeast Asian Nations (ASEAN) means Indonesia is exempt from the tax which will impact Australian, Russian and Mongolian rivals.

"There is continued interest in the country's geological prospectivity, but investors will need certainty on investment terms and the regulatory framework," said Winzenried. "The long-term success of the Indonesian mining sector will be driven by an improved investment climate in order to attract the funds needed — whether from domestic or global sources — for a sustainable industry, in times of both low and high commodity prices."

*Michael King*



# India reaps the rewards of favourable monsoon

India, which fell a victim to unacceptably high rates of food inflation for over two years, is now breathing a sigh of relief because of a benevolent monsoon. The weighted average precipitation of southwest monsoon (June to September), the world's most reliable rain-bearing system, this year has been almost 8% above normal. The bounteous rainfall is to herald a bumper production of rice, oilseeds, pulses and vegetables. This should allow reining in food inflation. The country, which is required to feed a population of 1.2bn is highly dependent on monsoon rains since only about 40% of cultivable land has access to irrigation water. Moreover, there is official admission that irrigation efficiency is low for both surface and ground waters. Industry official Om Prakash Dhanuka says "while the good southwest monsoon is to allow us to harvest bountifully the crops that we grow during the summer-monsoon period, the strong precipitation will leave good amount of moisture in the soil facilitating growing of wheat, oilseeds and some rice varieties in the coming winter months. Hopefully, the winter rains too will oblige." The just retreated monsoon has also had a beneficial impact on cash crops like sugarcane, cotton and jute. The bumper production, according to Dhanuka, will lift the farm sector's annual growth rate this time to over 5% from last year's disturbingly low 1.9%.

The point is by how much India's foodgrains production combining the summer-monsoon and winter crops this year will exceed the record output of 259.32mt (million tonnes) in 2011/12. What now is a major relief for the government is that bumper production will give a push to exports of rice, wheat and sugar and possibly curb imports of edible oils and pulses, the two items for which the country is highly import dependent. Last year, the country spent \$11.31bn on edible oils imports of which the principal item was palm oil. India also spent a record amount of \$2.34bn in 2012/13 for imports of pulses. Reuters says in a report that combination of falls in prices of oils and pulses in the world market and India's own big crops has created the scope for effecting a saving of as much as \$4bn this year on imports of oils (\$3bn) and pulses (\$1bn). The government owned Food Corporation of India is poised to export another 2mt of wheat worth about \$600m following its sale of 4.2mt in the world market at a unit value of \$311.38 a tonne. At the same time, the highly encouraging outlook for summer-monsoon rice production should give a push to Indian exports of rice, including the aromatic long grain basmati rice. "India in a struggle to narrow a gaping current account deficit will find some relief in higher exports of wheat and rice and any fall in imports of oils and pulses," says Dhanuka.

Riding on a 3.7% rise in land coverage to 36.6m hectares, the country, according to agriculture ministry officials, is poised to harvest a bigger amount of rice during the current phase than the record 92.78mt in 2011/12. Trade officials say this will be in spite of rain deficiency till almost August end in some important rice growing states like Orissa, Bihar and Andhra Pradesh. But agile farmers there did not lose time in replanting as soon as rains started falling well. As with plain rice, the basmati rice crop is shaping well and production will be much higher than last year's 7.1mt. Basmati exports are doing well. In the June ended quarter, basmati exports were up 17% to 1.116mt year-on-year basis. In contrast non-basmati exports during this period were down to 1.416mt from 1.584mt. Trade officials, however, are hopeful of exports of plain and broken rice picking up on the strength of bumper production. Unlike in basmati, where India has to contend with some competition from Pakistan, the world plain and broken rice market is a lot more crowded with Thailand, Vietnam and China present as keen exporters. Vietnam's rice production is poised to fall next year in over a decade as the world's second largest shipper gives a push to growing other crops like corn to boost income of farmers. This will work to the advantage of Thailand and India.

The monsoon is also having a major beneficial impact on production of pulses for which India has remained the world's biggest importer. Besides good rains, the government raising the minimum support prices for pulses by as much as 30% in two years has encouraged farmers to increase the land coverage by at least 1.43m hectares to close to 10m hectares. This estimate, however, falls short of the normal area by over 1m hectares in a good monsoon year. Trade officials say when the final count of sowing is made, land coverage stands a chance of exceeding what is taken as normal. Whatever it finally is, pulses production is set to rise to at least 7mt from 5.91mt during this summer-monsoon period. Production during this phase forms 35% of annual pulses harvest with the major portion grown during the winter. The trade is putting a bet that winter pulses production will be good too to bring the year's total to a record 18.45mt.

That India will have a good oilseeds harvest is a given for the same reasons for other crops. But what is keenly watched is whether oilseeds output this time will be better than the 2010 record 21.922mt. Much will depend on the harvest size of soybean which alone constitutes over half oilseeds production during summer-winter. While soybean is cultivated over 12.2m hectares against 10.7m hectares last time raising the prospect of a bumper harvest of 12mt, the jury is still out on the damage caused to the crop by excess rains in two major growing states of Madhya Pradesh and Maharashtra. BV Mehta, director general of Solvent Extractors Association, is hopeful of groundnut staging a smart comeback this season after faltering for two years. Gujarat, the single largest groundnut producing state, will have a minimum crop of 4.2mt, provided it receives one more spell of rains. *Kunal Bose*



**T. Parker  
Host**

INTERNATIONAL

## Your Host in Colombia

All the service, support, and extraordinary logistical leadership you've come to rely on now with an international address

Servicing all Colombian ports with headquarters in Santa Marta

[www.tparkerhost.com](http://www.tparkerhost.com)

# e-coal

consultancy services

publications

price information

electronic data sales

international coal market intelligence

[www.e-coal.com](http://www.e-coal.com)

pembs net ltd, the moors, llanteg, pembrokehire, uk

tel +44 (0) 1834 831400 fax +44 (0) 1834 831100 [info@e-coal.com](mailto:info@e-coal.com)



# European coal trades 2013



Coal and iron ore at the Port of Hamburg's Hansaport terminal.

Dr Tim Jones, e-coal.com

The European coal market has maintained its position as the least visibly active in the world coal markets this year, and this has continued now for more than two years. Consumption of coal for power generation and steel production has been subdued, and the European buyers have been much less visible than those in Asia. European coal producers also operate at a much smaller level than those in other continents. The problems in the Eurozone have had a lasting impact on the general economy in Europe, and it is only recently that there are signs that the region has come out of recession. Some coal producers have continued to suffer, and in the United Kingdom in particular, one company was put out of business completely when government-imposed carbon emissions taxes seemed to be the final straw. Numerous jobs were lost, with adverse knock-on effects on related traders and investors. Meanwhile,

the United Kingdom continues to import coal from other sources such as Russia, Colombia, and South Africa.

At the beginning of 2013, thermal coal spot markets had remained rather calm over the holiday period, with little movement seen in the prices around the major markets. The spot market in northern regions including Europe was expected to firm during the first quarter of 2013 due to seasonal increases in demand for thermal coal, and a rise would have had a knock-on effect on thermal coal spot prices in the southern hemisphere markets as well. Market analysts appeared to have taken a mildly bullish sentiment to the coal market in 2013, with an overall improvement expected over the course of this year compared to 2012. US exporters were taking some comfort from the expectation of renewed demand from parts of Europe this year, with Germany being seen as one market to tap.

## OCEAN SPOT FREIGHT RATES (US\$/T) 2012

Route	Tonnage	31 Aug	24 Aug	% change
USG/ARA	65,000t	14.30	14.55	-1.72
Roberts Bank/ARA	55,000t	20.25	20.55	-1.46
HR+RB/Japan 16m	120,000t	24.50	24.75	-1.01
HR/Rotterdam	110,000t	8.70	8.85	-1.69
Bolivar/Rotterdam	130,000t	7.80	7.95	-1.89
Queensland/R'dam	130,000t	11.05	11.20	-1.34
Rich'ds Bay/R'dam	130,000t	6.00	6.05	-0.83

Source: e-coal.com

## OCEAN SPOT FREIGHT RATES (US\$/T) 2013

Route	Tonnage	23 Aug	16 Aug	% change
USG/ARA	65,000t	14.00	15.60	-10.26
Roberts Bank/ARA	55,000t	20.00	19.85	0.76
HR+RB/Japan 16m	120,000t	28.05	26.60	5.45
HR/Rotterdam	110,000t	11.30	10.60	6.60
Bolivar/Rotterdam	130,000t	10.50	9.85	6.60
Queensland/R'dam	130,000t	16.50	15.40	7.14
Rich'ds Bay/R'dam	130,000t	10.25	9.25	10.81

Source: e-coal.com

Colombia's plans to expand coal production, however, were expected to compete with other suppliers' hopes for Europe. An increase in the price of natural gas was expected to result in renewed consumption of coal in some major economies including the USA. One market being watched more closely at the time was South Africa which was expected to see growing demand from Europe. India and China were expected to show continued growth in demand, which would influence Atlantic markets. Coking coal spot markets had yet to show much activity after the holiday break, with little business being reported. So overall, the initial expectations for the international coal industry as 2013 got under way were not as depressing as they had been for the past couple of years, and some more positive aspects were anticipated this year. The year also began with a firming in the freight rates on the major coal routes.

Back in January, rumours had been circulating in Germany that some utility buyers had been planning their approach to coal procurement for the second quarter of 2013 and beyond. While a number of customers had already agreed substantial tonnage in the wake of reduced nuclear power output, there was still a need for more thermal coal to be purchased in the spot and spot tender markets. The buyers were expected to be aiming for coal to be delivered to the ARA (Antwerp–Rotterdam–Amsterdam) ports at prices close to US\$90/t CIF (cost, insurance, freight) basis 6,000kcal/kg NAR (net as received).

European customers were interested to note at the start of this year that Colombia's National Mining Agency had forecast coal production growing to 98mt (million tonnes) in 2013 with an average price of US\$75/t FOB (free on board). To 2020, output is forecast to peak at 107mt during 2016-2018 with annual average prices at US\$79, US\$84 and US\$87/t FOB respectively. Production in 2020 is forecast to be 103mt with an average price of 92/t FOB. A few weeks later in early February, workers at Cerrejon's operations went on strike following a

e-coal.com Venezuela spot price (FOB basis 6,000kcal/kg NAR)



97% majority vote in favour of industrial action over wages. The union was demanding an increase of 7% in wages this year, with further increases next year.

Dutch trader, Vitol secured the marketing rights to coking and thermal coal produced by Coal of Africa Limited. Vitol is expected to target some new business in Europe after the swing to India and other countries in Asia by the South Africans in recent years.

In February, there were reports of some buying activity in the European steel sector, but not for US or other coking coal. Instead, the Australians seemed to have picked up some business despite the disruptions to the supply chain in Queensland due to flooding. That may, however, have been the reason for buyers and traders purchasing cargoes after becoming concerned about a possible price rise in the ensuing months. At that time, the spot price of PCI material was said to be approaching US\$150/t FOB as well.

In mid-February, US shippers began negotiating quarterly contract terms with the European steel makers who were interested in lower cost material for their blends over the ensuing months. Mid vol hard coking coal had seen some firming in price due to the improvement in demand for such material. The indicator spot price for the reference brand of low vol coal was US\$157/t FOB on the east coast at the time. High vol coal was priced at US\$145/t FOB. The coking coal spot market had been quiet, but there were signs that lower

e-coal.com Mahakam River spot price (FOB barge basis 6,700kcal/kg GAD)



quality hard coking coals were beginning to achieve firmer prices in the spot market. For reference brand quality, European buyers were rumoured to have been paying up to US\$175/t FOB for Australian material in early February. The steel makers were understood to have been adjusting their blends amid the demanding market conditions. In Europe, higher gas prices kept interest in other fuels at the top of the fuel managers' agenda, but a substantial increase in demand for coal and a consequent rise in the price had not been evident. Polish, Russian, and US thermal



## PROMPT SPOT PRICES FOR THERMAL COAL 2012

(US\$/t)  
(FOB basis 6,700kcal/kg GAD) ash, 15% max, sulphur  
1% max

Location	31 Aug 12	24 Aug 12	% change
South Africa	89.85	89.50	0.39
Colombia	92.50	92.60	-0.11
Venezuela	88.50	88.00	0.57
Russia Baltic	86.60	85.95	0.76
Poland	87.00	86.00	1.16
Newcastle	91.25	91.50	-0.27
Queensland	92.00	92.20	-0.22
China	97.50	97.75	-0.26
Russia East	96.75	97.00	-0.26
Banjarmasin	79.30	79.70	-0.50
Mahakam	81.00	81.30	-0.37

Prices are FOB vessel except Banjarmasin and Mahakam River which are FOB barge. Source: e-coal.com

## PROMPT SPOT PRICES FOR THERMAL COAL 2013

(US\$/t)  
(FOB basis 6,700kcal/kg GAD) ash, 15% max, sulphur  
1% max

Location	30 Aug 13	23 Aug 13	% change
South Africa	72.25	72.10	0.21
Colombia	72.40	72.20	0.28
Venezuela	72.55	72.40	0.21
Russia Baltic	73.10	73.00	0.14
Poland	73.15	73.00	0.21
Newcastle	79.25	78.70	0.70
Queensland	79.85	79.25	0.76
China	85.00	84.60	0.47
Russia East	83.20	82.65	0.67
Banjarmasin	72.50	72.00	0.69
Mahakam	74.20	73.55	0.88

Prices are FOB vessel except Banjarmasin and Mahakam River which are FOB barge. Source: e-coal.com

coal had been of more interest than South African material.

Some companies were able to report good results earlier this year. Xstrata reported a record production result for coal across its global operations. Total output reached 90.4mt in 2012 which was an increase of 7% compared to the previous year. The increase came from thermal coal output, and although coal had shown positive results the company's share price movement had remained unexciting.

Thermal coal spot markets remained soft in all markets except Colombia where industrial action and environmental issues tightened supply to the ports. Reports suggested only 20% of normal coal supply could be shipped in February. Some interest in Polish and Russian material was reported as buyers looked at other sources of coal in northwest Europe. US exporters had also been receiving enquiries from buyers in Europe in order to cover potential cancelled cargoes as the Colombian situation continued.

In the United Kingdom, the Cockerzie, Didcot A, and

## e-coal.com Banjarmasin spot price (FOB barge basis 6,700kcal/kg GAD)



Kingsnorth power stations closed this year. European emissions regulations led to plans to close a number of older major coal-fired plant across the country.

The ending of the strike at Cerrejon Coal in Colombia in mid-March reduced pressure on thermal coal supply in the Atlantic, and it was shown that the major buyers in Europe had adequate stocks of coal to comfortably see the strike through. Other shippers had been hoping for more business and better prices if the industrial action continued. Although US and

Russian exporters are believed to have benefited to some extent in the European and Mediterranean markets, the shippers further afield including South Africa do not appear to have reaped much reward.

By the end of the first quarter of this year, Baltic shippers were rumoured to have been receiving new enquiries for coal deliveries in the United Kingdom and Rotterdam as the warmer weather approached. Russian and Polish material had, however, softened in price in the spot market in line with the general trend in markets around the world at that time. In Croatia, buyers were back in the spot tender market seeking 11

## e-coal.com China spot price (FOB basis 6,700kcal/kg GAD)

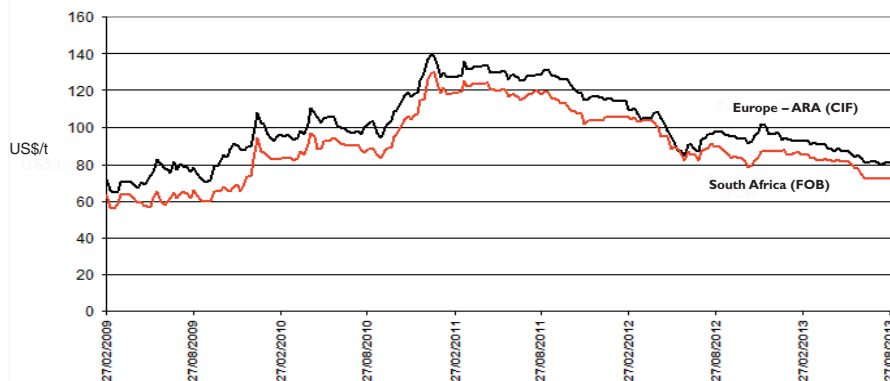


Panamax cargoes of coal for the Plomin power station. Their tenders are among the most visible and regular of the European market.

The European coking and thermal coal markets began the second quarter rather quietly, although contract business was clearly showing coal deliveries were continuing into the ARA ports and the United Kingdom. Russian coal continued to be purchased by the UK generators, and higher sulphur material at discounted prices from the USA and elsewhere was still of interest to those consumers with scrubber technologies at their plants. There was also renewed thermal coal spot tender activity in Eastern Europe in April, and spot market activity on electronic platforms picked up. A Panamax cargo of Polish coal was reported to have been purchased by a Turkish customer for prompt delivery at a price of under US\$80/t FOB in mid-April.

The relatively soft price of thermal coal in the Atlantic market did not correspond with some reports that the European utilities had been keen to buy coal in April. The material to supply some of them may have been taken up from the pads at Rotterdam, but coal stocks at the ARA ports were said to have been depleting during the previous few weeks. The cold snap in northern Europe had kept up demand for electricity

**e-coal.com South Africa spot price v Europe — ARA indicator price (basis 6,000kcal/kg NAR)**



and coal, which could have boosted spot prices above prevailing levels. The renewed availability of Colombian coal, however, would have countered upward pressure on the spot price to some extent. Traders also reported that thermal coal to supply Europe was available at Richards Bay when any enquiries arose. Russian supply to northern Europe was relatively tight due to the persisting frozen conditions affecting shipping.

As April progressed, European buyers had been taking some US tonnage in the thermal coal spot tender market. Coal stocks were understood to have been building in Europe as contract tonnage arrived at the ports, and this had been sending some signals to suppliers that demand would be more subdued in the spot markets.

In early May, there were reports from traders that US

**RC INSPECTION**

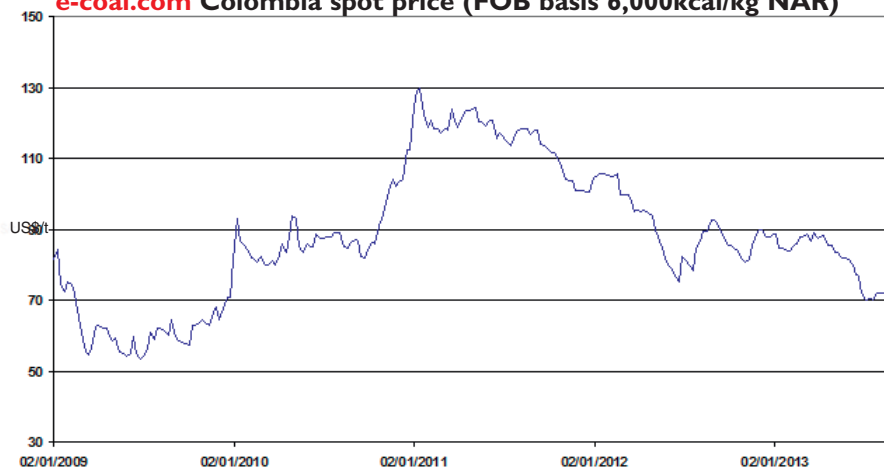
**LME listed, MMTA Member and Global Coal listed sampling and assaying company**

**[www.rc-inspection.com](http://www.rc-inspection.com)**

**RC INSPECTION B.V.**  
 Gustoweg 66, NL 3029 AS, Rotterdam,  
 The Netherlands  
 Tel: +31(0)10-425 0240  
 Email: [info@rc-inspection.com](mailto:info@rc-inspection.com)

**Main operational contacts:**  
 Rotterdam: Kees Maarschalkerweerd +31(0) 10-425 0240  
 Ben Bender +31(0) 10-425 0241  
 Peter Bagchus +31(0) 10-425 0247  
 South Africa: Valter Marusic +27(0) 11 397 8029  
 Hongkong: KK Chan +852-2471 6949



**e-coal.com Colombia spot price (FOB basis 6,000kcal/kg NAR)**

GlencoreXstrata, and a number of Xstrata offices are being closed.

In May, Germany's RAG announced that it is to cease all coal mining in the country by 2018. German coal-fired power stations will, however, still require supplies which will need to be secured from overseas. Portugal's EdP was rumoured to have been active in the market in May, and is understood to have purchased around 500kt of coal from Colombia for delivery next year. Some reports suggested the price was in the mid-US\$70s per tonne basis 6,000kcal/kg NAR.

thermal coal had been offered to European customers at about US\$85.00/t FOB during the previous week. At the time, coal exporters had been seeking higher FOB prices at the east coast ports because of the increase in rail costs in the country this year.

In corporate news, the merger between Glencore and Xstrata was completed on 3 May, although it was being seen more by some as a takeover by Glencore. Glencore's CEO Ivan Glasenberg became the CEO of the new entity

**e-coal.com Indicator prices (CIF basis 6,700kcal/kg GAD)**

Hopper cars for ship unloading



## Experience and Know How

**Planning,  
manufacturing  
and assembling**

**Always the right  
solution for  
your material!**

Loibl Allen-Sherman-Hoff GmbH  
Arberstr. 40  
D 94315 Straubing Germany  
Phone +49 9421 9256 0  
Fax +49 9421 9256 25  
**mail@loibl.biz**  
**www.loibl.biz**



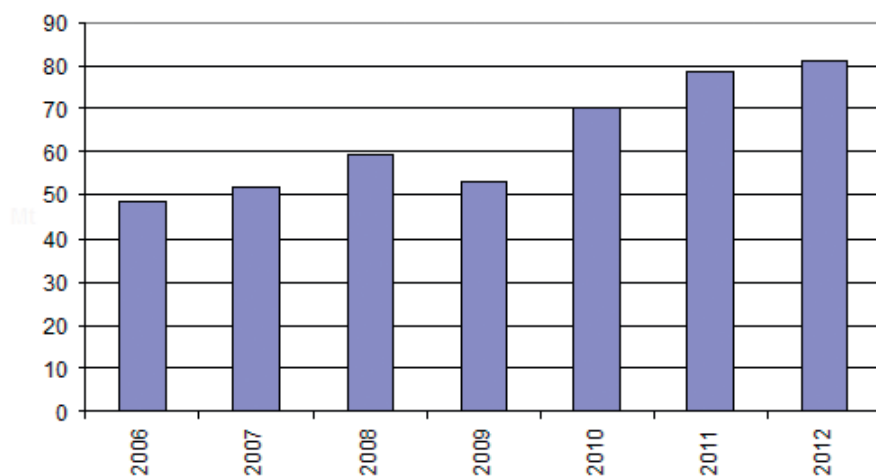
Ship loading systems



Conveying systems at the harbor

**Plant  
engineering  
and material  
handling  
technologies**

Colombian coal exports (mt)

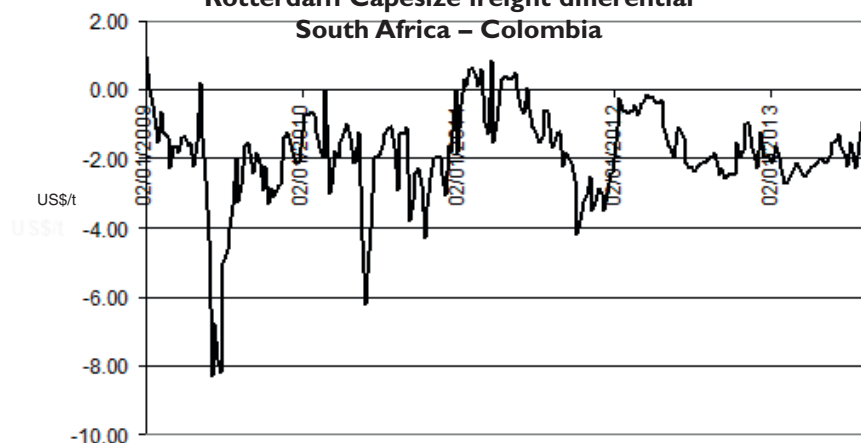


Ukraine's coal exporters were successful in Morocco around that time, when Office National de l'Electricité is understood to have purchased coal following its earlier tender seeking 3x38kt cargoes. The price was rumoured to have been about US\$74.50/t FOB basis 6,000kcal/kg NAR. Delivery was required to the Jerada power station in June and July. There had been activity in some apparently quiet markets during the year, and in May the market noted the US government had reported that exports of thermal coal totalled 6.22mt in March which was an increase of 25% compared to the same month in 2012. Europe accounted for 3.8mt or 61% of this.

Some parts of Europe and China were understood to be seeing greater availability of hydroelectric power in May, and demand for coal was expected to decrease in those areas in the ensuing weeks. Thermal coal spot prices had decreased in the Atlantic in the middle of May, with European interest waning over the course of the first couple of weeks. Renewable sources of electricity were reported to be having an impact on coal demand in Italy, Spain, and Portugal in particular at that time. Turkey's Colakoglu Metalurji had been in the market, however, seeking a single Panamax cargo of thermal

and steady deliveries of previously booked Colombian and South African tonnage have been reported.

Finland's Fortum has not been in the news much recently, but reports in June suggested there are plans to reduce electricity generation at the Inkoo coal-fired power station.

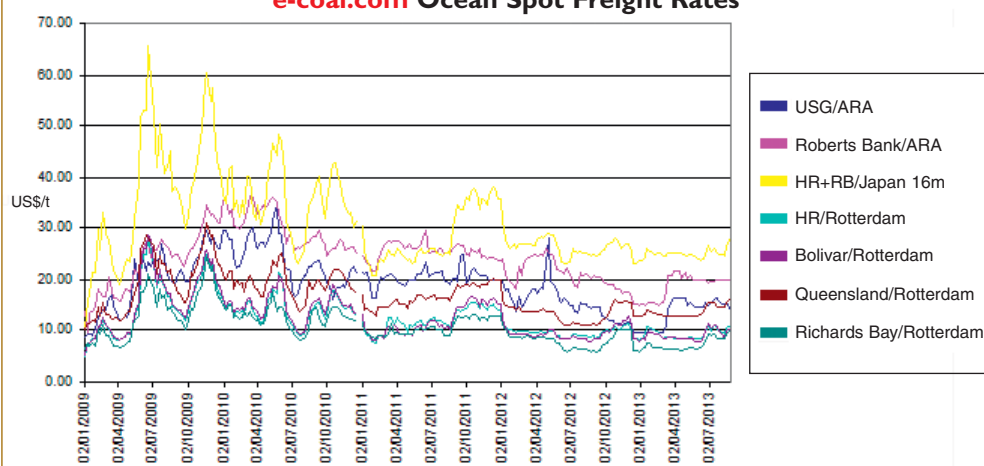
Rotterdam Capesize freight differential  
South Africa – Colombia

Rumours suggested the plant could even be shut down permanently.

Higher stock levels contributed to the softening in the spot price at Richards Bay in June, and Atlantic trade had been weaker as the northern summer got under way. The hot spell

in the United Kingdom, however, had not been seen throughout Europe that month. Extra electricity demand from air conditioning was yet to emerge across the region in general. Polish and US high sulphur thermal coals were understood to be readily available and could compete with Colombian and South African material into the ARA ports. Russia's coal production during January to May had increased by 1.2% compared to the same period last year, to reach 143.7mt.

e-coal.com Ocean Spot Freight Rates





**e-coal.com Newcastle spot price (FOB basis 6,700kcal/kg GAD)**

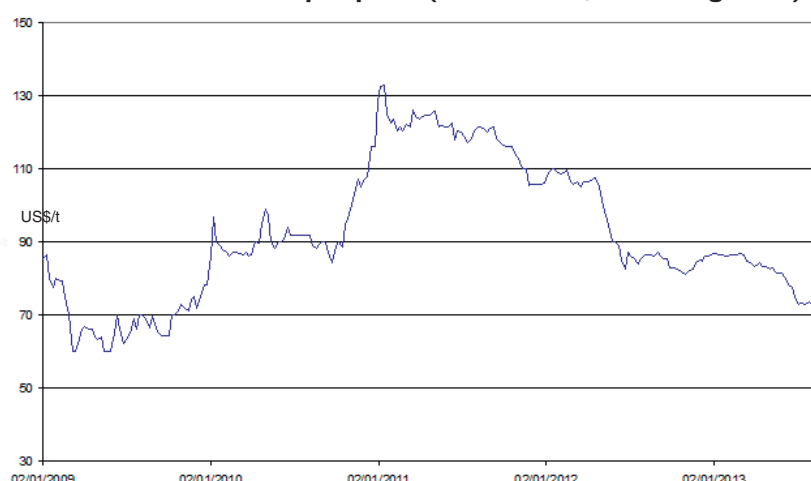
built up at some mines. Maintenance work on the rail system over the previous couple of months had hindered deliveries to the Pacific market, and the European and Mediterranean buyers were seen as the option to focus on at that time. The seasonal lull in coal burn in much of Europe, however, meant there had been limited interest at the then current spot price of around US\$73/t FOB basis 6,000kcal/kg NAR. Some substantial deals were anticipated before the start of the northern Autumn as buyers prepare for their winter demand.

The industrial dispute by workers at Drummond which resulted in strike action in July, had an effect on coal markets in the north Atlantic, with a slight rise in the price of coal delivered to Europe. The strike was disrupting production and

Coal exports increased by 6.8% to reach 55.6mt. Thermal coal comprised 46.8mt of that, but there was an increase of 3.69mt in coking coal exports to reach 8.75mt.

Coal-fired power generation in Germany grew during Q1 2013 with coal consumption rising by 14.5% to reach 15.8mt. Following the reduction in nuclear power across the country in the wake of the Fukushima disaster in Japan two years ago, Germany has been importing more thermal coal in 2013. Total coal imports reached 13.6mt during Q1 which was an increase of some 10% compared to the same period last year. Thermal coal imports increased by 20% or about 2mt during the first quarter this year. The decline in domestic coal production continues to put more reliance on imported coal amid the move away from nuclear power. No German coal is expected to be produced after 2018.

Russian exporters were understood to have been making fresh offers of coal in Europe in mid-July as supply from Colombia was tightened. There appeared to be significant tonnage available in Russia where stocks had been

**e-coal.com Poland spot price (FOB basis 6,000kcal/kg NAR)**

ship loading in Colombia, with about a third of the country's coal supply affected. Demand for coal in the spot market was still relatively quiet in Europe, however, and supplies from the

USA, Russia, Poland, South Africa, and elsewhere appeared to be adequate to prevent much of a firming in the spot price. Force majeure had been declared on a number of cargoes, and vessels were being delayed at Puerto Drummond and some had been diverted elsewhere. European traders had been locking in tonnage for delivery in 2014 from other supplier countries in reaction to the tightening of supply from Colombia.

During the first week of August, traders have indicated that US thermal coal had been on offer on the east coast for

**e-coal.com Russia (Baltic) spot price (FOB basis 6,700kcal/kg GAD)**

**e-coal.com Russia (East) spot price (FOB basis 6,700kcal/kg GAD)**

under US\$70/t FOB basis 6,000 kcal/kg NAR. Some European interest is believed to have been shown in high sulphur product which is reported to be on offer at the US Gulf ports for some US\$10/t FOB less.

Despite the opportunity to purchase thermal coal for prompt delivery at low prices in mid-August, one of the main reasons many buyers have been unable to cash in is believed to be the lack of space on their pads. Coal stocks were reported to be high with little room for buyers to manoeuvre. Consequently, the delivered spot price had been easing at the time.

In the United Kingdom, a new company, UK Coal Production Ltd has been formed in order for mining to continue at the remaining UK Coal mines. A fire led to the closure of the Daw Mill colliery, and two underground mines and six opencut mines remain. These have a capacity of some 5mtpa overall.

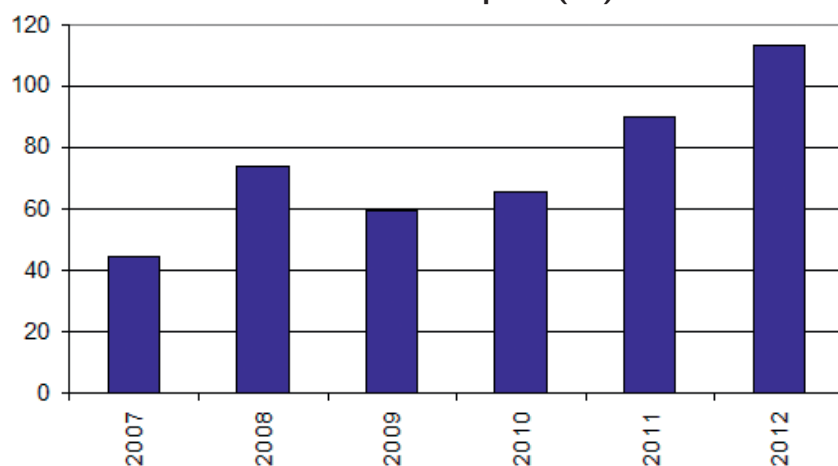
Overall coal demand in Europe this year is forecast to be in the region of 190mt which is a decrease of some 10mt from

around 5mt in 2014 to approximately 195mt and half of the increase, some 2.5mt could be attributed to Germany. Denmark's coal demand for this year could also result in an

**e-coal.com South Africa spot price (FOB basis 6,000kcal/kg NAR)**

increase, possibly by around 1mt.

Compared to the sentiment prevailing at the times of writing about European coal trade in the previous couple of years, there are some signs that 2014 could be the year when things start to improve for the coal sector. It will be interesting to see what delegates have to say at the Coaltrans conference in Berlin in October. While an improvement for coal trade may have come too late for some operations in Europe, it is clear that in the years ahead in key areas there will be continued substantial demand for coal. **DC**

**US total coal exports (mt)**

Dr Tim Jones is Director of **e-coal.com** Consultancy and Editor of the weekly publication *Coal Market Intelligence* which covers 11 spot markets worldwide, gives key information on the latest deals and tenders, company news, people and jobs, industrial relations, and ports, shipping, and freight rates.





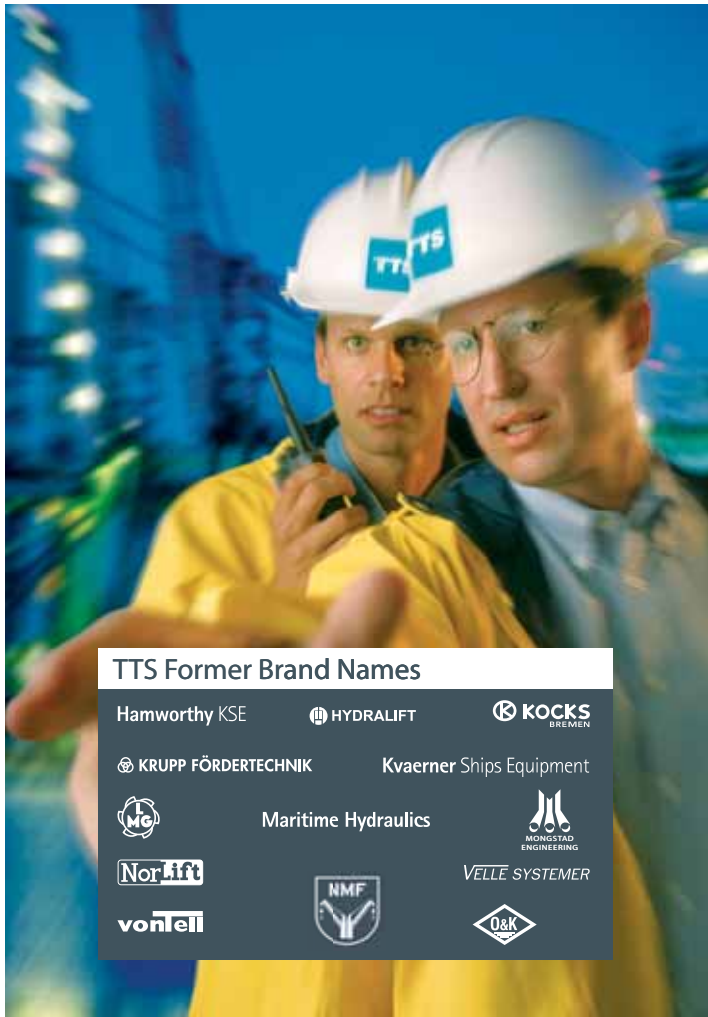
## METRO PORTS - General, Project and Bulk Cargo Experts

**Coming soon...** Metro will operate Texas Deepwater Industrial Port located in Houston, Texas. The facility is permitted to handle 15 million metric tons of coal per annum, with BNSF Railway and UP Railroad access for up to 150 car unit trains. The facility is located adjacent to the Sam Houston Beltway Bridge and is scheduled to open in 2014. Contact Charles Tillotson for details at 832.622.4381 or [Charles.Tillotson@metroports.com](mailto:Charles.Tillotson@metroports.com).

*Metro Ports, providing innovative sustainable solutions for the maritime community.*



Corp.: 310.816.6500  
[www.metroports.com](http://www.metroports.com)  
[info@metroports.com](mailto:info@metroports.com)



#### TTS Former Brand Names



## TOTAL SERVICE SUPPLIER


OEM Manufacturer and your service specialist for marine and offshore cranes, winches, hatch- covers, ro-ro equipment and davits

- 1- and 5 yearly inspections
- Davit certification
- Repairs and maintenance
- Spare parts
- Fleet service agreements
- Modification and conversion
- Training and technical support
- Global service network

Visit our homepage for more info and contact details for our services

[www.ttsgroup.com/Services](http://www.ttsgroup.com/Services)







**International Shipping & Forwarding**

---

**Your solution for mineral logistics Bulk & Breakbulk**

- ◆ Short sea / deep sea chartering
- ◆ Ships agencies
- ◆ Barging
- ◆ Stevedoring
- ◆ Storage
- ◆ Door-to-door logistics
- ◆ Cargo inspection, supervision
- ◆ Weight / draught surveys
- ◆ Sampling, preparation and analysing
- ◆ Customs clearance
- ◆ GMP+ and ISO 9001 certified

**Hudig & Veder Bulk B.V.**  
 Debussysstraat 2  
 3161 WD Rhooon  
 The Netherlands  
 T: +31 10 5066600 E: [bulk@hudigveder.nl](mailto:bulk@hudigveder.nl)  
 F: +31 10 5012819 W: [hudigveder.nl](http://hudigveder.nl)



## COAL INTO GERMANY

via Rhenus Midgard's Seaports

**Coal Terminal NSB (Niedersachsenbrücke) in Wilhelmshaven, Jade Bay (Germany):**

- ☐ New: Capesize Vessels up to 250.000 dwt with a draft up to 18,50 m (60') sw
- ☐ Rail connections into Germany's hinterland and neighbourhood countries

**Coal Terminal Nordenham on the River Weser (Germany):**

- ☐ Rail- and inland waterway connections to Germany's hinterland and beyond
- ☐ Panmax- and partly loaden Cape Size Vessels with a draft up to 13,10 m (43') fw

Both ports handle close to 5 million tons, i.e. more than 10% of the imported coal into Germany.

**Rhenus, a company with a long history, is one of the world's leading providers of integral logistics services and has annual turnover totalling 4 billion Euro.**




Rhenus Midgard Wilhelmshaven GmbH & Co. KG · Lönninger Str. 6 · D-26384 Wilhelmshaven  
 Tel. +49 (0)4421 936-135 · Fax +49 (0)4421 936-104  
[info.wilhelmshaven@de.rhenus.com](mailto:info.wilhelmshaven@de.rhenus.com) · [www.rhenus.com](http://www.rhenus.com)



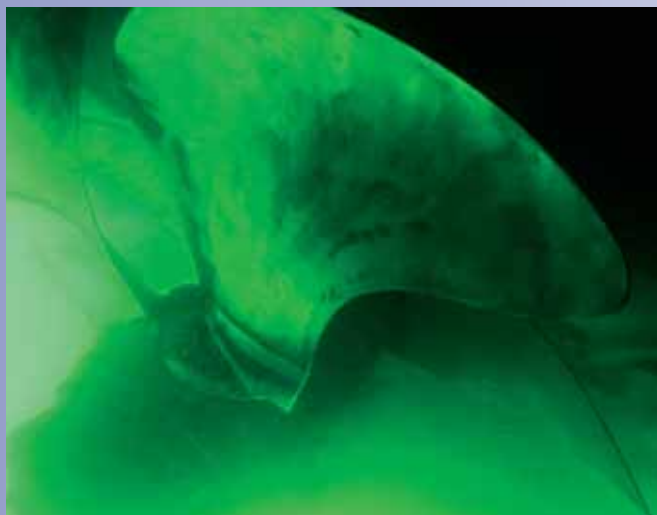
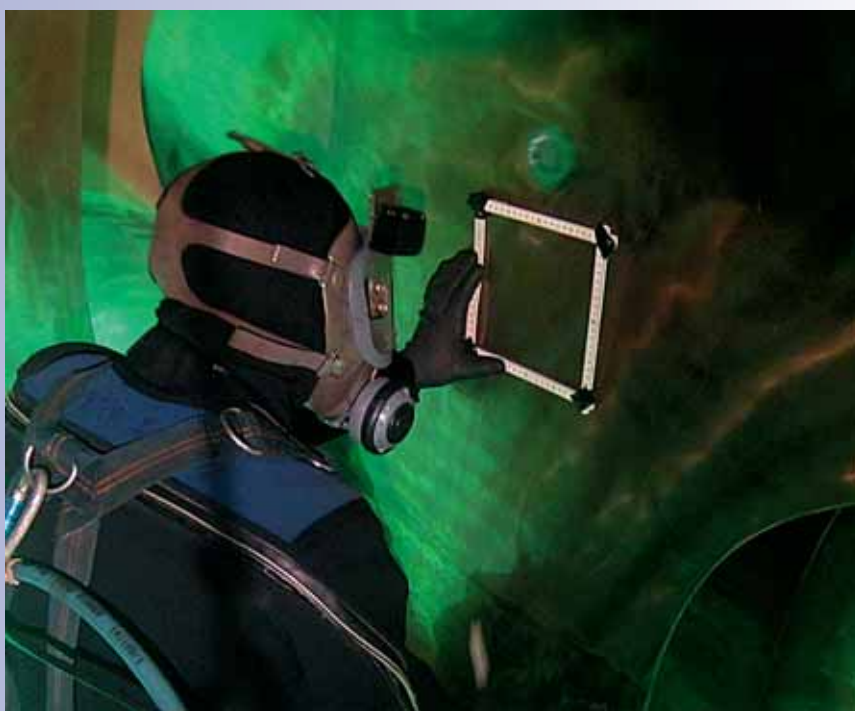
## Permanent underwater repairs to all types of propellers now possible



Major repair company Hydrex offers turnkey underwater repair and maintenance solutions to shipowners wherever and whenever they are needed. The company's large and multidisciplinary team helps its clients find the best solution for any problem encountered with their ships below the water line.

Over the years the Hydrex R&D department has continuously improved underwater repair techniques to make it possible for Hydrex diver/technicians to perform permanent repairs on seals, thrusters, rudders and almost any other part of the underwater vessel without the ship needing to go to drydock.

The final step has now been taken by the development of a repair system that allows Hydrex to perform permanent underwater repairs to every type of propeller in dry conditions. All kinds of repair or



maintenance work can be carried out to propellers, twin propellers, variable pitch propellers, azipod and collapsible thrusters.

This is especially important news for supply vessels, navy ships or any vessel under contract or on a location far away from available drydock possibilities. Staying on hire for underwater repairs will save precious time and money.

This new repair system can be transported by air transport to any location around the world from the Hydrex fast response centres within a very short time frame. It can be assembled very quickly (12 hours) on-site.

With the implementation of this technique Hydrex's diver/technicians can now perform permanent repairs to all parts of the underwater ship propulsion system in drydock-like conditions.



## DAMEN CRANE BARGE 6324

### NEW DESIGN – TRANSSHIPMENT BARGE – AVAILABLE FROM STOCK



Our newly designed 63 m Crane Barge basically serves 3 purposes: ship-to-ship, ship-to-barge and ship-to-quay dry bulk or container handling. Because we believe in this concept, we have already built a number of them, allowing for a very short delivery time.

#### Why?

- 1,000 tonnes per hour turnover
- Fuel efficient crane Liebherr CBG 350
- Lifting capacity 35 t @ 36 m (grab) / 45 t @ 36 m (hook)
- 12 crew day/night accommodation
- Shallow draught



## MacGregor's MacRack technology specified for five Greek bulk carriers

Economical and environmentally friendly electric-drive systems for MacGregor side-rolling hatch covers have been ordered for two new series of Greek bulkers being built by Sungdong, in South Korea

MacGregor, part of Cargotec, has confirmed that five 180,000dwt bulk carriers under construction in South Korea at Sungdong Shipbuilding and Marine Engineering, will feature MacGregor side-rolling hatch covers operated by MacGregor's innovative MacRack technology. The order includes the design and supply of key components and the fabrication of the hatch covers.

The bulkers are destined for two Greek owners, the first two for Quintana Shipping and the remaining three for Alcyon Shipping. The first vessel is scheduled for delivery at the end of 2014.

"Technology that drives new standards of efficiency and minimizes environmental impact is an essential element of today's market," says Torbjörn Dahl, Senior Naval Architect for Bulk Ships at MacGregor. "The new orders demonstrate shipowners' willingness to invest in this type of technology and they are a testament to the confidence these particular owners have in MacGregor's ability to deliver this type of solution. We anticipate that MacRack will become the standard system for side-rolling hatch covers, making separate hatch cover lifters obsolete."

Each hatch cover panel will be operated by an electrically driven MacRack unit, which both lifts the panel up from its closed position and then rolls it away to its open, stowed position. The panels are automatically freed from their securing cleats as they are lifted. The overall operating time for one hatch is approximately 2.5 minutes.

Each MacRack unit is mounted at the associated longitudinal coaming, driving a pinion which engages with a rack fitted underneath the hatch cover panel. In the open position, panels are stowed on transverse ramps. During the closing operation, the hatch covers are automatically cleated and made weathertight.

Automatic motor brakes prevent the panels from unintentional rolling at all stages of the opening and closing process.

MacGregor offers engineering solutions and services for handling marine cargoes and offshore loads. Its products serve the maritime transportation, offshore and naval logistics markets, in ports and terminals as well as on board ships. The company's cargo flow solutions integrate cargo access, stowage, care and handling functions to suit a particular ship's cargo profile. This benefits its productivity, environmental impact and profitable service lifetime.

MacGregor is part of Cargotec.



*MacGregor's innovative MacRack technology — each hatch cover panel is operated by an electrically-driven MacRack unit, which both lifts the panel up and rolls it to its open, stowed position in 2.5 minutes.*

## SSI appoints its first director

The Sustainable Shipping Initiative (SSI), is a 21-strong coalition of some of the biggest organizations across the shipping and associated sectors. It was convened by the NGO Forum for the Future in 2010 to find ways to get the shipping and supply chains industries to create a more sustainable shipping industry. Its members, from across the maritime and associated sectors, include Maersk Line, Rio Tinto, Unilever and WWF.

It has now become its own independent organization and appointed Helle Gleie, who has worked for Maersk Supply Service and the Baltic and International Maritime, to lead the organization from London. Gleie has 35 years' experience in the shipping industry.

The SSI was started by Forum for the Future and has been led by the NGO's staff since its inception in 2010. In September the SSI became an independent organization, with Gleie at the helm to drive the members in their joined mission to achieve a shipping industry which is both sustainable and profitable.

Danish-born Gleie, 55, has a diverse background in maritime, commercial and operational areas. She is CEO of her own company, Denmark-based ITOLEAD Consulting Group, and has recently worked as head of crew operation globally at Maersk Supply Service. Gleie has worked for the Baltic and International Maritime Council (BIMCO), an NGO

whose members in 120 countries control 65% of the world's tonnage, for several years.

Gleie is a member of WISTA (Women in Shipping and Trading Association), the Danish charterers club and the CMI (Comité Maritime International).

The expertise and specialist understanding of varied issues in the industry garnered from these positions will give Gleie a firm footing to drive the SSI towards its 'Vision 2040'.

Founder director and trustee of Forum for the Future, Jonathon Porritt, said: "The SSI becoming an organization in its own right is a promising move. Its ambition is clear to see. It has a key role to play within an industry which carries up to 90% of global trade, and has the potential to have a great impact on a raft of environmental issues. We wish Helle great success in her new role."

Gleie added: "Heading the SSI is a fantastic and unique opportunity. We are undertaking an extremely important mission to promote previously unknown levels of cross-industry co-operation and drive innovations in financing, fuels, technology and contracting. I am particularly excited to be involved in the SSI's important industry conference in September, where I will be discussing the industry's achievements, sustainability barriers and the SSI's future endeavours with senior stakeholders from throughout the industry."



# *For all your inland barging*



**DAP Barging BV**

Willemskade 15a

3016 DK Rotterdam

T +31 (0)10 282 77 88

info@dap-barging.nl

www.dap-barging.nl

**www.dap-barging.nl**

# PSM offers tank gauging solutions for all ships & applications

Whatever the type or size of vessel, PSM now offers a one stop shop for tank gauging solutions. From a single switch to complete systems, PSM's extensive range of level and pressure transmitters have been quality certified and carry international type approvals for use in ballast, fuel, draught and all service tanks.

Compatible with fuel oil, lubricants, hydraulic fluid and bilge or ballast water, they have been globally proven in all types and classes of commercial and military vessels to withstand the harshest of marine environments.

Incorporating software that provides both local visual indications and centralized alarm display for control of all tanks, PSM's gauging solutions include the measurement of:

- ❖ ship's trim and list;
- ❖ ship's draught;
- ❖ cargo level and volume;
- ❖ cargo overpressure and vacuum;
- ❖ waste water/oil overflow;
- ❖ ballast tank level;
- ❖ bunker fuel oil levels;
- ❖ day tank fuel levels; and
- ❖ bilge and void space levels.

As an international specialist in marine instrumentation, PSM's primary focus is to create marine level measurement equipment and systems that enable vessels to operate efficiently and reliably, and comply with safety and environmental regulations. Working worldwide alongside ship designers, owners and operators,

maintenance and repair companies to understand their specific tank level measurement needs PSM aims to deliver the best possible technical solution. In addition to tank gauging equipment, this includes water ingress and alarm systems to protect bulk carriers and oil discharge monitoring systems.

## ABOUT PSM

Established for over 30 years, PSM Instrumentation is a specialist in the design, manufacture and supply of advanced marine control instrumentation and marine protection systems for the marine transportation industry. PSM offers a range of application solutions for designers, shipbuilders and end-users, to ensure vessels operate efficiently and reliably and are compliant with legal, safety and environmental regulations. Main application solutions include:

- ❖ **ClearView:** award-winning monitoring and control systems for oily water separators, oil record book automation and bunker fuel management;
- ❖ **TankView:** marine tank level monitoring and supervision systems for ballast, cargo, service and bunker fuel oil tanks; and
- ❖ **BulkSafe:** water ingress detection systems and water level alarm systems to protect bulk carriers in accordance with SOLAS regulations

PSM products carry all required type approvals from the main leading marine societies, in addition to many country specific approval standards. PSM is approved to BS EN ISO 9001:2000.

## Historic sea route opens through Canadian Arctic waters

For the first time ever, a bulk carrier is using the North West Passage as a transit trade lane, when transporting coal from Vancouver in Canada to Finland. The historic transit is shorter than traditional shipping routes and will not only save time, fuel and CO<sub>2</sub>, but also increase the load of cargo with 25% compared to The Panama Canal. Nordic Bulk Carriers A/S, the Danish pioneer, is once again behind a new business adventure.

The international shipping industry is these days witness to a historic event, when a vessel for the first time ever is sailing from Vancouver in Canada to Finland through Arctic waters. One of the world's few modern ice-class bulk carriers — *Nordic Orion* — will carry a cargo of 73,500 tonnes of coal via the so-called North West Passage through Arctic waters to Finland. A Danish pioneer in operating ice-classed bulk carriers Nordic Bulk Carriers A/S is behind the historic North West Journey.

"We are very excited about this historic voyage, which has been a dream and ambition for several years," says Christian Bonfils, managing director in Nordic Bulk Carriers A/S. "We have deep respect towards these important Arctic waters and have planned this voyage in close coordination with Transport Canada and the Canadian Coast Guard to ensure a safe execution.

### REDUCING TIME, FUEL AND CO<sub>2</sub> EMISSIONS

The North West Passage across the Arctic is shorter than the traditional route through the Panama Canal and thereby has the potential to generate important saving in both time,

fuel and CO<sub>2</sub> emissions.

Bonfils, explains, "The North West Passage shortens the distance with 1.000 nautical miles. This results in a reduction in fuel consumption and transportation time – and it also means lower CO<sub>2</sub> emissions. The fuel savings alone add up to approximately US\$80,000." In addition this new route allows full utilization of the ship's capacity and thereby carries 25% more cargo than through the Panama Canal.

It takes more than an average ship to sail the North West Passage. The trip across the Arctic is a challenging task that requires great experience, navigational skills and modern world class ships. In fact, there are only a few vessels which can handle the task. "*Nordic Orion* is an ice-class 1A ship," explains Bonfils. "These ships are designed and built to operate in the harsh conditions of the Arctic.

It is estimated that the North West Passage will be open for transit voyages for approximately two months per year depending on the weather and ice conditions.

### NORDIC NAVIGATION TAKES A HISTORICAL STEP

The Danish company Nordic Bulk Carriers A/S opens another chapter in the proud tradition of Nordic navigation.

"We follow the *Nordic Orion* expedition closely and with great interest. This expedition once again emphasizes the strength, quality and long history of the Nordic maritime traditions. We are of course also very proud that a Danish company is the pioneers behind this voyage of discovery," says Jan Fritz Hansen, executive vice president of the Danish Shipowners' Association.





*Celebrating 10 years.*



**Innovative Transfer Technologies**

**Seamless Logistics Packages**

**Dedicated Customer Service**



**COOPER/CONSOLIDATED**

Stevedoring | Barge | Truck | Rail | Inland Terminaling | Ocean | Project Cargo | Logistics

Sales: 985.871.4403 | [www.cooperconsolidated.com](http://www.cooperconsolidated.com) | Stevedoring: 225.473.4288





# GUARDIAN: at the cutting edge of anti-piracy solutions

Marine & Auto Security Solutions (MASS) has unveiled an innovative anti-piracy solution that is set to take the shipping world by storm.

The company is the manufacturer of GUARDIAN, which is rapidly replacing razor wire with many blue chip shipping companies worldwide. GUARDIAN was designed by MASS director Teresa Stevens who co-founded the company with her husband — and now CEO — David.

Designed for ease of installation and effective at preventing access to the decks of ships, GUARDIAN is in place on over 100 ships, and has already hampered pirates' efforts to board illegally.

Produced in three different locations across the globe from a specifically designed compound which forms a high density rigid barrier with extreme UV protection, it will outlast razor wire by five years, saving time money and ensuring crew safety and owners peace of mind.

GUARDIAN is the most effective replacement for razor wire and will fit any size or shape of ship, easily covering awkward railings, chocks and fairleads allowing for speedy and safe removal. This means no more crews covered in a multitude of cuts from razor wire risking infections and costs in time and money to the ship managers, whilst saving thousands of man hours installing and removing razor wire.

There is no need to remove GUARDIAN at every port — simply remove the sections required for loading or unloading and for tying the ship up. This takes minutes, with no risk of cuts.



Replacing the sections on leaving port is equally simple.

MASS believes that crew safety must always remain a priority. In ensuring the safety of the ship from pirate attack, MASS is also ensuring the safety of the crews from kidnap, imprisonment and torture, enabling them to return home safely to their families at the end of their rotation.

Proof of the effectiveness of GUARDIAN was shown during an attack by pirates of the coast of Nigeria on 4 May this year. The attack on CMA CGM *Africa Four* was unsuccessful due mainly to the installation of GUARDIAN.

MASS already has a large client base, including:

- ❖ the largest shipping company in the world;
- ❖ the largest container shipping company in the world;
- ❖ the third largest container company in the world;
- ❖ the third largest tanker company in the world; and
- ❖ the largest oil and gas drilling company in the world.

Gaining such major clients is a great achievement for a company that installed its first units in September last year — and MASS's order book continues to grow. In addition, the company has agents in the Middle and Far East and is constantly striving to improve its ability to service the requirements of its growing list of clients. MASS firmly believes in attention to detail, and is happy to discuss special requirements with customers. It has also recently been working with its tool makers, to design corner units for offshore drilling rigs, and two-metre units for higher rail sections that also need protection.

MASS's motto 'Safeguarding seafarers worldwide' is not just a catchphrase, but is something in which it truly believes. The crews of ships worldwide do a great job supplying us all with what we want; they have the right to do their job in as safe an environment as can be provided.

## GUARDIAN: 100% RECYCLABLE

Unlike razor wire, at the end of its long life GUARDIAN can be recycled by regrounding the compound and used to make other products, thus lessening the impact on the environment and the risk to wildlife that razor wire causes when it is washed overboard.

## REGISTERED AND PATENTED

GUARDIAN is a registered and patented design worldwide. This original system guarantees a quality and reliability not offered by imitators who are trying to sell inferior copies.





Cape Size Transshipper, Goa, India



Turnkey Contract at the Port of Quebec



**SEABULK INC.** 

Tel: (604) 273-1378  
Fax: (604) 273-1358

Suite 150 - 10271 Shellbridge Way  
Richmond, B.C. V6X 2W8 Canada

[www.seabulk.com](http://www.seabulk.com)  
[sbs@seabulk.com](mailto:sbs@seabulk.com)



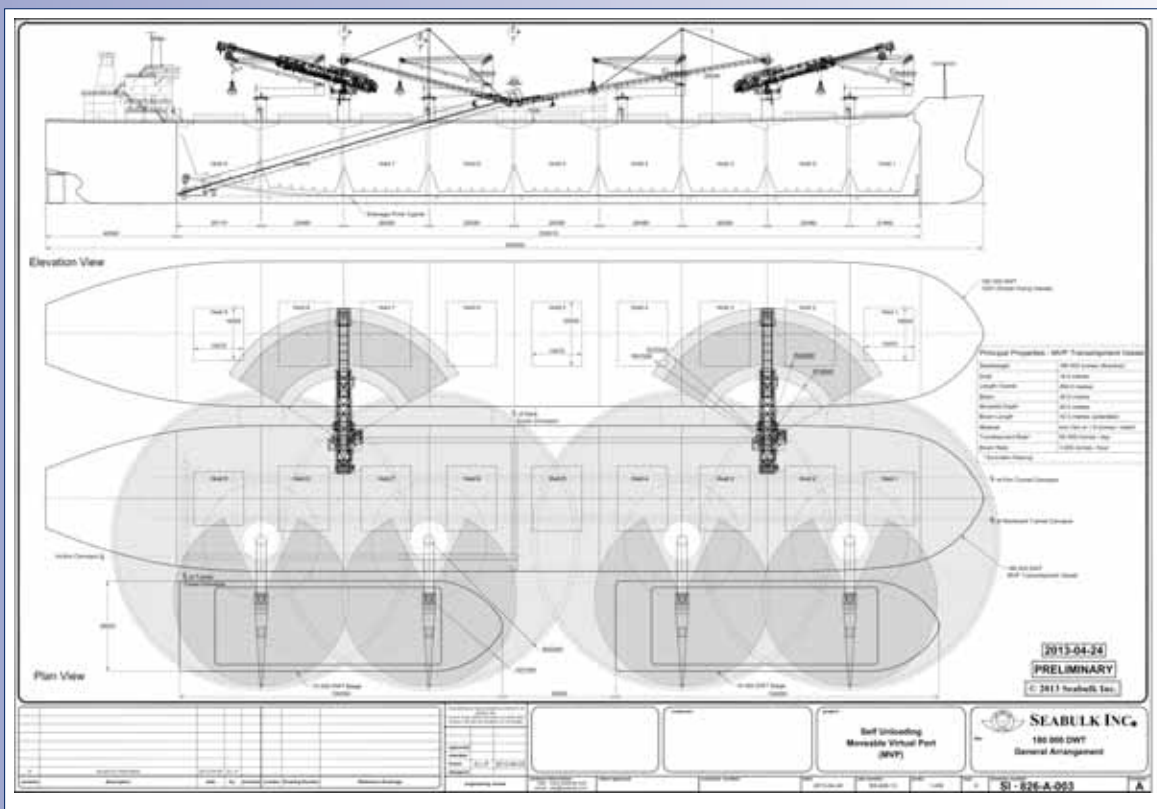
# Moveable Virtual Port: another innovation from Seabulk

How the world has changed! In one decade, China's iron ore imports have increased from 200mt (million tonnes) to 700mt per year. In this same decade, India's imports of thermal coal have increased to 100mt from almost zero. Such a phenomenal growth in demand for bulk cargo in

Asia has had a huge impact on all aspects of bulk shipping. Importing countries require deliveries in Capesize vessels to reduce cost of imports, in order to achieve economies of scale which has put enormous pressure on port infrastructure. China requires deep sea ports for ore exports from iron ore mines in Africa and Australia, while India requires these for coal imports. Both countries have embarked on growth rates close to 10%, which means that the infrastructure, of an unprecedented scale, must be developed on a fast-track basis. Huge investments are required since loading Capesize vessels requires a minimum of 20 metres draught in very challenging locations. This has created a demand for transshipment on a scale not anticipated a decade ago.

Seabulk Systems Inc of Canada has been involved in transshipment projects for over two decades. The development of the Semi Submersible Transshipper (SST) and the *Goan Pride* (GP) represent innovative implementation of new technologies and systems. Both innovations have been duly recognized by the Marine Bulk Industry – the SST is based on SWATH technology and GP is the World's first Capesize selfunloader. Now, Seabulk has embarked on another 'fit for purpose' concept. This is the introduction of the 'Moveable Virtual Port (MVP)'.

The concept is based on providing a 'just-in-time' system, which will allow an exporter/importer to load/unload Cape vessels without investments in major port infrastructure. The MVP is a virtual port which operates exactly like a shore-based bulk terminal with the capability of stacking, reclaim and storage. Not only does it have the capacity to fully load or receive Capesize vessel cargo, it also has the ability to re-position competitively to several locations within 500 nautical miles. This is achieved by use of special pneumatic fenders, which are stored on deck by davits when the vessel is ready to sail. The MVP will also store enough bunker fuel on board for a full year operation, thus requiring no bunkering facilities at each transshipment site.



As a result, marginal exporters with a requirement to load small tonnages (such as a million tonnes per year) and cannot afford a load port can simply dial a transshipment service. Within a few days, the MVP will mobilize, complete loading and sail to the next exporter. This is exactly how a 'Readymix' truck is able to pump concrete at different construction sites on a 'just-in-time' basis.

Seabulk will install a MVP in West Africa in 2013. This will be tailored to deal with the entire region, from Guinea to Ghana. Delivery of cargo from the load port to the MVP will be achieved by a fleet of tug/barges, which will be integrated with the MVP. The MVP specifically planned for West Africa will also deal with the problem of loading high moisture iron ore concentrates that exceed the 'Transportable Moisture Limits (TML)' for safe carriage in ocean-going vessels. This will be accomplished by the installation of an onboard dewatering system, which will act as the covered storage with drainage that is commonly seen at bulk terminals. The basic characterization of transshipment is 'when the ship cannot come to port, the port goes to the ship'. Seabulk is achieving the full meaning of this statement through its MVPs. The MVPs provide connectivity to shore based stockpiles through a network of shuttle vessels, store cargo on board like a bulk terminal, achieve load rates comparable to conventional ports and have the ability to load/unload cape vessels.

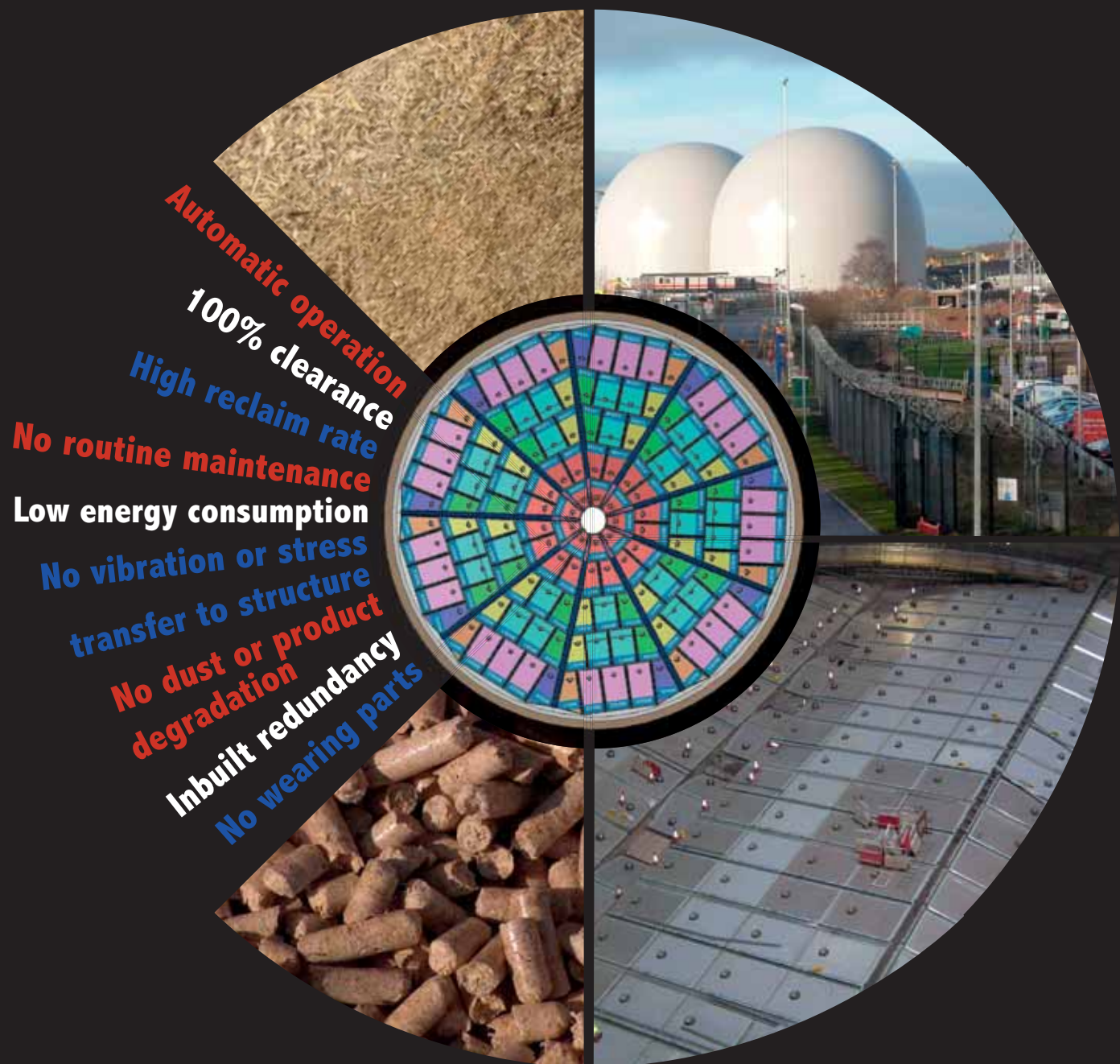
After its initial success, Seabulk plans to install more MVPs in West Africa which is the world's fastest growing iron ore producing region. Similar MVPs are also planned for the Indonesian Islands, which suffers from exactly the same challenges as West Africa for the export of thermal coal. In India, MVPs are being considered as a solution for unloading coal from Cape vessels and delivering it to draught receiving facilities at various independent power plants (IPPs). Seabulk's MVP addresses the reality of the unprecedented import growth in Asia and is the 'most valuable product' of the 21st century.





**Modular Reclaiming System**  
**THE UNIVERSAL SOLUTION**

# LEADING THE WAY



Over 20 years of research, development and successful projects  
[www.vibrafloor.com](http://www.vibrafloor.com)

# Self-unloading vessels

## An update



Jay Venter

## Another pearl in the ocean for Coeclerici

*The Floating Transfer Station Bulk Sumatra, in July 2013, in line with the delivery schedule, is the fourth unit to join the Coeclerici fleet currently operating for PT Berau Coal in East Kalimantan in Indonesia, writes Capt. Giordano Scotto d'Aniello, Head of Commercial Department, Coeclerici logistics division, Milan, Italy.*

### CUSTOM DESIGNED FOR GREATER EFFICIENCY

During the last few years, Coeclerici has expanded into the Indonesian market significantly through the use of the Floating Transfer Stations (FTS), contributing consistently to its clients' ever-growing trading activities.

Coeclerici units, for PT Beau Coal, were designed to the specific need of the client right from the drawing board, and it proved to be the perfect solution for the client when it became apparent that more offshore transshippers would be required as a result of their expansion in the coal production market.

### BULK SUMATRA MAIN CHARACTERISTICS

The FTS is a 11,855dwt unit fitted with two Liebherr heavy duty cranes with grabs, two hoppers, a belt conveyor system and two swivelling shiploaders to discharge simultaneously into ocean going vessel (OGV) cargo holds; the system is designed to reach a peak loading rate of 2,400tph (tonnes per hour).

The shiploaders have an outreach of 30m and have been designed to have an adequate slewing range by which, together with the rotating chute installed at the end of the FTS loader, they are able to reach all the spaces of the cargo hold that need to be loaded and thus guarantee efficient loading of the OGV up to Capesize.

The luffing range of the shiploaders +6° (up) and -15°

(down) allow the discharging chute to keep very close to the hatch cover in order to avoid any cargo spillage. This, together with the installation of even more efficient scrapers on each conveyor belt, is part of a host of technical solutions adopted to be as environmentally friendly as possible.



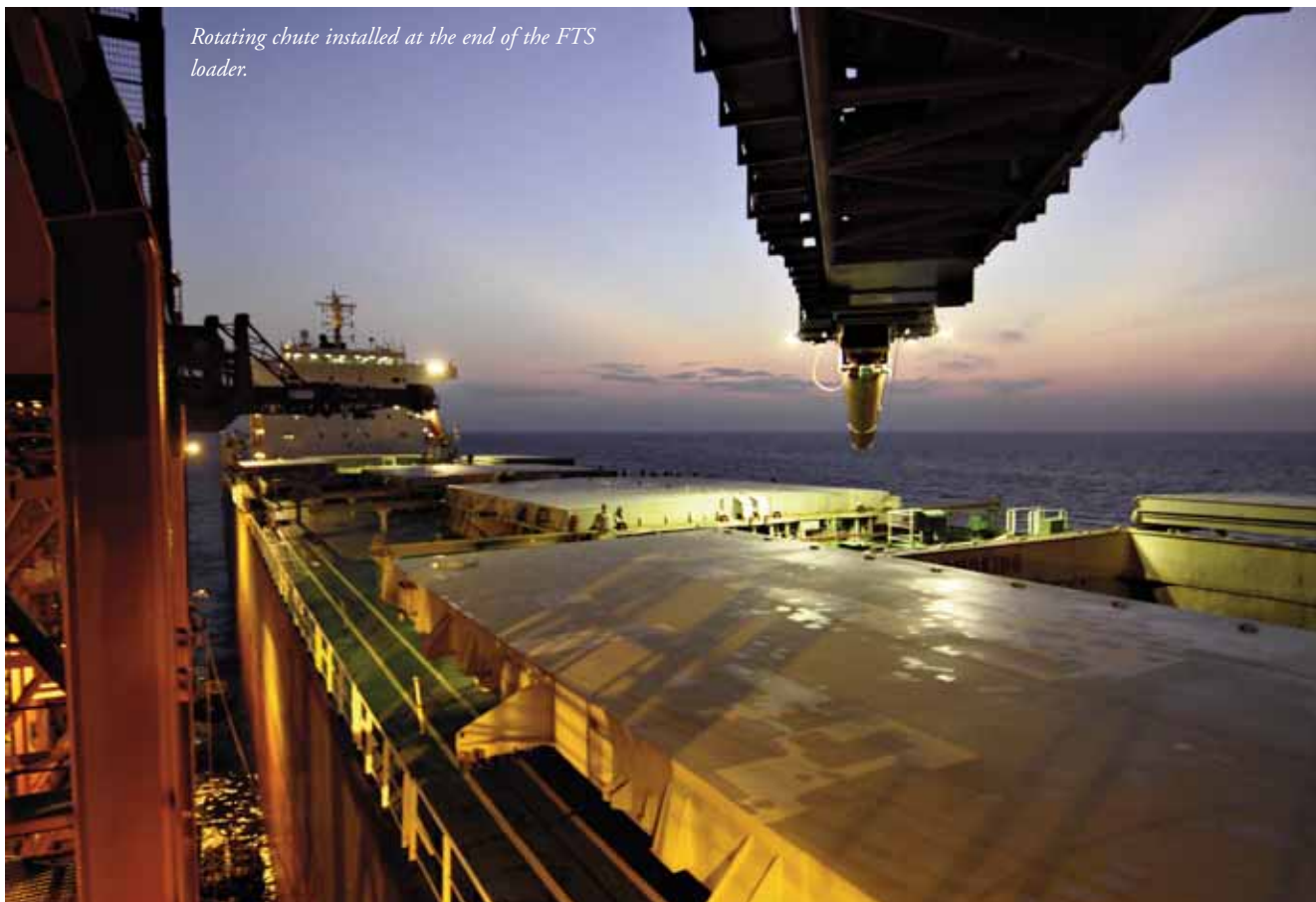
*A view of the Coeclerici fleet during operations in Muara Pantai Indonesia.*



*Fully covered conveyor belts.*



*Rotating chute installed at the end of the FTS loader.*



The shiploader's steel structure has been designed, constructed and certified by RINA to be capable of lifting a load

*FTS Bulk Sumatra heavy duty cranes.*



of 10 tonnes at 21m outreach, allowing the transfer of a payloader for trimming purposes onto the OGV without changing the mooring position. The conveyor system is equipped with an SGS sampling system, metal detectors and weighing scale for a non-stop checking of the coal operations.

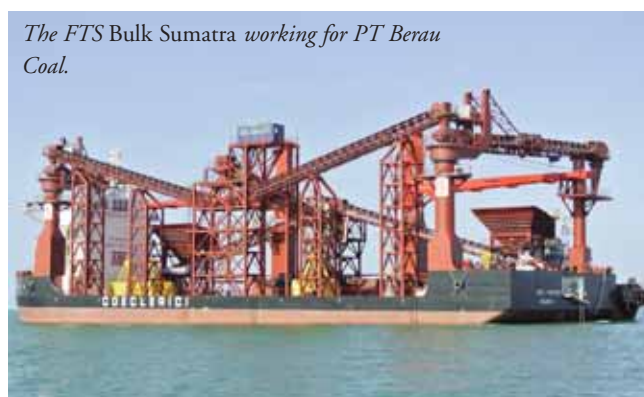
The 'conveyor control cabin' has been intentionally placed on the highest point of the unit to ensure the continuous control of the loading operation cycle; five cameras have also been placed in strategic positions to always assure the best efficiency and safety of the entire system.

The mooring equipment has been duly fitted on board to make it suitable for the coal barges working in the area, while the accommodation on board has been designed to host external personnel, like dozer operators, service engineers and sampling professionals.

#### CYCLE OPERATIONS

According to the loading schedule plan already agreed between the FTS terminal manager and the OGV Master, upon OGV readiness the first step is to establish the communication between the FTS and the OGV Captains by planning the

*The FTS Bulk Sumatra working for PT Berau Coal.*



positioning of the shiploaders. The transshipment operations start from the moment that the FTS is safely moored with its port side to the OGV and the feeder barge, transporting about 6/8,000 metric tonnes of coal, is safely moored on the starboard side of the FTS.

The two cranes grab the cargo from the barge that feed the conveyors system via the two hoppers of about 50m<sup>3</sup> strategically positioned to maximize the cranes' cycle. The specific operators make sure that the conveyors are working in compliance with the system parameters while other crew members check that all the operations are running smoothly. All the operations can easily and precisely be checked through the panel installed in the control cabin, which is fitted with all the regulators and alarms.

During the *Bulk Sumatra* commissioning phase, Coeclerici's technical staff, in close collaboration with the Captain and crew, PT Berau Coal technicians, as well as the equipment service engineers, verified that all the facilities involved in the operations and the communication between the actual performance and the project specifications were always complied with.

#### EXCELLENT PERFORMANCE OPERATIONS

The *Bulk Sumatra*'s latest delivery has marked another important step on the high technology offshore transshipment solutions Coeclerici provides to its client. The unit, during the commissioning period, showed an outstanding performance with a rate of 52,028 metric tonnes per day, thanks to Coeclerici's dedicated technical team that, together with Coeclerici's trusted suppliers, has been able to develop a combination of reinforced, powerful & reliable equipment fitted on board of the unit.

The existing Coeclerici fleet working for PT Bearu Coal, the fifth-largest Indonesian producer, has already handled 16mt (million tonnes), since the first delivery of the first FTS *Bulk Java* in July 2011.

If we consider that the second FTS *Bulk Borneo* was delivered



*Spillage-free grabs.*

on July 2012 and the third one, *Bulk Celebes*, on January 2013, the fleet, with the delivery of *Bulk Sumatra*, presently are exporting about 1.5mt per month with a potential throughput of about 3mt per month.

In the next few years, the figures will become remarkable if we include the quantity that Coeclerici's fifth FTS, *Bulk Pioneer*, has been handling in Indonesia for KPC since 2003, which, in 2012 alone was 6.5mt.

The above figures show the huge achievement of the Coeclerici logistics division in Kalimantan, which in the coming years will have the potential to handle a good 20–25% of all the coal moved offshore in Indonesia.

#### CONCLUSION

The various satisfied customers across the globe are testimony to the importance of all Coeclerici's working units.

In keeping with the company's strategy, Coeclerici will continue to explore new market areas, which will no doubt result in another string of newly pleased customers all over the waters of the world.

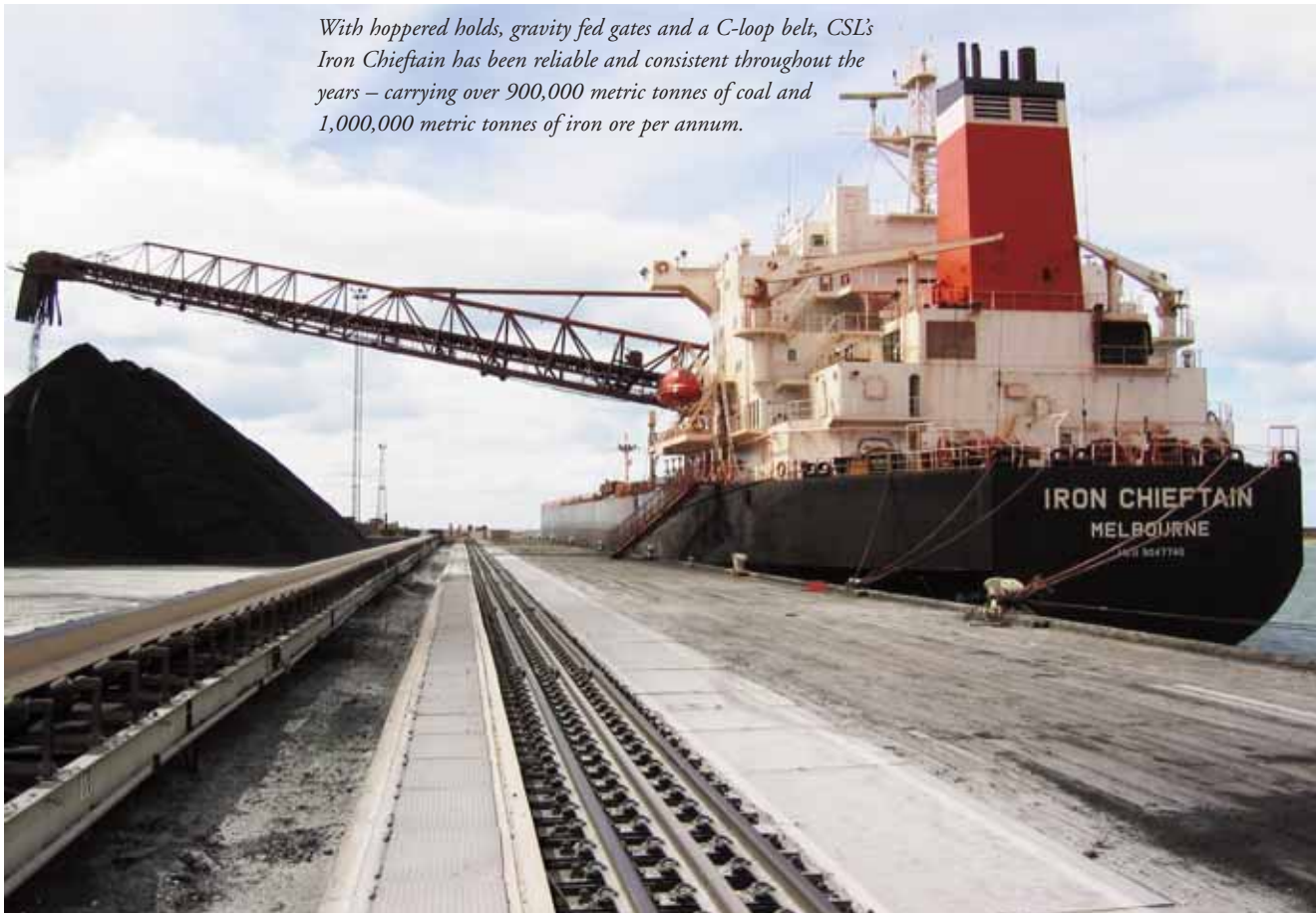
*An example of the Coeclerici units' loading operations.*





## Innovation-driven CSL celebrates 100 years of coal handling solutions

*With hoppers, gravity fed gates and a C-loop belt, CSL's Iron Chieftain has been reliable and consistent throughout the years – carrying over 900,000 metric tonnes of coal and 1,000,000 metric tonnes of iron ore per annum.*



As CSL celebrates its 100th anniversary this year, the world's largest owner and operator of self-unloading vessels continues to drive innovation and create efficiencies for coal customers worldwide.

In Canada and the Americas, CSL's latest-generation Trillium Class Laker and Panamax self unloading newbuilds have been operating along the continental coasts since late 2012. Featuring the most advanced self unloading technology available today and IMO Tier II engines, the Trillium-class ships use less fuel, release significantly fewer emissions, minimize cargo residue and provide superior operational efficiency for coal trades.

As part of CSL's ambitious fleet renewal program, the three new Trillium Class Panamax ships and four new Lakers will be joined by two new bulk carriers in 2014.

### COAL TOP OFFS IN THE AMERICAS

Along the East Coast of the United States and in the Gulf of Mexico, CSL Americas has been performing offshore coal top off operations whereby a CSL Panamax self-unloader transfers

coal into a lightloaded Cape. This operation ensures the Cape vessel is fully loaded before it departs North American waters for export markets, producing higher revenues for cargo owners. With permits and procedures in place on the West Coast of North America, CSL is ready to perform similar operations in the Vancouver area.

### MOVING COAL VIA CANADA'S NORTHERN CORRIDOR

Canada's Northern Corridor has become an efficient channel to move low-sulphur thermal coal from the Powder River Basin in



the Western US to end-markets in Europe. Using high-capacity self unloading Lakers, Canada Steamship Lines loads coal in Superior, Wisconsin, which is then discharged in Quebec City and reloaded to ocean-going vessels bound for European markets.

#### INTEGRAL ROLE OF SELF UNLOADERS IN AUSTRALIAN COAL SUPPLY CHAIN

In Australia, the *Iron Chieftain* is an Australian shipping stalwart – a 50,587dwt self unloading vessel that has been delivering coal from East Coast Australia to South Australia for the last 20 years. With hoppers, gravity fed gates and a C-loop belt, the *Iron Chieftain* has been reliable and consistent throughout the years — carrying over 900,000 metric tonnes of coal and 1,000,000 metric tonnes of iron ore per annum.

With experience loading at all major Australian coal ports, the *Iron Chieftain* provides fast and environmentally-friendly self-discharging and has become integral to the success of the customer's supply chain.

The 72 metre boom and self unloading system can achieve a maximum discharge rate of 2,500tph (tonnes per hour) and an

*The white trillium flower which has given its name to CSL's new class of self-unloader.*



average unrestricted discharge rate of 1,500tph. The shore-side operation at Whyalla allows for unrestricted discharge directly on to the coal stockpile, thus requiring minimal shore infrastructure and investment. The speed, efficiency and cost effectiveness of the *Iron Chieftain* discharging operation is highly valued by the coal receivers.

#### MEETING CUSTOMERS' HIGH STANDARDS IN EUROPE

CSL's youngest division, CSL Europe, understands that coal customers in

European coastal markets seek a balance between economies of scale and a tailored approach that meets their specifications. While markets remain difficult in Europe, CSL believes the next few years will bring a period of change and renewal to the European bulk shipping market, resulting in higher customer standards in the areas of fuel efficiency, environmental and operational performance, and cost-competitiveness. With its diversified fleet, rapid unloading rates, dust-free discharge booms, and reduced infrastructure requirements, CSL Europe is well equipped to respond to these demands and deliver superior operational efficiencies.

## MacGregor systems provide flexible cement handling for new Japanese cement carrier

*A new self-loading/unloading cement carrier for Japanese Taiheiyo Engineering Co will feature MacGregor cement handling systems designed to carry three grades of cement at a rated capacity of 1,000 tonnes per hour.*



M/V Bacific Breeze featuring MacGregor selfunloading system.

MacGregor, part of Cargotec, has secured a new order for autonomous loading and unloading systems for an 8,700dwt cement carrier to be built for Japanese shipowner Taiheiyo Kisen Kaisha Ltd.

"The totally enclosed cement handling arrangements will ensure flexible, efficient and clean cargo operations," says Anders Berencsy, Sales Manager, Selfunloaders at MacGregor. "An additional benefit is that the computer-controlled systems are programmed for automatic operation by just one person."

The 109m vessel will have four cargo holds, each divided into two compartments. The cement handling system is designed to carry up to three grades of cement in each shipment.

During loading operations, the ship's deck-mounted receiving aeroslide is connected to the shore facilities by flexible bellows; loading can be achieved on either side of the vessel.

The cement is then transferred to two short intermediate aeroslides by means of hydraulically-actuated flow control gates. These transfer the cargo to two reversible horizontal screw conveyors. One moves the cement forward to holds 1 and 2; the other serves holds 3 and 4. A combination of hydraulically-actuated sliding gates, flexible connections, hydraulically-actuated flow dividers and transfer aeroslides complete the delivery of the cement to the selected drop off points. Maximum level guards indicate when the holds are full, while pneumatically-operated shut-off valves avoid contamination between different

grades of cement.

Sloping aeration panels installed on the tanktop of each hold are the first elements in the discharge system. Air blown through the panels fluidizes the cement, allowing it to flow towards the centre of the hold, where it feeds into a vertical screw conveyor equipped with two remote-controlled flow control gates.

At deck level the cement returns to the reversible horizontal screw conveyors and is conveyed to a buffer hopper inside the pump room, located amidships. From the hopper the blow pump system transfers the cement to a silo ashore via two pipes. Dust collectors are installed on deck.

MacGregor is a leading brand of engineering solutions and services for handling marine cargoes and offshore loads. MacGregor products serve the maritime transportation, offshore and naval logistics markets, in ports and terminals as well as on board ships. Its cargo flow solutions integrate cargo access, stowage, care and handling functions to suit a particular ship's cargo profile. This benefits its productivity, environmental impact and profitable service lifetime.

MacGregor is part of Cargotec. Cargotec's sales totalled €3.3 billion in 2012 and it employs approximately 10,000 people. Cargotec's class B shares are quoted on NASDAQ OMX Helsinki under symbol CGCBV.



## Mitchell Consulting Group, Inc. points out growing transshipment sector

Mitchell Consulting Group, Inc. maintains a listing of self unloading vessels.

Below is a listing of 130 vessels that are involved in self unloading operations, listed in three sectors:

- 1) Vessels operating in dedicated trades,
- 2) Vessels operating independently such as in pools, and
- 3) Vessels that are floating transshipment or transfer vessels.

"What's really interesting", says Walter Mitchell, Chairman and Principal of Mitchell Consulting Group, Inc., "is to see the growth of this last sector. We have more of these afloat today than ever before, and the installations are as varied as ever. Many of these vessels were either built, or converted to purpose, within the last three to five years."

Most if not all of these floating transshipment or transfer vessels are dedicated to specific operations, which makes their

flexibility for other trades somewhat limited. Note the number dedicated to Indonesian coal. It is interesting to speculate what could come of these vessels if European coal demand were to come under pressure — could redundancy develop and, if so, where would these vessels go?

Mitchell Consulting arms clients with thorough research, accurate analysis and high-level advice relating to issues in the energy, petroleum, commodities, and world fleet sectors that are important to understand when investments are on the line.

The company's clients are comprised of industrial companies, investment houses/private equity firms and other entities that are stakeholders in the international maritime marketplace. In each case, there is a requirement for sound understanding of the forces that create demand for marine transport services, and that drive rates and valuations.

### OCEAN-GOING BELT CONVEYOR AND HYBRID VESSELS: Dedicated Operations

Vessel	Former Names	Flag	Dwt	Built/ Convert	Unload System	Yard	Owner	Country	Employment
ADHIGUNA	TARAHAN	Indonesia	11,096	1985	Incline Lift	Sasebo	Bahtera Adhiguna	Indonesia	Dedicated to PLN TARAHAN Power Station coal, Sunda Strait shuttle (Indonesia)
BELTNES		Antigua	Barbuda	33,173	2009	Loop	J.J. Sietas Stema Shipping (HJH Shipmanagement)	Germany	Dedicated to Mibau limestone at Jesla, Norway to North Europe
BERNARDO	THOR, THOR AMBRA, QUINTANA A. MOANNA	Bahamas	67,044	1984/92	Loop	Imabari	Vulica Shipping Company, Ltd.	Bahamas	Dedicated to Vulcan/ICA joint venture; limestone from Punta Venado to US Gulf "crescent" market and Florida
BULK LIMPOPO		Italy	53,776	2012	Grab to belt loaders	China	CoeClerici Logistics	Italy	Dedicated to loading coal offshore Mozambique for Vale
BULK ZAMBESI		Italy	53,776	2011	Grab to belt loaders	China	CoeClerici Logistics	Italy	Dedicated to loading coal offshore Mozambique for Vale
BULKNES		AntiguaBarbuda	33,100	2009	Loop	J.J. Sietas	Stema Shipping (HJH Shipmanagement)	Germany	Dedicated to Mibau quarried products in the Baltic and North Europe
CHL INNOVATOR	RODNEY	Singapore	26,931	1976/85	Scraper/BIBO	Govan S.B.	Gearbulk (KG Jebsen/MOSK)	Norway	Dedicated to refined sugar trades in North Europe/Med
CHL PROGRESSOR	THERASSIA	Singapore	48,251	1985/92	Scraper/BIBO	NKK	Gearbulk (KG Jebsen/MOSK)	Norway	Dedicated to refined sugar trades in North Europe/Med
CSL CABO	CABO SAN LUCAS	Liberia	34,394	1971/80	Incline Lift		CSL International	Canada	Dedicated to Polaris Minerals limestone COA British Colombia/California
CSL TECUMSEH		Bahamas	71,319	2013	Loop	Chengxi Shipyard	CSL Group	Canada	Dedicated to Polaris Minerals limestone COA British Colombia/California
CSL TRAILBLAZER	GOLD BOND TRAILBLAZER	Bahamas	26,608	1978	Incline Lift		CSL Group	Canada	Dedicated to USWC gypsum cargoes
CSL WHYALLA	CSL SAMS, SHIN HSING	Australia	13,732	1987/08	Incline Lift		CSL Australia	Canada	Dedicated to iron ore transshipment from barges to ocean vessels in the Gulf of Spencer for Arrium (OneSteel)
E. OLDENDORFF	NOBEL FOUNTAIN	Liberia	78,532	1982	Gantry crane to boom	HHI	E-ships Oldendorff Logistics	Abu Dhabi, UAE	Dedicated to transshipment of inbound iron ore pellets for Emirates Steel Industries at Abu Dhabi
ENERGY ENTERPRISE	ENERGY INDEPENDENCE	USA	38,848	1983	Incline Lift	General Dynamics	International Shipholding Corp	USA	Dominion New England coal transportation, Hampton Roads/Baltimore to Massachusetts
FITNES		AntiguaBarbuda	33,174	2010		J.J. Sietas	Stema Shipping (HJH Shipmanagement)	Germany	Dedicated to Mibau limestone at Jesla, Norway to North Europe
GEM OF ENNORE	PEARL OF DUBAI	India	73,789	2000	Crane/grab to deck hopper/belt	Hitachi Zosen	West Asia Maritime	India	Dedicated to TNEB coal transport from Paradip to Ennore under 10-year T/C to Poompuhar Shipping Corporation
GENERAL PIAR	CHRISTOFFER OLDENDORFF, CSL INNOVATOR, PACIFIC PEACE	Liberia	62,594	1982/89	Bucket		Technical Marine Planning Overseas Ltd.	Greece	Dedicated to river shuttle/transfer of CVG Ferrominera iron ore on the Orinoco River, Venezuela

## OCEAN-GOING BELT CONVEYOR AND HYBRID VESSELS: Dedicated Operations

Vessel	Former Names	Flag	Dwt	Built/ Convert	Unload System	Yard	Owner	Country	Employment
GYPSUM CENTENNIAL		Bermuda	49,270	2001	"C" loop belt	Hyundai Mipo	Gypsum Transportation Ltd.	Bermuda	Dedicated to iron ore transshipment for African Minerals at Freeport, Sierra Leone
GYPSUM INTEGRITY		Bermuda	47,761	2009	"C" loop belt	EISA, Brazil	Gypsum Transportation Ltd.	Bermuda	Dedicated to iron ore transshipment for African Minerals at Freeport, Sierra Leone
BRITTANY MAE, TEEKAY FOAM		Bahamas	78,571	1981/07	Loop	Hyundai	Vulica Shipping Company, Ltd.	Bahamas	Dedicated to Vulcan/ICA joint venture; limestone from Yucatan peninsula to US Gulf and East Coast ports
HELENE	SATURN	Faeroe I	7,958	1980	Excavator	Rickmers Werft	Storresletten Rederei	Germany	Trading mostly in Mibau quarried products in North Europe
KIMITETSU MARU		Japan	17,000	1991	Loop	Shikoku Dock	Shinwa Naiko Kaiun	Japan	Dedicated to inter-island limestone cargoes within Japan
KIMITSU MARU		Japan	17,000	1991	Loop	Shikoku Dock	Shinwa Naiko Kaiun	Japan	Dedicated to inter-island limestone cargoes within Japan
ORISSA	LUPUS	India	81,783	1979		Italcantieri	Dempo and Salcogaor Mining	India	Dedicated to India iron ore transshipment at Goa and Panaji
PRAMUDITA	AMBASSADOR	Indonesia	37,263	1983	Loop		Caraka Tirta Pramata	Indonesia	Dedicated to PLN Power Station coal, Sunda Strait shuttle (Indonesia)
RIO CARONI	SHORYU MARU	Venezuela	88,151	1983/93	Incline Lift	NKK	Cargoport and Orinoco Ferrominera	Venezuela	Dedicated to river shuttle/transfer of CVG Ferrominera iron ore on the Orinoco River, Venezuela
RIO ORINOCO	MARATHA SHOGUN	Venezuela	86,864	1979/91	Incline Lift	NKK	Cargoport and Orinoco Ferrominera	Venezuela	Dedicated to river shuttle/transfer of CVG Ferrominera iron ore on the Orinoco River, Venezuela
SANDNES		AntiguaBarbuda	26,100	2001	Loop	J.J. Sietas	Stema Shipping (HJH Shipmanagement)	Germany	Dedicated to Mibau quarried products in the Baltic and North Europe
SARTIKA BARUNASHIN HSING No. 2		Indonesia	13,601	2000	Incline Lift	Tsuneishi	Adhiguna Bahtera	Indonesia	Usually dedicated to coal transport in and around Indonesia
SPLITTNES	KARI ARNHILD	Panama	18,964	1994/06	Loop	Kvaerner Kleven	Stema Shipping (HJH Shipmanagement)	Germany	Dedicated to Mibau limestone at Jesla, Norway to North Europe
STONES		AntiguaBarbuda	28,000	2001	Loop	J.J. Sietas	Stema Shipping (HJH Shipmanagement)	Germany	Dedicated to Mibau limestone at Jesla, Norway to North Europe
SUNRISE	SERENITY	India	60,187	1974/97	Grab to belt	Hitachi/IHI	Salgaocar Mining	India	Dedicated to iron ore top-off loading at Goa, India
TRANS BAY	BALSFJORD, SUMAVA	Marshall Is	70,120	1996	Crane to hopper/belt	Daewoo	Bulk Transloading AS	Abu Dhabi, UAE	Dedicated to transshipment of iron ore pellets for Gulf Industrial Investment Corp in the Persian Gulf
TRANS EMIRATES	BAKRA, BAKR	Marshall Is	70,546	1993/99	Crane to hopper/belt	Daewoo	Bulk Transloading AS	Abu Dhabi, UAE	Dedicated to transshipment of iron ore pellets for Gulf Industrial Investment Corp in the Persian Gulf
TRANS GULF	BANDAR	Liberia	81,659	1982/	Crane to hopper/belt	Italcantieri	Bulk Transloading AS	Abu Dhabi, UAE	Dedicated to transshipment of iron ore pellets for Gulf Industrial Investment Corp in the Persian Gulf
W.H. BLOUNT	AMIR	Bahamas	65,402	1984/91	Loop	Hyundai	Vulica Shipping Company, Ltd.	Bahamas	Dedicated to Vulcan/ICA joint venture; limestone from Yucatan peninsula to US Gulf and East Coast ports
WESER STAHL		Cyprus	47,257	1999	Gravity S-U	Hyundai Mipo	CSL Group	Canada	Dedicated to iron ore COA for Stahlwerke Bremen, voyages Narvik-Bremen/Rotterdam
YEOMAN BANK	SALMONPOOL	Liberia	43,728	1982/90	Pocket belt	Eleusis	Aggregates Industries (Holcim, ex- Foster Yeoman)	Switzerland	Usually dedicated to aggregates transport from Glensanda, Scotland to North Europe
YEOMAN BONTRUP	WESTERN BRIDGE	Bahamas	96,772	1991	Pocket	Tsuneishi	Aggregates Industries (Holcim, ex- Foster Yeoman)	Switzerland transport	Usually dedicated to aggregates from Glensanda, Scotland to North Europe
YEOMAN BRIDGE	EASTERN BRIDGE	Bahamas	96,772	1991	Pocket belt	Tsuneishi	Aggregates Industries (Holcim, ex- Foster Yeoman)	Switzerland	Usually dedicated to aggregates transport from Glensanda, Scotland to North Europe



## OCEAN-GOING BELT CONVEYOR AND HYBRID VESSELS: Independent Operations

Vessel	Former Names	Flag	Dwt	Built/ Convert	Unload System	Yard	Owner	Country	Region of deployment
BAHAMA SPIRIT	FREEPORT MINER, SAN PIETRO	Vanuatu	46,606	1995/99	Gravity S-U	Sanoyas Mizushima	Algoma Central	Canada	Western Atlantic/Caribs
HONOURABLE HENRY JACKMAN	PATROKLOS	Bahamas	75,597	1981/07	Gravity S-U		Algoma Central	Canada	Western Atlantic/Caribs
MAA SALEHA BEGUM	BAUTA, YASNAYA POLYANA, OINOUSIAN PRUDENCE	Bangladesh	41,756	1987/98	Grab to hopper to belt		Brave Royal Shipping, Ltd.	Bangladesh	Under new owners, employment is believed to be sand/aggregates in the Western Pacific/SE Asia
MAA SAMUDA KHATUN	BALLANGEN, YAMBURG, OINOUSIAN FIGHTER	Bangladesh	41,734	1987/97	Grab to hopper to belt	Brave Royal Shipping, Ltd.		Bangladesh	Under new owners, employment is believed to be sand/aggregates in the Western Pacific/SE Asia
BULK PROSPERITY		India	10,500	2007	Grab to hopper to belt	China	CGU Logistic (CoeClerici JV)	India	West coast India minerals transshipment
BEI JI XING		PRC	27,526	1986	Incline Lift	Mitsui S.B.	China Shipping International	PRC	PRC coastwise
HAI WANG XING		PRC	37,944	1995	Incline Lift	Bremer Vulkan	China Shipping International	PRC	PRC coastwise
TIAN LONG XING		PRC	37,944	1995	Incline Lift	Bremer Vulkan	China Shipping International	PRC	PRC coastwise
CSL ATLANTIC	ENFORCER II	Malta	23,683	1981/09	Gearred/grab hybrid		CSL Australia	Canada	Australia coastwise
CSL THEVENARD	SEAWAY A	Australia	40,867	1981/08	Scraper/reclaim		CSL Australia	Canada	Australia gypsum coastwise Townsville-Thevenard
IRON CHIEFTAIN		Australia	50,587	1993	Loop	Hyundai	CSL Australia	Canada	Australia coal, iron ore
CSL BERGEN	TROLLNES	Malta	8,682	1985	Loop	Kvaerner Kleven	CSL Europe	Canada	Scandinavia-North Europe minerals
CSL CLYDE	CLYDNES, ARROW BRIDGE	Malta	7,182	1996	Excavator	Appledore Ferguson	CSL Europe	Canada	Scandinavia-North Europe minerals
CSL ELBE	TELNES	Malta	10,110	1982	Loop	Kvaerner Kleven	CSL Europe	Canada	Scandinavia-North Europe minerals
CSL RHINE	TINNES	Malta	10,110	1983	Loop	Kvaerner Kleven	CSL Europe	Canada	Scandinavia-North Europe minerals
CSL SHANNON	TRONES	Malta	12,094	1986	Loop	Kvaerner Kleven	CSL Europe	Canada	Scandinavia-North Europe minerals
CSL THAMES	VESTNES		29,982	2009	Gravity S-U		CSL Europe	Canada	Scandinavia-North Europe minerals
CSL TRIMNES	TRIMNES, EXPRESS	Malta	17,309	1990	Loop	Tsuneishi Zosen	CSL Europe	Canada	Scandinavia-North Europe minerals
ATLANTIC SUPERIOR	MELVIN H. BAKER III	Canada	37,320	1982	Loop		CSL Group	Canada	returned to Great Lakes trading
CSL ACADIAN	CABO DE HORNOS	Bahamas	74,517	/2006	Gravity S-U		CSL Group	Canada	Western Atlantic/Caribs
CSL ARGOSY	NILE	Bahamas	74,423	/2006	Gravity S-U		CSL Group	Canada	Western Atlantic/Caribs
CSL METIS	SINAMAICA	Bahamas	69,305	1981/07	Gravity S-U		CSL Group	Canada	Western Atlantic/Caribs
CSL SPIRIT		Canada	70,018	2000	Incline Lift	Jiangnan SB	CSL Group	Canada	Atlantic Canada
RT. HON. PAUL E. MARTIN		Bahamas	71,405	2012	Loop	Chengxi Shipyard	CSL Group	Canada	Western Atlantic/Caribs
SHEILA ANN		Bahamas	70,037	2000	Incline Lift	Jiangnan SB	CSL Group	Canada	East/West Coast NA
CSL ATLAS		Liberia	67,308	1990	Pocket	Verolme Estaileros	CSL International	Canada	West Coast NA
ALICE OLDENDORFF		Liberia	50,259	2000	Grab to belt		Egon Oldendorff	Germany	Western Atlantic/Caribs
BERNHARD OLDENDORFF	YEOMAN BURN	Liberia	77,548	1991	Elevator	DSME	Egon Oldendorff	Germany	Western Atlantic/Caribs
CAROLINE OLDENDORFF	YEOMAN BROOK	Portugal	77,548	1991	Elevator	DSME	Egon Oldendorff	Germany	Anchored Panama Canal, Atlantic side
HARMEN OLDENDORFF		Liberia	66,188	2005	Gravity S-U		Egon Oldendorff	Germany	Western Atlantic/Caribs
JOHANNA OLDENDORFFSOFIA III		Liberia	67,546	1998	Grab to belt hybrid		Egon Oldendorff	Germany	Western Atlantic/Caribs
SOPHIE OLDENDORFF		Liberia	70,034	2000	Incline Lift	Jiangnan SB	Egon Oldendorff	Germany	East/West Coast NA

## OCEAN-GOING BELT CONVEYOR AND HYBRID VESSELS: Independent Operations

Vessel	Former Names	Flag	Dwt	Built/ Convert	Unload System	Yard	Owner	Country	Region of deployment
EOS	EEMSBORG	Madeira	6,198	1976/85	Scraper	A.Vuyk	Emmaboda Shipping	Sweden	Baltic area aggregates
KALKVIK		Faeroe I.	9,402	2007	Scraper to bucket elevator to boom	FerusSmit BV	Erik Thun	Sweden	Baltic area aggregates
MALMNES		Madeira	9,891	1993	Scraper	Ferus Smit BV	Erik Thun	Sweden	North Europe
MORNES		Faeroe I.	9,125	1991	Scraper	Smit-Foxhall	Erik Thun	Sweden	North Europe cement
NORDANHAV	MOXNES	Faeroe I.	9,891	1992	Scraper	Dutch	Erik Thun	Sweden	North Europe
OSTANHAV		Faeroe I.	5,800	1983/87	Scraper	Swedish	Erik Thun	Sweden	Baltic cement
SUNNANHAV		Faeroe I.	9,400	2006	Scraper to bucket elevator to boom	Ferus Smit BV	Erik Thun	Sweden	Baltic cement
SILICA II	A.V.KASTNER	Panama	19,075	1987	Pocket belt	Hyundai	Gulf of Aden Shipping	UAE	Trading in the Middle East Gulf
BALDER		Marshall I	48,184	2002	Reclaimer		Klaveness	Norway	Western Atlantic/Caribs
BALDOCK		Marshall I	75,569	1981/2006	Gravity S-U		Klaveness	Norway	Western Atlantic/Caribs
BALTO		Marshall I	71,476	2013	Loop	Chengxi Shipyard	Klaveness	Norway	USWC, Maiden voyage
BARKALD		Marshall I	49,463	2002	Grab to belt		Klaveness	Norway	Western Atlantic/Caribs
ORIENTAL QUEEN VI	UCO XXV, WANI SWAN	StVincentGrenadines	25,439	1982	Reclaim/elevator	Imabari	Mansour Shipping	Syria	Worldwide trading
EASTERN CEREZA	MILAMORES,	Vanuatu	69,809	1989/98	Grab to belt hybrid		Marbulk (CSL Group)	Canada	T/C to Oldendorff, POWER last known in MEG
NELVANA		Vanuatu	74,973	1983	Loop		Marbulk ) (CSL Group)	Canada	Western Atlantic/Pacific Northeast
PIONEER		Vanuatu	37,448	1981	Loop		Marbulk (CSL Group)	Canada	Western Atlantic / Pacific Northeast
GYDNIA	SUN ARROW, SUN P.	Mexico	64,375	1981/05	Gantry to boom	Namura	Servicios Mexicanos	Mexico	Currently in Shanghai, employment not known
ANTWERPEN	SEA LION	Cyprus	41,100	1979/99	Grab to belt	Cockerill	Ship Management & Transport	Poland	East Coast NA
DON MIGUEL	SMT BONTRUP, HOEGH MINERVA	Uruguay	44,016	1979/	Gantry to boom		Ship Management & Transport	Uruguay	Rio Uruguay shuttle to FTS in stream
KRAKOW	PANLI	Bahamas	70,912	1982/07	Gantry to boom	IHI	Ship Management & Transport	Poland	Western Atlantic
VENCEREMOS	GDANSK, NORSUL RIO, RIO TROMBETAS	Bahamas	63,671	1984/05	Gantry to boom	Ishibras	Ship Management & Transport	Poland	Western Atlantic coal
PREVENTER	DARYA NOOR, MANNA	Panama	69,995	1990	Crane to boom	KHI	SNP Management	India	Worldwide trading
VIGHNRAJ	SOPOT, ARCTIC	India	70,912	1982/07	Gantry to boom	HHI	Sula Shipping and Logistics	India	India coastwise transport of minerals
GENERAL PIAR	CHRISTOFFER OLDENDORFF, CSL INNOVATOR, PACIFIC PEACE	Liberia	62,594	1982/89	Loop		Technical Marine Planning Overseas Ltd.	Greece	believed to be Venezuela
NAZLIKIZ	STEINES	AntiguaBarbuda	8,139	1978	Excavator	Kalmar Sweden	Yenal Geni	Turkey	Med





## TRANSSHIPMENT AND FLOATING TERMINALS

Vessel	Former Names	Flag	Dwt	Built/ Convert	Unload System	Yard	Owner	Country	Employment
AJKWA		Indonesia	15,000	1998	Loop belt on barge	Keppel	PT Kuala Pelabuhan	Indonesia	Dedicated to copper concentrates movements from PT Freeport's Glasberg mine at Irian Jaya
BARNGARLA		Australia	12,910	2006	Gravity feed to boom conveyor	Yahua SB	CSL Australia	Canada	Dedicated to iron ore transshipment from barges to ocean vessels in the Gulf of Spencer for Arrium (OneSteel)
BOCA GRANDE II	NOBEL SNAPPER	Bahamas	135,160	1982/06	Nordström	Boelwerf	SMT Silva /Orinoco Ferrominera	Venezuela	Dedicated to iron ore shuttle/transfer of CVG Ferrominera iron ore on the Orinoco River,Venezuela
BULK BORNEO		Indonesia	11,805		Grab to belt loaders		CoeClerici Logistics	Italy	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
BULK CELEBES		Indonesia	11,472		Grab to belt loaders		CoeClerici Logistics	Italy	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
BULK GULF			80,000		Grab to belt loaders				Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
BULK IRONY		Italy	13,579	2003	Grab to hold	Nanjing Xinhua	CoeClerici Logistics	Italy	Dedicated to iron ore lightering at Piombino, Italy
BULK JAVA		Indonesia	11,839		Grab to belt loaders		CoeClerici Logistics	Italy	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
BULK KREMI I			14,500	1975/00	Grab to hold		CoeClerici Logistics	Italy	Dedicated to iron ore/coal/sulphur lightering at Bourgas
BULK LIMPOPO		Italy	53,776	2012	Grab to belt loaders	China	CoeClerici Logistics	Italy	Dedicated to loading coal offshore Mozambique for Vale's Moatize coal project
BULK PIONEER		Indonesia	5,974		Grab to belt loaders		CoeClerici Logistics	Italy	Dedicated to transshipping coal off Kalimantan for KPC
BULK SUMATRA			11,805		Grab to belt loaders		CoeClerici Logistics	Italy	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
BULK TRIESTE			122,000		Grab to belt loaders				Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
BULK WAYUÛ			64,400	1978/98	Grab to hold/ Grab to belt	Mitsubishi	CoeClerici Logistics	Italy	Permanent mooring in Lake Maracaibo
BULK ZAMBESI		Italy	53,776	2011	Grab to belt loaders	China	CoeClerici Logistics	Italy	Dedicated to loading coal offshore Mozambique for Vale's Moatize coal project
EAGLE		Liberia	12,000	2008	Gravity feed to boom conveyor	E-ships	Oldendorff Logistics	Abu Dhabi, UAE	Dedicated to transshipment of inbound iron ore pellets for Emirates Steel
FALCON		Liberia	12,000	2008	Gravity feed to boom conveyor	E-ships	Oldendorff Logistics	Abu Dhabi, UAE	Dedicated to transshipment of inbound iron ore pellets for Emirates Steel
FOTP DERAWAN		Bahamas	1,526	2009	Grab to elevator and belt conveyor	Yahua SB	CSL Asia (Singapore)	Canada	Dedicated to transloading coal offshore Kalimantan for PT Berau Coal
HAWK		Liberia	12,000	2009	Gravity feed to boom conveyor	E-ships	Oldendorff Logistics	Abu Dhabi, UAE	Dedicated to transshipment of inbound iron ore pellets for Emirates Steel

## TRANSSHIPMENT AND FLOATING TERMINALS

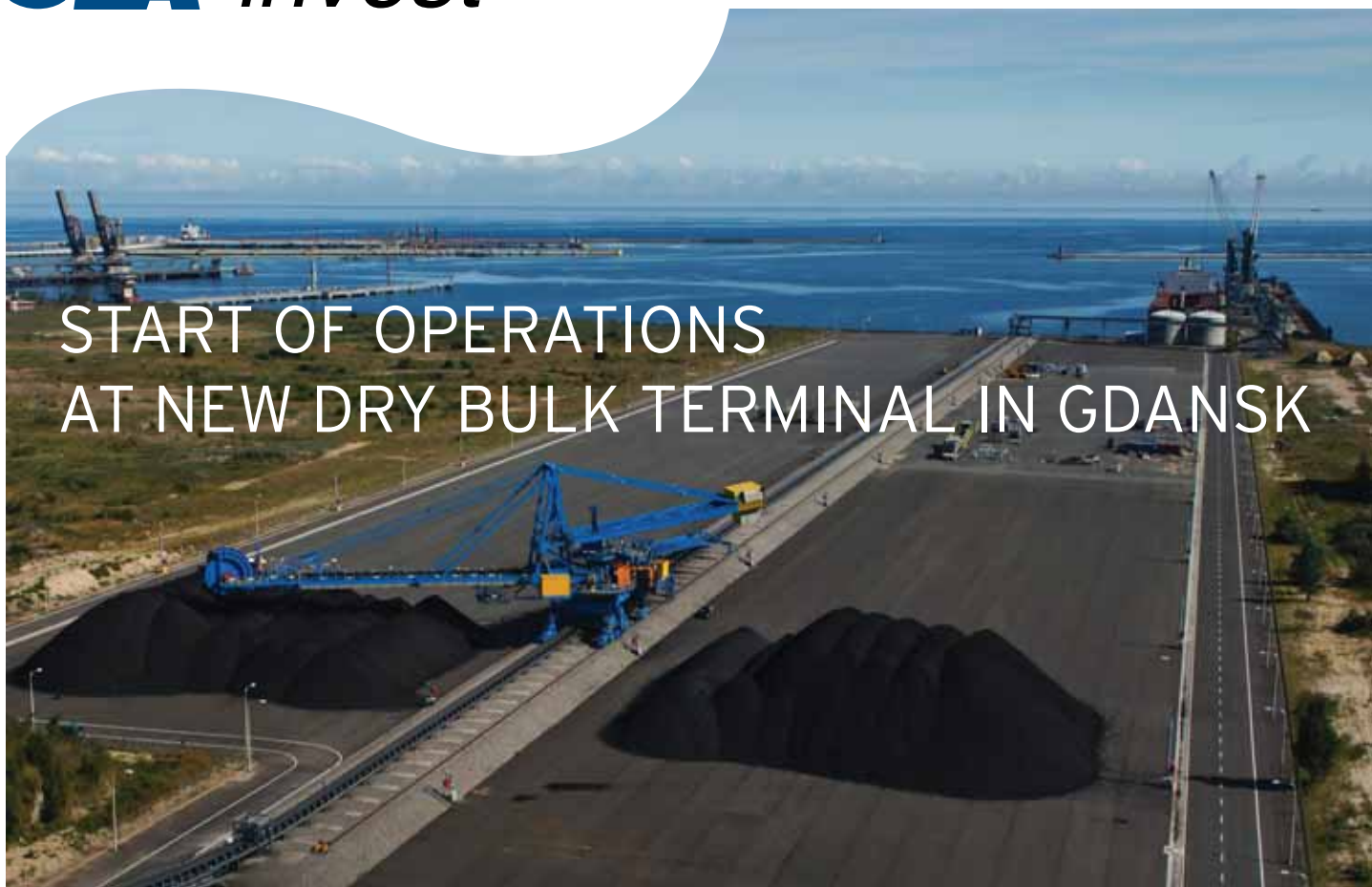
Vessel	Former Names	Flag	Dwt	Built/ Convert	Unload System	Yard	Owner	Country	Employment
MARA		Indonesia	64,850	1989	Gravity feed to boom conveyor		Pelayaran Isna Agung Permata	Singapore	Dedicated to Indonesia coal transfer at Kalimantan for Rocktree Logistics (Singapore)
MIDDLEBACK		Australia	12,000	2006	Gravity feed to boom conveyor		CSL Australia	Canada	Dedicated to iron ore transshipment from barges to ocean vessels in the Gulf of Spencer for Arrium (OneSteel)
MIRAMAR									Dedicated to transshipping iron ore at Freetown, Sierra Leone for London Mining
ORE FABRICA	FRONT DUCHESS	Cook Islands	284,480	1993/	Grab to belt conveyor	HHI	Seamar (Vale SA)	Brazil	Dedicated to floating storage and transshipment of Vale iron ore at Subic Bay anchorage, Philippines
ORE SOSSEGO	SUNRISE V	Cook Islands	256,147	1991	Grab to belt conveyor		Seamar (Vale SA)	Brazil	Dedicated to floating storage and transshipment of Vale iron ore at Subic Bay anchorage, Philippines
PRIDE OF MARAMPA		Liberia							Dedicated to transshipping iron ore at Freetown, Sierra Leone for London Mining
PRINCESSE ABBY							PT Mitra Swire	Indonesia	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan
PRINCESSE CHLOE							PT Mitra Swire	Indonesia	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan
ROYAL SESA		India	3,519	2012		Chengxi Shipyard	SESAGOA Ltd. (a Vedanta company)	India	Dedicated to iron ore transfer to ocean vessels at Mormugao, India
SHATIXA	BULK CHALLENGER	India	12,207	2002	Grab to hold	China	Timblo Private Ltd.	India	Dedicated to transshipping iron ore into ocean going vessels at Goa, India
SPENCER GULF		Australia		2006	Elevating conveyor system on offshore trans-shipment barge		Auscan Transshippers (CSL Australia)	Canada	Dedicated to iron ore transshipment from barges to ocean vessels in the Gulf of Spencer for OneSteel, Whyalla
SST BERAU		Indonesia		2000	Scraper to bucket elevator to belt conveyor	Shanghai, China	Lati Transshippers (CSL Asia consortium)	Canada (Singapore)	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan for PT Berau Coal
VITTORIA							PT Mitra	Indonesia	Dedicated to coal transfer to ocean vessels at Muara Pintai anchorage, Kalimantan
ZEUS		Indonesia	500	2009	Grab to belt	Tsuneishi	Pelayaran Sinar Shipping	Singapore	Dedicated to Indonesia coal transfer at Kalimantan for Rocktree Logistics (Singapore)

DCi





# START OF OPERATIONS AT NEW DRY BULK TERMINAL IN GDANSK



Extensive storage capacity for import and export bulk cargoes

**PERMISSIBLE DRAUGHT** 15,00 M Baltmax

2 cranes of 60 MT lifting capacity

**CONVEYOR BELTS** 4.000 MT / hour

**RELOADING TO TRAIN** 2.400 MT / hour

Blending and screening

Raw materials gateway to Poland and Central - Europe

## CONTACT

TEL. **+32 9 255.02.11**

EMAIL **cd-pp@sea-invest.be**

**WWW.SEA-INVEST.COM**

## Port Północny opens the Polish market to Capesize cargoes



### OPERATIONS START AT THE NEW IMPORT TERMINAL

On 2 September this year, the *City of Dubrovnik* became the first vessel to be unloaded at the new unloading pier at the Port Północny terminal in Gdansk, Poland. The vessel brought the first cargo of import coal to the subsidiary of the Belgian based SEA-invest group.

Port Północny has been a stronghold for the export of Polish coal in large vessels since the beginning of the 1970s. Port Północny aims to export a total of 3mt (million metric tonnes) of cargo this year. Poland, and its hinterland, now have access to an import terminal, which is capable of offering quick turnarounds, can accept Capesize vessels with a maximum draught of 15m, and which has a storage capacity of 2mt.

Two Liebherr LPS 600 portal cranes, with a lifting capacity of 60 metric tonnes, guarantee discharge rates of 30,000 tonnes/WWD (weather working day), while the largest stacker/reclaimer in Poland ensures that the cargoes are transported to the storage areas of both the new and the existing part of the Port Północny terminal. The terminal is able to handle and store coal, anthracite, iron ore and biomass. A high-speed train-loading station loads the largest trains accepted on the Polish railway system at 2,400tph (tonnes per hour). Because both the

import and the export pier are linked to each other, imported cargoes can be reloaded in seagoing vessels to destinations in the Baltic. On top of this, compacting, screening and blending services are offered by the SEA-invest subsidiary.

The Port of Gdansk can now fully fulfill its role as the major hub for bulk cargoes destined for Poland, its neighbouring countries and the Baltic region. SEA-invest is proud to serve its customers in one more port. SEA-invest is present in 25 ports in eight countries. This new jewel to its stevedoring crown lives up to the company slogan 'SEA-invest: an ocean of opportunities'.





## Creation of an environmental observatory for the Bay of Sept-Îles

In late August, the Port of Sept-Îles announced the creation of an environmental observatory for the Bay of Sept-Îles that will be headed by Institut nordique de recherche en environnement et en santé au travail (INREST).

"I'm pleased with the creation of this observatory, which testifies to the determination of the partners involved to work together on environmental and sustainable development issues. This initiative will give the community a comprehensive overview of the bay," said Sept-Îles mayor Serge Lévesque.

In addition to providing an environmental overview, this project seeks to:

- ❖ update and consolidate data and metrics on the bay's environment;
- ❖ produce an annual monitoring report drawing on data processed by INREST;
- ❖ predict the bay's capacity to accommodate acceptable projects that are safe for people and the environment;
- ❖ help existing businesses improve their environmental performance, as warranted; and
- ❖ measure the results of conservation and environmental improvement efforts in the Bay of Sept-Îles.

"To our knowledge, this integrated and ongoing research approach for an ecosystem of this kind is a first in Quebec, and possibly in Canada as a whole. It helps position us as a pioneer in the environment and sustainable development matters," asserted Donald Bherer, executive director of Cégep de Sept-Îles.

After several months of preparation, the stakeholders agreed on a process whose startup phase will be as follows:

1. Inventory and analysis of existing data (literature review)
2. Water quality and sediment sampling
3. Production and dissemination of a final report

"The current data is insufficient for developing a long-term, overall monitoring strategy, so this startup phase will enable INREST and its partners to better structure subsequent phases planned for 2014 and 2015," said Dr. Julie Carrière, Eng., researcher and director of the new research institute.

This important project will enhance understanding of current and future environmental impacts thanks to the acquisition of credible and updated baseline data. In addition, it will support stakeholders in their decision making and environmental management while responding to public expectations and concerns.

"The new observatory integrates the objectives pursued by Green Marine. It will help protect our valuable marine ecosystems and ensure responsible planning based on sustainable development values. This innovative initiative reflects the environmental leadership of the port and its partners," said Pierre D. Gagnon, president and CEO of the Port of Sept-Îles.

It will cost close to \$384,250 to get the first phase off the ground. Développement économique Sept-Îles will contribute \$50,000, the Port of Sept-Îles \$209,600, and Corporation de protection de l'environnement \$124,650. "I would like to thank the City of Sept-Îles for providing the financial support we need to carry out this project, which has been several years in the making. It's an environmental initiative that is key to the development of our community," said Corporation executive director Stéphanie Prévost.

Work will begin soon, and the final report for the first phase is slated for fall 2014. Phase 2 of the project, planned for next year, is expected to include research on the benthic community, eelgrass, fish, phytoplankton, macroalgae, and physical and climate data, among other aspects.



ASSOCIATED TERMINALS

Our lineup, your

# team

When you need an expert to provide cargo handling and logistical services, turn to Associated Terminals. With the shortest transit times from the Gulf of Mexico, twelve midstream berths including two full size Cape berths, state of the art technology and an experienced staff, our team has it covered. [www.associatedterminals.com](http://www.associatedterminals.com)

## Richards Bay to receive longer block trains

Transnet is to operate 200-wagon trains between the Mpumalanga coalfields and Richards Bay Coal Terminal. These 30% longer units will enter service at the same time as a new scheduling system is adopted to improve reliability and reduce turnaround times. Locomotive cycle times will fall from 58 hours to 41 hours, while the wagon cycle will drop from 63 hours to 48 hours.

Now, the challenge is to fill this additional capacity.

In the past, Transnet could handle 75mt (million tonnes) a year, but to date the most moved has been 69.2mt, as demand for thermal coal has dropped in line with reduced economic activity worldwide.



The ability to run longer trains is a result of building rail sidings at individual coal mines long enough to handle the new block trains, which previously had to be assembled in shunting yards. Going forward, it will no longer be necessary to sub-divide any of the trains, two of which will operate each day. This means that capacity is now in the order of 81mt per year, while Richards Bay can handle up to 91mt. The prediction is for around 1.85mt a week to be exported through the port, representing a 30% increase.

## Pipavav prefers coal over other dry bulks

The Indian port of Pipavav says that it is more profitable to handle coal than either wheat or fertilizer. The specialist terminal, Gujarat Pipavav Port Ltd, which is operated by APM Terminals, receives a maximum of four dollars per tonne of coal handled, compared to \$15 for a tonne of wheat and seven dollars for a tonne of fertilizer. However, it is easier to handle coal and therefore more desirable to do so.

For the quarter ending in June, the port handled a record 1.018mt (million tonnes) of dry bulk, of which 47% was coal and 20% fertilizer. In addition, the terminal also handles limestone and foodgrains.

The quarter was noticeable in that traffic was 77% higher than the previous one.

*Barry Cross*



**interBALT**

INTER BALT Sp. z o.o.  
Shipping Agency  
ul. Stągiewna 18  
80-750 Gdańsk  
Poland

phone +48 58 300 96 94  
fax +48 58 346 22 40  
e-mail: [interbalt@interbalt.pl](mailto:interbalt@interbalt.pl)



[www.interbalt.pl](http://www.interbalt.pl)





# Duluth Seaway Port Authority awarded \$10 Million federal TIGER grant

With a \$10 million TIGER grant from the US Department of Transportation, the Duluth Seaway Port Authority is embarking on an exciting new project along Duluth's waterfront — undertaking a major adaptive re-use and redevelopment project on Garfield Pier (Dock C&D) that will not only re-establish the dock's structural integrity, but also connect the 28-acre site to existing road access and rail infrastructure. Once complete, the new platform will markedly expand the port's general cargo handling capacity.

"The award represents a major investment in this region's multimodal transportation system," said Adolph Ojard, Port Authority executive director. "The Port of Duluth-Superior is strategically positioned to serve the heartland of North America. Returning this valuable parcel of land to the development stream allows it to once again become a productive community asset — offering strategic support to serve expansions in multiple core industries in the years ahead from the region's nonferrous, iron mining and steel industries to the pulp and papermaking sectors, while further incentivizing new entrepreneurial investment."

In essence, this is a capacity-building project. "This site represents the largest of just a handful of remaining parcels of land situated on Seaway-draught channels in this harbour," added Ojard. "We're rehabbing the platform of what was once a grain elevator...setting the table, so to speak, for future growth and development. Once complete, the port will have a new, competitive platform from which to address future business opportunities as they present themselves."

This redevelopment project represents a major undertaking for the Duluth Port. The total price tag is \$16 million. In addition to the \$10 million in federal funding awarded, project costs will be covered by nearly \$3 million in funds forthcoming from the Minnesota Port Development Assistance Program with the balance committed by the Port Authority itself.

## PROJECT HIGHLIGHTS

Once the award is officially presented by the U.S. Department of Transportation, Port Authority staff will finalize the specific construction timetable. Preliminary engineering design work to stabilize and upgrade the site has been completed; the plan encompasses several components:

- ❖ dock reconstruction (replacing corroded sheet piling and deteriorated wooden dock walls);
- ❖ resurfacing the property;
- ❖ renovating a roll-on/roll-off dock;
- ❖ dredging adjacent waters for ship berths;
- ❖ installing road and rail infrastructure links; and
- ❖ making safety and security enhancements.

"We could conceivably bid the project yet this fall and be ready to start construction next spring," noted Ojard, referencing the site plan and artist's rendering included in the grant application. He also stressed the competitiveness of the TIGER grant process. "The Port Authority submitted a proposal in each of the four previous years and rose quite high in final rankings, but never made the final cut...until now. It seems the fifth time's the charm."

"This is a project endorsed and supported by public and private sectors alike for the opportunities it opens up for growth and for the value it adds to the port and to the greater business community," added Ojard. "We are grateful for the long-standing support of Minnesota's Congressional delegation as well



as for the support received from Mayor Ness, local civic leaders and stakeholders from business and industry who endorsed this project from the outset. And, we want to thank MARAD, this nation's Maritime Administration, for the support and guidance they've provided throughout this process."

Cargill donated Garfield Pier (Docks C&D) to the Duluth Seaway Port Authority in 1989; the Port Authority has since spent upwards of \$3 million to demolish the old grain elevators and prepare the site for future capital upgrades. Located across the slip from the existing Clure Public Marine Terminal, the pier is currently used for the temporary storage and staging of wind turbine components and other project cargo.

Transportation Investment Generating Economic Recovery (TIGER) grants date back to the program's launch in 2008. Administered by the US Department of Transportation, it is the only general funding source for port-related and other transportation infrastructure projects across the nation, so this award represents a crucial investment in regional job creation, expansion of export capacity and overall economic competitiveness. There was nearly \$474 million in TIGER discretionary funds available for 2013.

Close to 1,000 ships visit the Port of Duluth-Superior each year, moving roughly 40 million tonnes of cargo including iron ore, coal, grain, limestone, cement and salt plus a variety of heavy-lift and project cargo.

As the largest tonnage port on the Great Lakes-St. Lawrence Seaway, cargo movements through the Port of Duluth-Superior support 11,500 jobs and contribute over \$1.5 billion to the local/regional economy.

The Duluth Seaway Port Authority is an independent, public agency created by the Minnesota State Legislature to foster regional maritime commerce, promote trade development, facilitate industrial development and serve as an advocate for port interests here and around the world.

# Australian port benefits from NetSuite

NetSuite Inc., a major provider of cloud-based financials/ERP and omnichannel commerce software suites, today announced that Victoria's Port of Portland in Australia has gone live with NetSuite. Port of Portland replaced Epicor for financials; Astea International for shipping,

accounts payable and receivable; HR3 for payroll; and MEX for maintenance, projects and operations, with a single instance of NetSuite for financials, payroll, project management, asset management and shipping. Port of Portland was able to significantly improve the efficiencies of its financials and project management capabilities with NetSuite, as well as streamline its ship scheduling process to support its growing customer base of exporters.

Port of Portland is a deep-water bulk port located between the ports of Melbourne and Adelaide and is the international gateway for the Green Triangle Region, responsible for nearly two thirds of Australia's wood production. The port specializes in the import and export of bulk commodities, particularly agricultural, forestry and mining products, as well as aluminium and fertilizer. It has approximately five million tonnes in annual throughput, which is expected to grow to seven million tonnes over the next few years. With more than 300 ships passing through the



port each year, it delivers \$3 billion into the region annually.

Port of Portland is focused on growing its customer base of exporters, and needed to update its core business systems in order to support this future growth. Its previous systems were out of date and lacked integration, which

required a lot of inefficient manual processes that led to data inconsistencies. Ship scheduling, in particular, was hand written on pieces of paper and not captured properly in its software systems. After reviewing a number of on-premise solutions, such as Technology One, Klein Ports, One Port and Microsoft Dynamics NAV, it turned to NetSuite's fully integrated cloud-based business management solution to future-proof its business, as it was the only solution that met all of its requirements.

"As we are a small-to-medium business with only 55 employees and 20 operational maintenance staff, NetSuite's cloud-based solution was very appealing to us — it means we can be cutting edge with the latest advancements in technology, without having to manage and upgrade it ourselves," said Kara King, company accountant for Port of Portland. "We don't have a full-time IT person and we are in a remote location, so having NetSuite helpdesk at our fingertips is a big thing."

## PORT OF KOKKOLA

### *The Main Dry Bulk Port in Finland*



### Ideal location with 13 m draft

The Port of Kokkola is ideally located, with rail and road connections to every part of Finland and to Russia. We are Finland's largest transit port delivering goods to and from Russia.

Continuous investments have made it the leading dry bulk port in Finland.

The draft of 13 m allows Panamax class vessels to load full loads of 75,000 ton, and larger vessels (120,000 DWT) have loads of more than 100,000 ton.





# Major bulk port in Finland

## Port of Pori

*The port of all size vessels*



## The strengths of the Port of Pori

- Dust minimized loading and unloading systems in use
- Suitable for large volumes
- Deep fairway (15.3m) and the best ice conditions in Finland
- Uncongested hinterland connections
- Room to expand, free areas available for dry and liquid bulk
- Located far from dense housing areas
- Environmental and work safety as top priorities

### Reachability (by truck)

● Within 3 hrs. of Pori

● Within 6 hrs. of Pori

### • New 12m quay!

For more info go to:  
[www.portofpori.fi/en](http://www.portofpori.fi/en)



Port of Pori | Merisatamantie 4, FI-28880 PORI, FINLAND

Tel: + 358 (0)2 621 2600 | Fax: + 358 (0)2 634 9498

[info.port@pori.fi](mailto:info.port@pori.fi) | [www.portofpori.fi/en](http://www.portofpori.fi/en)



## Nacala coal terminal commences operations in December

The new coal terminal at Nacala-a-Velha, in Mozambique, will dispatch its first consignment in December. The facility, which will serve markets in India, Europe, Asia and South America, is currently under construction. Coal will arrive from Moatize by rail, a distance of 912km. The 1,500m-long trains used will be headed by four locomotives hauling rakes of up to 100 wagons. To date, investment in the project has been \$4.3 billion.

BC

## Interacid diversifies into dry bulk

Interacid, which sells sulphuric acid to the mining industry, is developing a \$90 million project aimed at diversifying its business into the logistics sector and also into the handling of dry bulk concentrates of copper and potassium chloride. In order to do this, it is to open a new terminal inside the

installations that the company already has in the industrial park adjacent to the Chilean port of Mejillones. Construction work will begin at the end of next year and take up to three years to complete, allowing the terminal to enter operational service in 2018.

BC

## TPP establishes new loading record

Terminales Portuarias del Pacífico (TPP), which operates the dry bulk terminal at the Mexican port of Lázaro Cárdenas, has established a new loading record, despatching 142,933 tonnes of iron ore in one week. The consignment was loaded into a Capesize vessel bound for China.

The previous record was 142,450 tonnes. However, the Mexican record for overall dry bulk shipments dates back to 2009, when a vessel discharged 142,190 tonnes of imported coal.

BC



SILOS E TERMINAL GRANELEIRO DA MATOLA. SA

...a gateway to Southern Africa

Ship Loading and Unloading • Silo • Road and rail unloading • Railway/Truck loading in bulk • Loading bags into trucks • Truck expedition • Bagging

Phone: (258 21) 721762/ 722770 • Fax: +258 21 721763 • Cell: +258 82 3003576

E-mail: stema@stema.co.mz • Web: www.stema.co.mz

Head Office: 729, LÍNGAMO, MATOLA  
PO Box 1940, MAPUTO, MOZAMBIQUE







QUEBEC  
STEVEDORING  
GROUP  
**PORT OF  
QUÉBEC**

# THE NORTHERN CORRIDOR

FOR U.S. COAL EXPORTS TO EUROPE AND ASIA.



LAKE VESSELS  
(RAIL)

CAPE-SIZE VESSEL  
CAPACITY

EXCESS STORAGE  
CAPACITY

YEAR-ROUND  
OPERATIONS

SHORTEST DISTANCE AND TRANSIT TIME  
TO EUROPEAN MARKETS

WE HANDLE • WE STORE • WE BUILD • WE INNOVATE • WE INVEST • WE ORCHESTRATE

# WE CAN HANDLE IT



**PORT OF QUÉBEC**



ARRIMAGE QUÉBEC  
QUEBEC STEVEDORING

## Zarechnaya to acquire 100% of Baltic Coal Terminal



Coal Company Zarechnaya is to acquire 100% of the equity in Baltic Coal Terminal (BCT), which operates at the Latvian port of Ventspils. The news, which has only recently come to light, refers to an agreement initially signed on 15 February 2013, although this has not yet been acted on.

The mining company, which operates in Russia's Kuzbass region and is one of the country's five largest exporters of thermal coal, currently holds a 50% stake in the terminal. As for BCT, it handled 4.799mt (million metric tonnes) of coal in 2012, exporting it to markets in the UK, Germany, Italy and the Netherlands. It has a static capacity of 210,000 tonnes, although can handle up to 6mt of coal annually.

To date, €80 million has been invested in the terminal. *BC*

## GWS expands Santander installations

Global Steel Wire is to expand its existing installations at the Spanish port of Santander. It has asked the port authority for an additional 6,423m<sup>2</sup> of area. The company specializes in the manufacture of wire, which it supplies to high-technology sectors. It is already one of the largest companies in the Cantabria region of northern Spain. *BC*



## Galigrain to build new warehouse in Coruña outer harbour

Galigrain, which belongs to the Nogar group, is to build a 9,500m<sup>2</sup> storage facility at Puntas Langosteira in the outer harbour extension. The new facility will become operational in the port of La Coruña, Spain, in 2014, where the company is already the largest agribulk handling company. The concession covering the warehouse will be for a period of 35 years, which is the maximum amount of time allowed under existing legislation.

For its part, Galigrain forecasts handling up to 100,000 tonnes at the facility, which it also believes will eventually have to expand. Initial investment will be in the order of €4.5 million and also includes a discharge and loading grab crane. *BC*



**In Group**  
**Guided by the Sea...**

<ul style="list-style-type: none"> <li>Atlantaport</li> <li>Auloger</li> <li>Avisport</li> <li>ETE</li> <li>ETE Logística</li> <li>JATL, Linde, Narmat</li> <li>Eurclina</li> <li>Gestivell Serviços</li> <li>Mais Seguros</li> <li>Maricargas</li> <li>Marvapor</li> <li>Nevatag</li> </ul>	<ul style="list-style-type: none"> <li>Navigprime</li> <li>Navek</li> <li>Opetis</li> <li>Portatras</li> <li>S&amp;C</li> <li>S&amp;C Moçambique</li> <li>Socarmat Aveliro</li> <li>Socarfer</li> <li>Sofaria</li> <li>STM (Navique)</li> </ul>	<ul style="list-style-type: none"> <li>TCGL</li> <li>TCL</li> <li>Transoal</li> <li>Transinsular</li> <li>Transinsular Açores</li> <li>Transinsular Madeira</li> <li>Transportes Sousa Mendes</li> <li>Vieira &amp; Silveira</li> </ul>
--	---	---

**GRUPO E.T.E.**

Largo do Corpo Santo, 25 | 1200-129 LISBOA | Tel. 211 128 000 | Fax 211 128 091 | info@ete.pt | www.ete.pt





[www.bulkconnections.com](http://www.bulkconnections.com)

**Bulk**

*connections*



## Ukrelevatorprom has commenced 2013 campaign

Ukrelevatorprom, one of the largest grain silo operators in the Port of Odessa, has handled its first consignments of barley, rape and wheat, coinciding with the start of the new harvest. For the last season (July 2012-June 2013), the terminal handled exports amounting to 2.1mt (million tonnes) of grain, of which corn amounted to 808,000 tonnes. This was slightly down on the 2.325mt handled in the previous season. BC

## Taranto bulk terminal to move to Cement Quay

The Taranto Bulk Cargo Terminal Consortium and the Italcave Consortium have agreed to relocate their activities from an existing site on the Polisettoriale Quay to the Cement Pier, thereby freeing up land for use by Taranto Container Terminal. The port authority says this will provide widespread benefits for all concerned. Previously, Ilva Spa, Cementir Spa and the Municipality of Taranto, as well as the FILT CGIL, CISL and Fit Ultrasporti trade unions, had all signed an agreement to allow this relocation to take place. BC

## Lisbon bulk traffic up

In June, overall traffic at the Port of Lisbon registered growth of 3.2%, which was due mostly to dry bulk traffic, which grew by 16.4% for the month. For the first two quarters, overall traffic amounted to 6 million tonnes, of which 40% was exports. In February, dry bulk was up 32%. BC

## Tuticorin establishes salt-handling record

India's Chidambaranar Port Trust at Tuticorin has created a single day salt-handling record. On a recent Saturday, 13,200 tonnes of bulk salt was loaded onto the *Great Gain*. The previous single day record for this commodity had been 8,910 tonnes. BC

## CVRD iron ore carrier docks at Sohar

CVRD's *Vale Shinas* called at the Port of Sohar on its maiden voyage from Brazil, docking at its deep-water jetty, where it unloaded 400,000 tonnes of iron ore. The vessel is the fourth iron ore carrier to be built specifically to carry traffic to and from Oman, where it partners Oman Shipping Company. BC

## July boost for dry bulk traffic at Lisbon

In July, the port of Lisbon, in Portugal, reported growth in dry bulk traffic of 34.7%. During the month, it handled 104,000 tonnes of various commodities, with grain representing more than 60% of the total. Cumulatively, dry bulk traffic at the port has grown by 5.2% on the year to date. BC




MTMG - Morski Terminal Masowy Gdynia Sp. z o.o.  
[www.mtmg.gdynia.pl](http://www.mtmg.gdynia.pl); [mtmg@mtmg.gdynia.pl](mailto:mtmg@mtmg.gdynia.pl)  
 ul. Węglowa 4, 81-341 Gdynia  
 tel. +48 58 627 43 18  
 fax +48 58 621 53 54


*The art of providing logistics services*

*any cargo. any ship. any time*

[www.mtmg.gdynia.pl](http://www.mtmg.gdynia.pl) [www.atics.fr](http://www.atics.fr)



MORSKI  
TERMINAL  
MASOWY  
GDYNIA







**An independent stevedoring company operating in Dordrecht, Moerdijk and Rotterdam.**



- bulkhandling
- warehousing
- storage
- containerhandling

*More than just a stevedore*

**Terminal Dordrecht**  
's-Gravendeelsedijk 175  
3316 AS Dordrecht

T +31 (0)78-6 111 000  
F +31 (0)78-6 111 001  
E [info@zhd.nl](mailto:info@zhd.nl)

**WWW.ZHD.NL**

**Terminal Moerdijk**  
Vlasweg 19  
4782 PW Moerdijk

T +31 (0)168-328 050  
F +31 (0)168-327 678

**OUR FOCUS  
ON CUSTOMERS  
MAKES THE  
DIFFERENCE**

The seaports of Terneuzen and Vlissingen provide an ideal gateway between northern Europe and the rest of the world. They guarantee a rapid flow of goods thanks to their easy accessibility, deepwater location and excellent facilities. The two modern ports are strategically located between Rotterdam and Antwerp, at the mouth of the Western Scheldt. Together with a first-rate network of congestion-free roads, railways and waterways, this ensures fast and effective transport links with the hinterland. The key advantages of Terneuzen and Vlissingen are customer-friendliness, tailor-made solutions and ample opportunities for logistics and industrial activity. And the Zeeland Seaports Authority is there to see that these important benefits are carefully maintained and safeguarded for all our customers.

**driven by dedication**



schelpenpad 2 • p.o. box 132 • 4530 AC terneuzen • the netherlands  
[port@zeelandseaports.com](mailto:port@zeelandseaports.com) • [www.zeelandseaports.com](http://www.zeelandseaports.com)  
p +31 (0)115 647400 • f +31 (0)115 647500

# Low countries struggle to maintain dry bulk volumes

## Hamburg-Le Havre range



*OVET has installed a new state-of-the-art train loading station at Flushing/Vlissingen terminal. For more details, see p59.*

**Barry Cross**

Some ports in the low countries have struggled recently to maintain previous healthy levels of dry bulk traffic as the recession in Europe has knocked industry back and resulted in fewer imports. However, there have been some bright spots, too.

At the Dutch Port of Dordrecht, the leading dry bulk terminal, ZHD, handled around 2.5mt (million tonnes) of cargo in 2012, with commercial director, Leo Lokker stressing that the company deals with all kinds of products, many of which performed differently during the year. Scrap, for example, did particularly well last year, although has had a slow start in 2013, due to the downturn in the steel industry, the price of scrap and the situation in the Middle East, among others.

“Wood pellets (biomass) is a major commodity for ZHD at the port and performed well in 2012, but has since declined due to the Dutch government’s policy in respect of co-firing,” explains Lokker.

He adds that the industrial minerals markets, which depend on the steel industry very much, are also having a difficult time.

“However, thanks to the diversity of customers/end-users and products, although 2013 is not a great year so far, ZHD is

still doing well,” he says, noting that the company has also entered the agribulk markets due to obtaining GMP certification at the beginning of the year.

To stress how tough things are out there at the moment, Lokker forecasts that, at Dordrecht, ZHD expects a decrease of approximately 300,000 tonnes on the year. Nevertheless, it also has a terminal at Moerdijk and a floating cranes business in Rotterdam, so is sufficiently diversified to cope with falls in traffic at one terminal.

ZHD’s Dordrecht terminal handles both imported and exported dry bulk. Scrap is mainly exported, while other commodities are, usually, inbound. Quizzed over to whether the ratio is changing over time, Lokker concedes that it is difficult to say, since the company is involved in so many different markets: minerals, scrap, agribulk, coal, biomass, and so on, although the overall picture at the port is broadly similarly to that of Rotterdam, whose port authority effectively oversees that of Dordrecht.

Given the presence of such a powerful neighbour, Lokker was asked how Dordrecht is still able to compete in the dry bulk market. There are, he says, many distinct reasons.





## European Bulk Services Rotterdam



### European Bulk Services (E.B.S.)B.V.

Elbeweg 117 ▶ Europoort Rotterdam ▶ Port no. 5820 ▶ P.O. Box 1204 ▶ 3180 AE ▶ Rozenburg ▶ The Netherlands  
T +31(0)181-258121 ▶ F +31(0)181-258154 ▶ E [sales@ebsbulk.nl](mailto:sales@ebsbulk.nl) ▶ W [www.ebsbulk.nl](http://www.ebsbulk.nl)



“Most importantly, larger vessels — up to Handymax size — can call here because we have 9.45m of draught, which means they sail further inland, where there are then good barging and trucking options to allow consignments to move even further into the continent,” he explains, noting that if a vessel drawing more water wants to access facilities, it can be lightered on the buoys at Rotterdam, using the company’s self-propelled floating cranes.

Furthermore, ZHD is very much more focussed and specialized in niche markets, such as scrap handling, biomass and special minerals, the latter involving specialist transshipment. This enables additional value to be added, which wouldn’t be the case with larger Panamax and Capesize vessels hauling coal and iron ore shipments. Nevertheless ZHD is still able to discharge even these vessel sizes directly into barges with means of their floating cranes on the buoys and/or dolphins in the Port of Rotterdam.

“We can also offer our customers greater flexibility, more competitive pricing and better services than most of them would get in a bigger port,” he says. “Because we also handle general cargo in both containers and as breakbulk, we have the equipment available to load or discharge bulk into or from containers, or in whatever combination that might prove useful.”

Significantly, Dordrecht is the busiest inland waterways hub in the Netherlands, with barges accounting for at least 2.5mt of cargo. They go as far down river as it is possible to go, including to Berlin and out into the Danube. For large bulk volumes — which would be the case when operating to, for example, Duisburg in Germany — barges can load up to 5,500 tonnes depending on actual water level.

In contrast, rail is little used, while road accounts for 10–15% of the total cargo moved land side.

“Both the municipality and port of Rotterdam are already investing heavily in upgrading roads and other infrastructure around Dordrecht. ZHD, itself, is investing a lot in new warehouses, equipment and together with the Port of Rotterdam we are working on an expansion plan, which would see our operating area expanded by about 100,000 square metres,” says Lokker.

In 2012, the Dutch Port of Moerdijk — the Netherlands’ fourth largest in terms of total trade — handled a total of 7,884,000 tonnes of dry bulk. For the first half of the current year, volume amounted to 4,063,814 tonnes compared to the 4,190,193 tonnes handled in the corresponding 2012 period.



*Port of Dordrecht.*

According to Sjaak Vaes, manager of commerce, at Moerdijk Port Authority, “The expectations for dry bulk in the near future is for traffic to stabilize or grow just slightly up until 2030.”

Most of the dry bulk handled at the port is imported, although Vaes expresses a hope that, in the future, there will also be more exported consignments.

Asked why companies make use of the Port of Moerdijk when other dry bulk handling facilities abound at other ports in the region, he points out that good access by sea, barge, rail and road are all important reasons, with the port accessible by the Rhine, Meuse, Scheldt, Volkerak, Haringvliet and Markiezaatsmeer rivers, as well as via various canals.

“We are also located mid-way between the main ports of Rotterdam and Antwerp, with the latter just three hours’ sailing time up river, which is why a lot of companies prefer to use Moerdijk. In addition, we have a lot of good connections with the main hinterland of Europe, going from Germany as far east as the Baltic States,” he says.

In terms of landside movement, the port authority is active in trying to achieve a modal split by promoting non-road transport. However, Vaes concedes that rail, in particular, needs significant investment, if it is to achieve greater market share.

“We are therefore making a major effort to put into place a Rail Service Centre, where we will be able to combine large flows of the same product. In addition, companies that are situated within the Port of Moerdijk are also making investments

to ensure that they are ready for future developments,” he says.

Asked whether any current traffic could be considered to be ‘captive’ to the Port of Moerdijk, he says he believes that cement could be seen in that light.

However, the port also handles agribulk, building materials, steel products, wood pellets, fertilizer and metal products.

Finally, in terms of access, he points out that draught, at around 8.9 metres, means that 90% of Lloyds-registered ships can be accommodated at the port.

Groningen Seaports, which is the fourth largest Dutch port in terms of volume behind Rotterdam, Amsterdam and Zeeland, handled total traffic in 2012 of 8.705mt, of which 6mt was in the form of dry bulk, a slight increase over the



*Port of Moerdijk.*



# stevedoring & warehousing rotterdam

- PROJECT CARGO
- INDUSTRIAL BREAKBULK
- 730 METRES QUAY LENGTH
- HEAVY LIFT STORAGE AREA
- HEAVY LIFT UP TO 1500 TONS

Lifting your cargoes faster

ISPS CERTIFIED

AEO-F CERTIFIED



Waalhaven n.z. 4  
3087 BL Rotterdam  
P.O. Box 55092  
3008 EB Rotterdam  
Portnummer 2157

TELEPHONE  
+31 (0)10 429 94 33

FAX  
+31 (0)10 429 02 61

E-MAIL  
office@rhb.nl

WEB  
www.rhb.nl



shorecranes up to 208 tons

5.8mt reported for 2011. According to Erik Bertholet, business manager logistics, the 3.44% growth is mainly due to an increase in paper and palm kernel expeller commodities.

"For the first six months of 2013, dry bulk traffic has amounted to 2.6mt, during which both paper traffic and building materials have declined somewhat," he says. "However, for the year in total, we are expecting a similar performance to both 2011 and 2012, given that the economy remains sluggish."

Groningen Seaports handles more exported dry bulk than imported, although appears to be on course to register a slight increase in imports in the third and fourth quarter of the current year. Minerals is by far the most important dry bulk handled, accounting for 52% of the port's overall traffic base, with food products and agribulk, at 5% and 4% respectively, well behind in second and third place.

Quizzed as to why the port is still able to attract dry bulk traffic when it is relatively close to other major ports, Bertholet notes that there are several existing production companies within the vicinity of Groningen, which also cater for specific logistical demands from within the local area. In addition, the port has few problems with congestion and has easy road access.

"Our hinterland is similar to that of both Rotterdam and Antwerp, although we can say that our 'niche' market is to be found in the northern extent of that region," he says.

Groningen Seaports is also linked, via the Eemskanaal, to the local inland waterway network. The canal is actually a major inland route, also serving Rotterdam and Amsterdam. Indeed, so important is this link that Bertholet notes that it accounts for the majority of dry bulk movements, which are either barged inland or moved using small vessels.

"In terms of the modal split, waterway predominate, with road carrying just a small part of our overall dry bulk traffic," he says. "We do have rail connections to both Eemshaven and Delfzijl harbours, with rail services provided daily by DB Schenker. The port authority is trying to encourage greater use of rail and Groningen Seaports is investing to extend our rail network."

In fact, the main role of Groningen Seaports is to invest in quays and infrastructure, such as roads, rail links and utilities, leaving the provision of handling equipment and storage to private sector interests.

Most bulk handling takes place at Eemshaven, which has a modern public bulk terminal opened in 1973 and is used for the storage and transshipment of dry bulk commodities. The bulk terminal, which is situated on the northern side of Julianahaven, is accessed via 1,100 metres of quay, offering draught of up to 14 metres. This compares with the 7.5–9 metres to found elsewhere within the port complex, which also comprises two inland terminals at Farmsumerhaven and Oosterhornhaven.

At Delfzijl harbour, there are ample storage and transshipment facilities, serving several adjacent industrial and logistics clusters, such as Chemie Park Delfzijl, Metal Park Delfzijl and the Trade Wharf. The Eastern Trade Wharf has a total length of 850 metres and is the transshipment location of both general cargo and dry bulk goods. Just behind, two stevedore companies offer storage and transshipment for commodities such as timber, containers, paper, hardwood trunks, china clay, pulp and general cargo.

One interesting new initiative is the planned Bioport Eems Delta, a seaport and industrial site where biomass will be imported and transshipped. Groningen Seaports is now looking

## PROBLEM PORT OF ANTWERP SOLUTION

### Everything is possible at the Port of Antwerp

- Everything is possible is not just a slogan, it's an attitude. It's the way the port of Antwerp looks at things. We don't stare at problems, we see solutions.
- A port with endless possibilities. We have to admit, sometimes it's quite a challenge. But a challenge that we love to take together with you.

Challenge us at [customerservice@portofantwerp.com](mailto:customerservice@portofantwerp.com)  
Follow us at [www.portofantwerp.com/everythingispossible](http://www.portofantwerp.com/everythingispossible)



#eisp13  
#portofantwerp







**Any bulk commodity  
in any volume  
from any vessel,  
ROTTERDAM BULK TERMINAL  
... at any time.**



RBT is the Rotterdam *bulkterminal*  
that handles any kind of bulk in any volume, at any time  
with care and professionalism, fast and competitive.

Rotterdam Bulk Terminal offers you fast, reliable and flexible bulk handling, with a customer-friendly and highly service-oriented approach at an excellent price/quality ratio, no matter the volume or type of bulk that is involved. Extensive possibilities for specialized storage for a wide range of bulk commodities, combined with a huge capacity, offer you a maximum result.

*Rotterdam Bulk Terminal, better in bulk!*



to attract, support and facilitate companies setting up their businesses in the bioport. In addition, this sector is also being strongly back by the Dutch government.

Plans for a gasification plant at BioMCN and Eneco's wood-fuelled plant in Delfzijl should also result in a sharp increase in the import of wood (and wood-like materials).

In 2012, Zeeland Seaports reported a 9% reduction in dry bulk traffic, although for the first half of 2013 traffic grew by 1.5%, which is how the port authority expects the year as a whole to end. Despite the essentially flat European economy, the diversity of dry bulk handled at Zeeland means that, when one commodity is doing badly, others are doing better.

Statistically, Zeeland Seaports handles twice as much imported dry bulk as it does exported dry bulk, although officially released figures do not include a lot of export barge traffic, which means outbound consignments are probably under-reported.

Facilities at the port are located mid-way between Antwerp and Rotterdam, with all three ports essentially chasing the same hinterland, which could be said to be quite a large chunk of north-western Europe.

"We believe that shippers choose Zeeland Seaports over either Antwerp and Rotterdam because of the good dedicated terminal facilities that we have, along with a good workforce, quick turn around times, our located close to the North Sea, draught of up to 16.5 metres and our congestion free, multimodal hinterland connections," says communications manager Arno Dirkzwager.

The excellent barge connections generated 12mt of dry bulk traffic last year, moving between the Netherlands, Belgium, France, Germany, Poland and Switzerland. Indeed, barge has a 45% share of the overall landside movement of cargo, followed by road (25%), short sea (20%) and rail (10%).

"Recently, our customers have been investing in new storage facilities for black and white bulk. At the port authority, we have invested in better quay facilities and rail connections for dry bulk. On top of that, we are looking to improve barge facilities," says Dirkzwager.

He also reveals that a recent agreement has been signed with a company that is going to invest in the construction of a new fertilizer factory in Terneuzen, which will provide further storage facilities for dry bulk, as well as overall more traffic.

Dirkzwager calculates that around 60% of current dry bulk traffic is essentially "captive" to the port, because of either nearby processing plants or industries.

In terms of draught, Terneuzen has handle vessels drawing up to 12.5 metres of water, while Vlissingen has water depth of 16.5 metres, with the port authority actively investigating a possible one metre increase.

"16.5 metres is already suitable for Capesize ships, but in the future ports might be better off with 17.5 metres," he says.

The poor state of the European economy definitely negatively affected the flow of goods transported by water to and from the Port of Brussels in 2012. Cargo loaded and unloaded in Brussels decreased 3% to just over 4.7mt, while transit traffic through the river on which the port stands declined sharply by 22%. Overall traffic — that handled directly by the port and that simply passing through — dropped 9.2% to 6.5mt.

However, despite the poor results, these are indicative of those reported across the entire European port sector.

Significantly, the volume of goods transported by inland waterways effectively took 610,000 trucks of the road in and

around Brussels, thereby saving 95,000 tonnes of CO<sub>2</sub>.

In terms of dry bulk traffic, construction materials continue to head the list of commodities handled. Unfortunately, given the comparative slump in the local construction industry, these declined by 8% on the year from 2.836mt to 2.611mt.

Hydrocarbons remain in second position, but are showing positive signs of growth. Agribulk, at 332,000 tonnes, was up 5%, although foodstuffs fell by 21% to 122,000 tonnes. Minerals and scrap traffic declined by 45% to 113,000 tonnes, although metallurgical products continue to decline too, down 60% to just 21,000 tonnes.

The Netherlands remains Brussels' major trading partner, accounting for almost 60% of the tonnage traded. The estuary ports of Dordrecht and Breskens provide the bulk of the sand imported by Brussels for the building industry. The Netherlands also remains an important market for the sector development in areas such as slag and mill residues.

Trade between Belgium and France remained stable overall, while that with Germany is almost back to its 2008 level.

Last year, the Port of Brussels also launched its pilot Watertruck project, which forms part of the EU INTERREG Irb programme. This latter provided half of the €40,000 seed capital, with the operators accounting for the balance.

The scheme consists of small barges ferrying water sludge from a treatment plant at North Aquiris to the container terminal, where it is loaded onto larger barges for onward transit to Liège, where it is used in the production of cement. The new concept allows 2,000 truck journeys to be eliminated, since the 20,000 tonnes of product involved would previously have been moved by road. Not only does the deployment of the small barges help to optimize the logistics chain involved in cement production, but it also results in cheaper costs.



## COAL INTO GERMANY

via Rhenus Midgard's Seaports

**Coal Terminal NSB (Niedersachsenbrücke) in Wilhelmshaven, Jade Bay (Germany):**

- ☐ New: Capesize Vessels up to 250,000 dwt with a draft up to 18,50 m (60') sw
- ☐ Rail connections into Germany's hinterland and neighbourhood countries

**Coal Terminal Nordenham on the River Weser (Germany):**

- ☐ Rail- and inland waterway connections to Germany's hinterland and beyond
- ☐ Panmax- and partly laden Cape Size Vessels with a draft up to 13,10 m (43') fw

Both ports handle close to 5 million tons, i.e. more than 10% of the imported coal into Germany.

**Rhenus, a company with a long history, is one of the world's leading providers of integral logistics services and has annual turnover totalling 4 billion Euro.**




Rhenus Midgard Wilhelmshaven GmbH & Co. KG · Lüneburger Str. 6 · D 26384 Wilhelmshaven  
Tel. +49 (0)4421 936-135 · Fax +49 (0)4421 936 104  
info.wilhelmshaven@de.rhenus.com · www.rhenus.com





Quality in bulk

**OVET** B.V.  
[www.ovet.nl](http://www.ovet.nl)



Mr. F.J. Haarmanweg 16d  
4538 AR Terneuzen  
The Netherlands

Tel.: +31 115 676 700  
Fax: +31 115 620 316  
E-mail: [info@ovet.nl](mailto:info@ovet.nl)

Contact: Mr. Bram Peters  
Mr. Sander van der Veeke

**NEW: TRAIN LOADING STATION**  
**LOCATION: TERMINAL VLISSINGEN**  
**TRAIN CAPACITY: UNLIMITED D-CLASS**

## OVET dry bulk terminals – quality & flexibility in bulk

### OVET INVESTS FOR THE FUTURE: NEW STATE-OF-THE-ART TRAIN LOADING STATION AT FLUSHING/VLISSINGEN TERMINAL

As from now, OVET has a new state-of-the-art train loading station available at its terminal in Vlissingen/Flushing. This new piece of equipment will allow OVET to receive 44 wagon trains in one length. OVET already handled 14 test trains for different (German) customers using different rail transport companies in August and September with good results. A 24-hour round-trip to e.g. the German Ruhr area has proven to be successful. The rail companies were very satisfied with the available good connections to the port of Vlissingen.

The station has a maximum loading capacity of 1,500tph (tonnes per hour) and is equipped with an automatic weighing system. Over 1,250 metres of rail track are available at the



— can still be used to load different types of wagons with all kinds of dry bulk products.

OVET operates two deep water terminals in Vlissingen and Terneuzen. Both locations are strategically located and have efficient hinterland connections. The advantage of the locations for rail transport is that there is no congestion at all. The time needed to reach the German border is therefore very efficient.

The new installation was built by Heilig B.V. located in Heerhugowaard, in co-operation with TES Installation for the electro technical installations. The rail infrastructure was built by Strukton with subcontracting to J. Hoondert & Zn. B.V. The of the terminal layout was designed in co-operation with Logitech B.V.

The rail network Zeeuwse lijn and Sloelijn connect the port of Vlissingen to the European hinterland. The rail lines are electrified and the port of Vlissingen has of an electrified train



terminal of which 675 metres are double track.

Besides train loading, OVET also offers de-ironing, blending, screening and crushing services.

The port delivers excellent rail connections, rail paths and (diesel)shunting services. Different rail and (diesel) shunting companies (DB Schenker, Locon, Rheincargo, Captrain, RRF, TX Logistik) offer transport from and to the port which can provide OVET with the demanded services. An electrified shunting yard is facilitated at rail station Vlissingen-Sloe.

With these facilities, OVET is capable of expanding coal rail transport towards the European hinterland, mainly to supply the German power and steel industry.

However, other dry bulk products can obviously also be handled for all European destinations. The new facility is designed in order for OVET to remain flexible in the way of loading. Other loading equipment as mobile conveyor belts — or cranes

yard. The rail track from the train yard to the OVET Terminal (Kalootherbour) is non-electrified. The transport on this track is done by means of diesel shunting locomotives. Different shunting companies are present in the port. The distance of this track is approximately 5km.

With these new facilities OVET is ready for the future. It can now be present in the market on different fronts.







## Bulk Terminal Amsterdam

Your partner for dry bulk cargoes  
into the main European Markets

- **MAIN TERMINAL:** QUAY LENGTH 1.2 KM WITH TWO BERTHS/SEPARATE BELT SYSTEM FOR SIMULTANEOUS DISCHARGE OF TWO LARGE COAL VESSELS (UP TO CAPE SIZE) AT A HIGH CAPACITY TO THE VARIOUS STACKING INSTALLATIONS (3250 AND 3850 TPH)
- **TERMINAL NORTH:** QUAY LENGTH 350 METERS / ONE BERTH FOR UP TO CAPE SIZE VESSELS
- **MAX VESSEL SIZE:** 17.80 METERS DRAFT SWEK, MAX BEAM 45 METERS
- **4 GANTRY CRANES** (1 x 60 TONS / 1 x 50 TONS / 2 x 30 TONS)
- **FLOATING CRANE** (50 TONS)
- **COAL STORAGE CAPACITY** 3MIO TONS ON 650,000m<sup>2</sup>
- **RAILCAR LOADING FACILITY;** 25,000 TPD
- **TWO LARGE SHIP (SPOUT) LOADERS:** 60,000 TPD AT THE SONTHAVEN FOR (PUSH) BARGE COMBINATIONS AND SEAGOING VESSELS.
- **GRAB LOADING INTO BARGE/SEAGOING VESSEL AT MAIN TERMINAL AND TERMINAL NORTH**
- **IN TOTAL 9 HEAVY DUTY MAGNETIC SEPARATORS** INSTALLED IN ALL INWARD AND OUTWARD BOUND CONVEYOR BELT ROUTES, INCLUDING THE RAILCAR LOADER. BOARD/BOARD INTO BARGE BARGE/COASTER ALSO POSSIBLE VIA THE MAGNETIC SEPARATORS.
- **HOMOGENISING OF VARIOUS GRADES OF COAL** WHILST LOADING VIA THE CONVEYOR BELT INCL. WEIGHT ASSESSMENT PER QUALITY
- **SCREENING/CRUSHING/MIXING**
- **COVERED STORAGE CAPACITY AT MAIN TERMINAL** IN 5 SHEDS DIRECTLY UNDER REACH OF THE GRABS; TTL. 25,000m<sup>2</sup> FOR BIOMASS, AGRIBULK AND MINERALS.

## OBA Bulk Terminal Amsterdam

Westhavenweg 70, 1042 AL Amsterdam,

Managing Director: Hans Fylstra (hans.fylstra@oba-bulk.nl) +31 20 5873701

Manager Commercial Department: Hans Mattheyer; (hans.mattheyer@oba-bulk.nl) +31 20 5873750

Website: [www.oba-bulk.nl](http://www.oba-bulk.nl)



## Ports of Nagoya and Antwerp sign Sister Port Agreement



*From left to right: Mr. Eddy Bruyninckx, CEO Antwerp Port Authority; Mr. Takayuki Kondo, Executive Vice President Nagoya Port Authority; and Mr. Marc Van Peel, Vice Mayor and Chairman Antwerp Port Authority.*

The Port of Antwerp in Belgium and the Port of Nagoya in Japan have renewed their collaboration agreement. The agreement expands on the treaty of friendship that was first signed 25 years ago. The formal signing of the renewed twinning agreement was held on 28 August during a ceremony on the construction site for the new Deurganckdocklock, giving access to the left bank of the river Scheldt. This lock will enter operation in 2016 and will be the biggest in the world. The agreement was signed on behalf of Nagoya Port Authority by executive vice president Takayuki Kondo. The signatories for Antwerp Port Authority were port alderman and Port Authority chairman Marc Van Peel and CEO Eddy Bruyninckx. The governor of the province of Antwerp, Mrs Cathy Berx attended the ceremony.

Nagoya is the fourth-largest city in Japan and capital of the prefecture of Aichi, with some 2.3 million inhabitants. The city has also developed into a centre of trade and industry. Important industries include car manufacturing, chemicals, paper and toys. Nagoya is also a major port, with a freight volume of 203mt (million tonnes) in 2012 including 2.7 million TEU of containers.

The Port of Antwerp for its part had a freight volume of 184mt in 2012 and handled just over 8.6 million TEU, making it the second-largest port in Europe. It is also home to the largest petrochemical cluster in Europe. In the meantime, a number of Japanese companies have established a firm footing in Antwerp. Thus the Japanese forwarder Meiko Europe recently

celebrated 35 years of presence in Antwerp. The NYK shipping company for its part has been established in Antwerp for more than 100 years and now has its own ro/ro terminal there. The car company Mazda has its European hub in the port of Antwerp.

In the new twinning agreement the Nagoya and Antwerp port authorities emphasize that they will collaborate in projects that further strengthen the links between the two ports, that they will share best practices in port management, and that they will examine ways of further promoting trade between the ports.

The first treaty of friendship between the ports of Antwerp and Nagoya dates from November 1988, 25 years ago. During this period it contributed to good relations between the two ports and the development of sustainable commercial relations between them. The treaty was first renewed in 2002 on the



*Orange jackets, from left to right: Front left: Mr. Takayuki Kondo, Mr. Marc Van Peel; back middle: Mr Takashi Yamada; front middle: Mrs. Cathy Berx, Governor of the Province of Antwerp; back right: Mr. Eddy Bruyninckx; front right yellow jacket: H.E. Mr Mitsuo Sakaba Ambassador of Japan in Belgium; front right: Mr. Jiro Takahashi, Chairman Association for the Promotion of Utilization of Nagoya Port (all photos: © Antwerp Port Authority).*





# coal meets Europe

Welcome to the port of Amsterdam. Where coal meets Europe. As Europe's second-largest coal port, Amsterdam is a leading player within the business. The existing large and flexible terminals - offering custom made solutions - attract a substantial share of Europe's need for 'import coal'. And the demand is rising. The port of Amsterdam is ready to accommodate this market growth and has the ambition to do so in a sustainable manner. Amsterdam has a unique logistic location within the world's largest energy hub: the ARA range (Amsterdam, Rotterdam, Antwerp). Situated in

Europe's largest delta the port of Amsterdam offers a dynamic international hub with a sea-entrance-draft up to 17.8 meters and excellent hinterland connections for inland shipping, rail and road. All together an excellent location for your coal business.

Want to know more about the port of Amsterdam where coal meets Europe?

Go to [www.portofamsterdam.com](http://www.portofamsterdam.com) or contact our Commercial Division, Cluster Energy directly via [lex.de.ridder@portofamsterdam.nl](mailto:lex.de.ridder@portofamsterdam.nl)



## Port of Amsterdam enjoys renewed sense of optimism as coal traffic surges

**D**espite the coal markets remaining in something of a flux, Port of Amsterdam saw throughput surge in the first half of 2013. Lex de Ridder, Manager Cluster Energy, gave DCI his take on the market and explained why the Port's new corporate status will enable further growth in the future.

**DCI:** In the first six months of the year Port of Amsterdam saw coal volumes soar 27%, helping push total throughput at the Port up by 5.4% to over 40mt (million tonnes) compared to a year earlier. What prompted such a jump in coal demand?

**De Ridder:** Coal demand was extraordinary and it wasn't just us, it was also true for some other ports, although their rates of growth did not match Amsterdam's. There were a few reasons for this. One, of course, is the oversupply of coal in the world market at the moment, especially from the US. Although we don't receive huge volumes from there, the availability of US coals influences the price which has fallen. This has made coal preferable for many users in comparison to gas. The other major factor is that we had a very cold winter — it took until May or June before it got warmer!

**DCI:** Do you expect growth to slow in the second half of 2013?

**De Ridder:** It hasn't so far but I think it will eventually. But even if it does, I still think we'll handle 15–20% more coal this year than we did in 2012 which is remarkable. We should handle over 18mt in 2013 which will beat the record of around 17mt in 2008. Since that year the numbers have hovered around 16mt.

**DCI:** Are these sort of volumes sustainable in 2014 and beyond?

**De Ridder:** It has been an unusual year and tonnage may drop in 2014. But our aim is to be handling 20mt in 2020, so this has been a stride forward. Even if we take a small step backwards next year we are on the right path.

**DCI:** Where is most of the coal imported through Amsterdam destined for?

**De Ridder:** Germany, a market we are very focused on and have multimodal connection options to reach, now takes about 80% of the coal we receive. Coal production in Germany is diminishing quickly, down to just 12mt last year. But its use is in favour after plans to increase nuclear production were phased out after events at Fukushima nuclear plant in 2011 in Japan which, of course, continue to capture the headlines.

**DCI:** Is the UK no longer a major market for you?

**De Ridder:** It used to be, but coal-fired power plants are closing down in the UK, and this will continue in the future. We supplied Kingsnorth Power Station in Kent for years but that closed a few years ago. So almost the whole of our transshipment trade to the UK has now gone. So this has been replaced by larger transshipments to Germany and Holland. Also, rising transshipment of biomass to the UK has been a promising compensation.

*photo: Patricia Langius.*



**DCI:** How is your home market?

**De Ridder:** A few weeks ago after a broad national discussion about energy, it was concluded that a handful of older power plants in Holland would be closed, probably four to five plants. However, it looks like Amsterdam's coal power station Nuon, part of Vattenfall, is staying. As a result, our coal volumes shouldn't be affected so much, but some other ports surely will be.

**DCI:** How would you say the overall outlook for coal is in Europe?

**De Ridder:** I think it's good. There might be a general political tendency to phase out coal in Europe, but most authorities expect coal to remain in the energy mix for the next 20 years. We are positive and will continue investing in coal facilities. I think Fukushima changed a lot because this ruled out nuclear as an option in Germany. It changed the nature of the debate about coal across Europe.

**DCI:** But legislators and consumers are still very environmentally aware and many still see coal as a dirty source of energy. Should more be done to address this?

**De Ridder:** Yes, that is the only way coal will play a major role in the long-term. If we want high volumes of coal then there has to be more use in modern power stations of carbon capture and storage technologies. I don't expect coal demand to remain high in Europe long term unless these technologies are used. But at the moment the energy companies just don't have the funds to pay for them because this is very expensive. In future, governments and the private sector will hopefully find funding solutions.

**DCI:** Will the use of coal be impacted if fracking for shale gas is implemented on a widespread basis in Europe as it has been in the US?

**De Ridder:** What's happening in the US is already influencing Europe. Shale gas has rapidly become much more important in any energy discussion than anyone could have imagined a few years ago. US coal consumption is down and this has had a



# THE GATEWAY TO EUROPE.



## Our location benefits enable long-range services.

duisport offers more than excellent transport connections to enhance the efficiency of your operations in continental Europe. Our services range from 2.0 million sq. m. of warehousing space to the unique opportunities provided by a future oriented logistic park with outstanding state-of-the-art facilities, a perfect integration in transportation networks and plenty of space for developing your business.

duisport has gained a reputation as a transportation and trading hub and developed into a hinterland port of strategic importance for the North Sea ports.

We are ready for the future. duisport – We provide a European service.

**duisport**   
*excellence in logistics*

Tel. +49 (0) 203 803-0  
mail@duisport.com  
www.duisport.com

huge impact on global coal prices because more output is available for export now. It is also a threat to coal consumption in Europe in the long-run. If current exploration leads to development and cheap shale gas reaching the market then all of a sudden gas is back into the mix as a cheap fuel. Coal could have a hard time if that happens. But I'm not sure shale gas will be produced in Europe in the same volumes as it has been in the US.

**DCI:** What about renewables, will they make more of an impact on overall energy output in the years ahead?

**De Ridder:** Well, Germany is completely focused on wind and solar. Sometimes, like this summer, they are producing too much wind power and can't store it so they export it, including to Holland. So that complicates things. But if you look at most analyses, they see coal as a long-run player in Europe's energy mix. Even if more alternatives become available, because coal is widely available and affordable.

**DCI:** Leaving coal aside, Port of Amsterdam also saw a 24% increase year-on-year in agribulk in the first six months of the year. What was behind this big jump — local factors or global agricultural markets?

**De Ridder:** Most agribulk imports passing through Amsterdam originate in South America with Brazil and Argentina being the largest exporters. 2012 was a year of disruption in both Argentine and Brazilian ports due to strike action and continued congestion, respectively. These factors, both unfortunately outside our control, impacted on throughput and resulted in disappointing tonnages in 2012. The agribulk markets are, by definition, volatile and prone to fluctuation in relation to both climatic and economic factors. This, in combination with the footloose nature of the large cargo shippers in their choice of port for transshipment and storage, makes for constantly varying figures. In the first half year of 2013 these movements are certainly in our favour. That said, Port of Amsterdam together with both our customers and the cargo owners, are constantly striving towards providing the best service for the agribulk business, be that in the form of competitive port dues,

professional and efficient transshipment or flexible buffer storage. By broadening the pallet of services offered, we are confident of being able to anchor more and more agribulk tonnages to our port.

**DCI:** In April, Port of Amsterdam was finally corporatized.

What does this mean in terms of your forward plans?

**De Ridder:** It means the Municipality of Amsterdam remains the port's single shareholder. But instead of being a municipal service company Port of Amsterdam has now been registered as a public limited company. This changes everything. It gives us far more freedom to act and allows us to become more market oriented.

**DCI:** How will this affect how the port is managed?

**De Ridder:** There has been a restructuring of management responsibilities, but essentially the new strategy breaks down into three areas. Firstly, we will look to maximize the potential of the land at the port of Amsterdam. Secondly, we will work harder at optimizing assets in the region which means more co-operation with municipalities, like IJmuiden and Zaandam along the North Sea Canal where ships enter our port system. We might be the fourth largest port in Europe, but these municipalities are independent so to optimize our operations for our clients we need more regional co-operation. And thirdly, we are looking at new ways of making money, both in the port, the region and outside the region including abroad.

**DCI:** What type of investments are on the drawing board?

**De Ridder:** Concerning coal, the construction of lightering facilities at IJmuiden to enable better handling of Capesize vessels will now definitely start next year which will make us far more competitive. We are investing €20 million in this and the Ministry of Transport has committed €80 million, which is excellent news as there have been cutbacks on other projects. We are also looking at handling liquid bulk there, like we already do at the 'board-board' facility in the Afrikahaven. This is another investment which we think could generate business. And then we're looking at a new approach to investments in West Africa and Brazil. Nothing is confirmed yet and this will

take time. But we have three or four projects we're moving forward with which are independent of Port of Amsterdam operations but will involve us using our expertise.

**DCI:** So you're feeling quite positive about 2014 and beyond?

**De Ridder:** Amsterdam is ready to co-operate with terminal operators and authorities to improve the whole climate for growth. Now we are corporatized we have a renewed sense of optimism and confidence in progress in moving forward, both at Port of Amsterdam and beyond.



*photo: Hubert Koekenberg.*



# DUNKERQUE

## the FRENCH PORT FOR DRY BULK

Accessible to ships with draughts of 14.20 metres via the De Gaulle Lock, the Central Port is the location for many industries. It includes the grain and multibulk terminals, as well as the raw materials reception facility for the ArcelorMittal steel works.



 **DUNKERQUE**  
PORT

# Port of Dunkirk restarts grain trade between France and China



©Dunkerque-Port.

Nord Céréales and the Port of Dunkirk have re-launched the grain trade between France and China.

The *Moon Globe*, a Panamax ship 225m long and 32.26m broad, called at the Port of Dunkirk during the last week of August to load more than 60,000 tonnes of wheat from the Nord Pas-de-Calais, Somme and Aisne regions, bound for Guangzhou in China.

France had not shipped any grain to China since 2004.

The quality of the wheat offered is highly satisfactory and opens up new opportunities for trade with Chinese buyers.

With its outstanding access for shipping, its draught, and the handling facilities available, the Port of Dunkirk can accommodate very large ships for the loading of grain.

The *Moon Globe* called at the Nord Céréales terminal and was loaded at a rate of 1,800 tonnes per hour, by using two gantry cranes simultaneously. Nord Céréales recently acquired a second loading gantry to double its handling capacities.

Joël Ratel, General Director of Nord Céréales, said: "The 2013-2014 season looks promising, in terms of both quantity and quality, and gives us good prospects for the coming weeks and months."

Christine Cabau, Chair of Dunkerque-Port's Executive Committee, added: "The investments made by Nord Céréales in the Port of Dunkirk are bearing fruit: we are able to berth and load extremely large ships with a high level of productivity to satisfy the most demanding clients. We are delighted with this result which rewards the efforts made by the sector."

The Nord-Céréales terminal is located in the Port of Dunkirk and offers all the facilities needed for berthing ships with a capacity of 110,000 tonnes. The terminal has 222,000 tonnes of vertical storage, 110,000 tonnes of horizontal storage, and a 3,000-point dryer.

France's third-ranking port, Dunkirk is well known for handling heavy bulk cargoes and for its numerous industrial installations. It has also built its reputation in other sectors such as cross-Channel ro/ro traffic to the UK, containers, fruit, etc.

Classified as the seventh port of the North Europe Range which extends from Le Havre to Hamburg, Dunkirk is also the leading French port for ore and coal imports, France's leading port for containerized fruit imports, and the country's second-ranking port for trade with Great Britain.



# EMO – 40 years fully equipped to meet your expectations



Please visit [emo.nl](http://emo.nl) to monitor our progress.



## LOOK TO THE FUTURE AND PLAN AHEAD

Since 1973, the EMO terminal in the Rotterdam port has been a major hub in transporting coal and iron ore from all over the world to the European hinterland. EMO has always been a reliable partner for its customers in helping to control these flows of goods by combining daily processes with a clear vision for the future.

EMO is able to accommodate the world's largest dry bulk vessels, and yet we never cease to look to the future and plan ahead – now more than ever! In 2012, we have strongly increased our storage and transshipment capacity and efficiency by commissioning five new, state-of-the-art projects: the seventh stacker reclaimer, the fifth unloader, the second fully automated coal wagon loader, a brand-new sea-going vessel loader along an innovative, new quay, and a high-tech operations centre. These projects ensure that we are fully equipped to enhance our safety, efficiency and sustainability performance, and to continue to serve you as a reliable partner in dry bulk transshipment in the coming decades.





# Verbrugge Terneuzen Terminals

## Your European Hub

The Verbrugge Bulk Terminal is one of Europe's most modern terminals.

Verbrugge Terminals is well equipped to arrange through-transportation of your products using all existing modes:

- by road, using its own fleet
- by rail, loading block trains using its new loading facility
- by water, both inland and short sea using its own chartering departments.

Cutting edge in-house information services are provided.

Offering a total logistical package enables us to integrate your supply chain and thereby be highly competitive.



**VERBRUGGE  
TERNEUZEN TERMINALS B.V.**

P.O. Box 5  
4530 AA Terneuzen  
The Netherlands

+31 (0) 115 64 64 91  
[mario.rijt@verbrugge.nl](mailto:mario.rijt@verbrugge.nl)  
[www.verbrugge.nl](http://www.verbrugge.nl)



## EMO, 40 years fully equipped to meet its customers' expectations

Since 1973, the EMO terminal in the Rotterdam Port has been a major hub in transporting coal and iron ore from all over the world to the European hinterland. EMO has always been a reliable partner for its customers in helping to control these flows of goods by combining daily processes with a clear vision for the future.

EMO is able to accommodate the world's largest dry bulk vessels, and yet it never ceases to look to the future and plan ahead — now more than ever. In 2012, the terminal significantly increased its storage and transshipment capacity and efficiency by commissioning five new, state-of-the-art projects: its seventh stacker reclaimer, fifth unloader, a second fully automated coal wagon loader, a brand-new sea going vessel loader along an innovative, new quay, and a high-tech operations centre. These projects ensure that EMO is fully equipped to enhance its safety, efficiency and sustainability performance, and to continue to serve its customers as a reliable partner in dry bulk transshipment in the coming decades.

EMO operates 24 hours a day, seven days a week. It handles large bulk shipments; its discharge capacity is 47mt (million tonnes) and throughput capacity is 60mt. It always approaches its work and planning with the greatest care. EMO believes it is very important to remain state-of-the-art. Keeping the terminal state of the art as well as making necessary improvements is its key to serving its customers. EMO's highly skilled trained personnel work closely together. Skilled employees working with innovative technology guarantee high quality, efficiency and sustainability.

### MEETING MARKET DEMANDS

EMO's 160-hectare area currently offers 7m of storage. EMO is ideally located on a 23m-deep waterway connected directly to the North Sea. Rotterdam harbour has excellent rail and waterway connections to the rest of Europe.

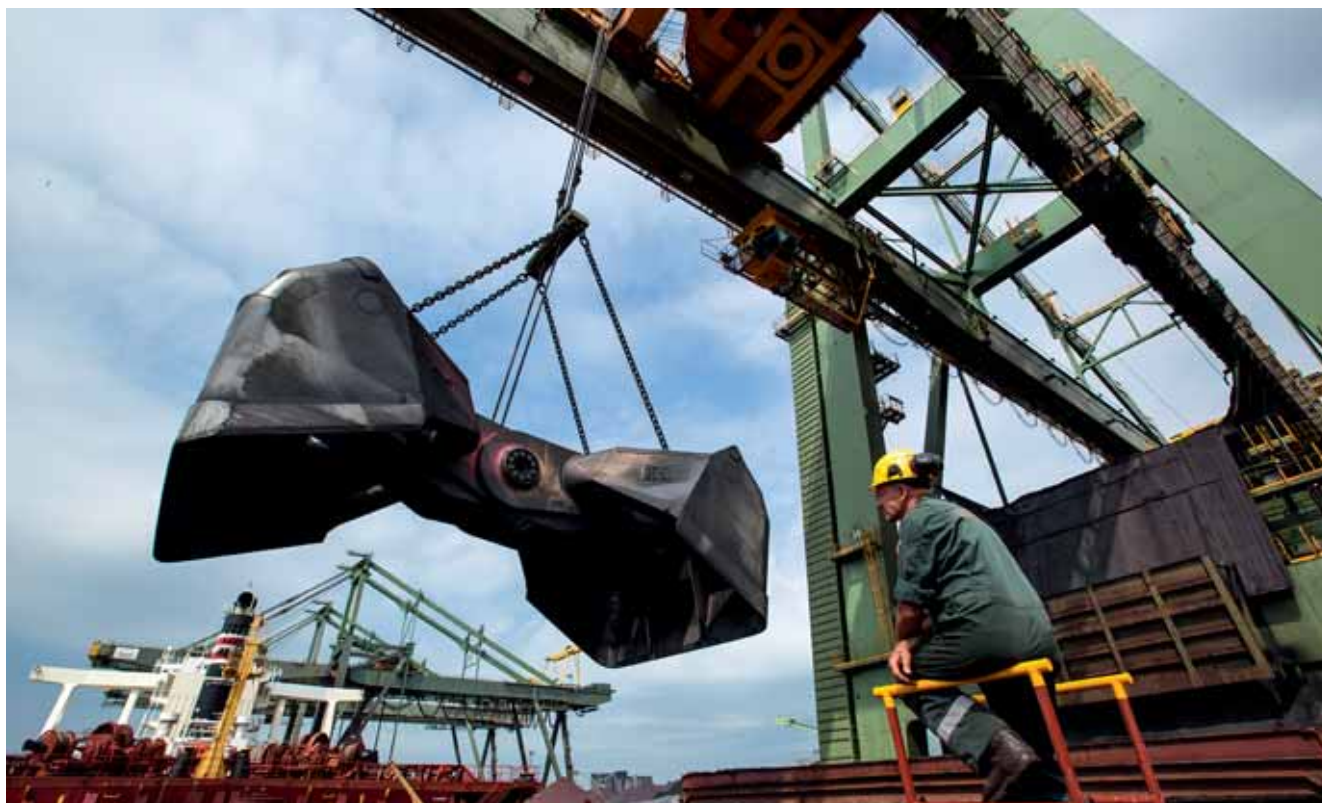
EMO is a partner that offers reliability and trustworthiness.



### TERMINAL CAPACITY

Unloading capacity	47mt
Throughput capacity	60mt
Storage capacity	7mt
Trainloading capacity	18 trains daily

The company stays on top of the latest developments in the market. EMO continually analyzes its customers' needs, the quality of its services and its terminal's performance. In anticipation of market trends and customer needs, it is continuously geared towards offering a more efficient, cleaner and safer terminal, one designed to meet all expectations.





# Niedersachsenbrücke reaches full bulk cargo handling capacity after upgrade

## RHENUS MIDGARD'S BULK CARGO TRANSSHIPMENT TERMINAL IN WILHELMSHAVEN HAS BEEN FULLY OPERATIONAL SINCE THIS SUMMER

With a discharge capacity of up to 4,000tph (tonnes per hour), a 2.5km-long conveyor belt system can transport coal from a docked vessel directly to storage areas on land. The *Magsenger 16* was the first coal ship to benefit from the improved infrastructure at the Rhenus Midgard site at the end of last month. The Capesizer had transported 110,000 tonnes of hard coal bound for Vattenfall's power stations in Berlin across the Atlantic from the United States.

"Of course, we will continue to optimize our transshipment processes in Wilhelmshaven in the future. But the completion of the new conveyor belt system is an important milestone. The co-ordinated interplay of handling, storage and transport capacities means we can now fully exploit Niedersachsenbrücke's full potential," says Matthias Schrell, managing director of Rhenus Midgard in Wilhelmshaven. "On average, we can now offload a large Capesizer in about three days."

The deepening of the mooring basin completed in 2012 allows the handling of fully laden Capesize bulk carriers with a draught of up to 18.50 metres. In addition to the new conveyor belt, the Rhenus Group invested in new ship unloaders, a fully automated stacker/reclaimer for storage and an automatic train



loader during the now completed construction work at Niedersachsenbrücke. This expansion program has made it

possible to offload ships with a cargo-carrying capacity of as much as 250,000 tonnes quickly and to store the coal and later retrieve it for onward transport by rail into the hinterland without delay.

If commercial operations continue to develop storage space can be expanded from two to as many as seven storage areas. Then some 3mt (million tonnes) of coal instead of the current 800,000 tonnes could be stored to allow the supply of power stations and other coal consumers in line with demand.

"The extended structures at the Niedersachsenbrücke offer the

industry new opportunities to make their transport chains more efficient by integrating the capacities in Wilhelmshaven. In the long term, the terminal facilities have been designed to allow the handling of up to 10mt of coal annually," says Michael Appelhaus, managing director of Rhenus Midgard. "In June 2013 — in other words, even before the commissioning of the new conveyor belt — we were able to manage 440,000 tonnes, which is the largest amount of coal ever handled in Niedersachsenbrücke in one month. Our goal is to increase this figure still further in the future."

The Rhenus Group provides logistics services around the globe and has annual turnover amounting to €4 billion. Rhenus employs over 24,000 people at more than 350 locations worldwide. The Rhenus business areas — Contract Logistics, Freight Logistics, Port Logistics and Public Transport — manage complex supply chains and provide a wealth of innovative value-added services.

DC



## SAMSON launches new Samson® Material Feeder on tracks

In 2013 SAMSON Materials Handling (formerly B&W Mechanical Handling) is launching the evolution of its Samson® Material Feeder. The MF0814T is a tracked derivative of the unique Samson® Material Feeder principle. Now, with unrivalled flexibility, the machine offers market proven high performance and reliability.

This concept has been developed in conjunction with mining and minerals customers. They require the huge holding capacity of up to 50 tonnes offered by the standard MF0814W combined with immense operational durability and accuracy in discharge control — now delivered to operate on the most testing ground conditions.

The Samson® Material Feeder MF08 series is suitable for heavy duty applications with continuous use including impact loading from articulated dump trucks and large loading shovels. Suitable for a material with bulk density up to 2.6t/m<sup>3</sup> and lumps up to 400mm, the typical materials handled include limestone, coal and coke, raw slag, alternative fuels, clays and shale & heavy mineral ores.

The MF0814T is self-propelled and operates via an integrated diesel power supply offering excellent flexibility on site. Self-steering through the umbilical control the unit can be deployed quickly and independently so offering greater utilization, flexibility and productivity.



## ABB appoints new CEO

Ulrich Spiesshofer has succeeded Joe Hogan as chief executive officer of ABB, the major power and automation technology group, following the three-month orderly transition period announced earlier this year. Hogan will continue as advisor to the Board until the end of March 2014.

In a welcoming statement, Hubertus von Grünberg, Chairman of ABB's Board of Directors, said: "Ulrich Spiesshofer has an outstanding track record forming and developing high performing teams and has demonstrated excellent strategy and execution skills." He added that Spiesshofer enjoys the full support of the entire board. "We look forward to a close co-operation with Ulrich to further

develop ABB's power and automation business under his leadership." "I look forward to working with ABB's strong team to deliver continued profitable growth against our strategy and create long-term value for our customers, employees and shareholders," Spiesshofer said. "In these challenging economic times, we will focus as a team relentlessly on customer satisfaction, quality and execution."

ABB is renowned for its expertise in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

## Caterpillar tops Gartner's annual Supply Chain List for 2013

For the second time, Caterpillar has been named in the annual Gartner Supply Chain Top 25 list. Caterpillar tops the Industrial Manufacturing list as the global supply chain leader and earned the number 18 ranking among all industries, up from number 20 in 2012.

"Caterpillar continues to broaden its integrated supply chain initiatives. This leading industrial is focused on common designs and processes across its manufacturing and supplier network, a robust set of metrics to measure the value of sustainability across its product portfolio and building velocity in its commercialization process," the Gartner report noted.

The rankings are scored on Gartner and peer opinion, Return on Assets (ROA), Inventory Turns and Revenue Growth.

Integrated Supply Chain strategies launched last year have contributed to a reduction in inventory across the enterprise and improvements in end-to-end response times. The Agility in

Mining programme has made significant reductions in inventory through the first half of the year, and is on track to continue meeting goals through the end of the year. The processes put in place through this programme, and similar programmes across the enterprise, will continue to strengthen Caterpillar's reputation as a global supply chain leader and ultimately result in achieving Enterprise Excellence.

"We are humbled to receive this award and recognition from Gartner. It is a testament to the achievements our teams have been making in improving our supply chain. This award should also encourage our teams that we are on the right track with our supply chain initiatives," said Mark Ward, Caterpillar Production System Supply Chain Director.

Gartner is a world-leading information technology research and advisory company, and has extensive base of IT research analysts and consultants.

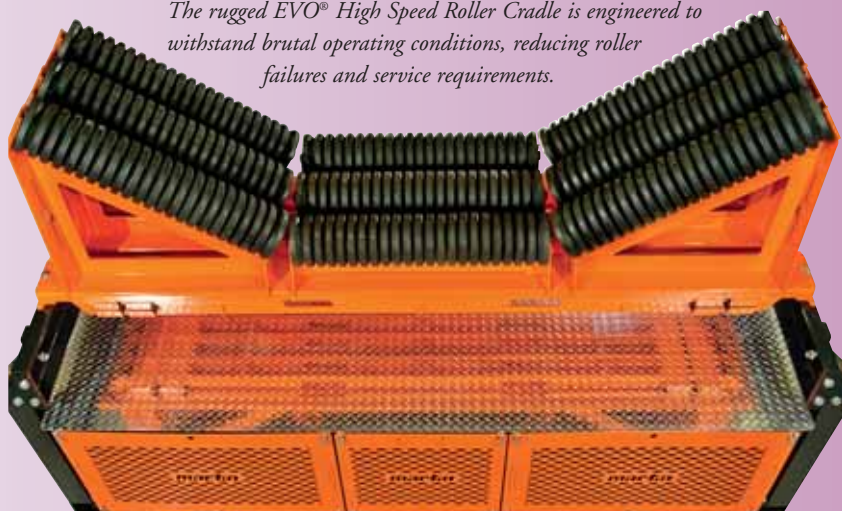


# High-speed roller cradle for

A new high speed impact cradle is designed to reduce roller and frame damage from heavy conveyor loading conditions in mining, coal handling, aggregates and other applications involving dense materials and/or high volumes. The rugged EVO® High Speed Impact Cradle is engineered to withstand brutal operating conditions, reducing roller failures and service requirements. One customer estimates that the new cradles from Martin Engineering paid for themselves in just the first week of service at the company's copper handling facility, due to the savings in maintenance and downtime.

"Under high-volume conditions, standard OEM impact idlers in the load zone simply can't withstand heavy loads and lengthy drops,

*The rugged EVO® High Speed Roller Cradle is engineered to withstand brutal operating conditions, reducing roller failures and service requirements.*



costing downtime for repairs as well as the expense of replacement components," observed Martin Engineering Service Technician Doug Brown.

The new cradles use Martin Engineering's Trac-mount™ technology to slide in and out easily for maintenance. The modular components are light enough to be removed by hand, without using a crane or other equipment to handle them.

"The new cradle design only requires one person to change the rollers when the time comes," said Brown. "The biggest problem solved is the downtime. In the past, when customers have needed to change rollers or frames, they had to shut down the conveyor for an extended amount of time," he explained. "Old style frames can be difficult to remove, requiring that maintenance personnel pull the arms down, then jack up the assembly to pull it out."

"We wanted something that was slide-in/slide-out," added Martin Engineering Global Product Manager Chris Schmelzer. "These new cradles were designed using Finite Element Analysis, so we could confirm that they'd be strong enough, without having to overbuild them," he explained. "We can make it as strong as it needs to be, without adding excess weight, so workers can remove and replace components without using heavy lifting equipment."

The innovative load zone design uses an elastomer bar suspension system that absorbs and distributes the material load being transferred, greatly reducing the stress on the idlers' rolling components and support structure. One patent-pending design innovation is the use of connecting brackets near the top of the idler frame to hold the three rollers



## WE'RE NEVER SATISFIED WITH "GOOD ENOUGH."

At Martin, we believe in *better*. *Better* ways to contain and control bulk material. *Better* service, support and technology.

*Better* means Martin sales and service technicians are annually certified in the industry's latest safety and inspection techniques. Identifying the right problem and providing the right solution the first time. That's Martin Engineering.

**Problem Solved™**  
**GUARANTEED!**



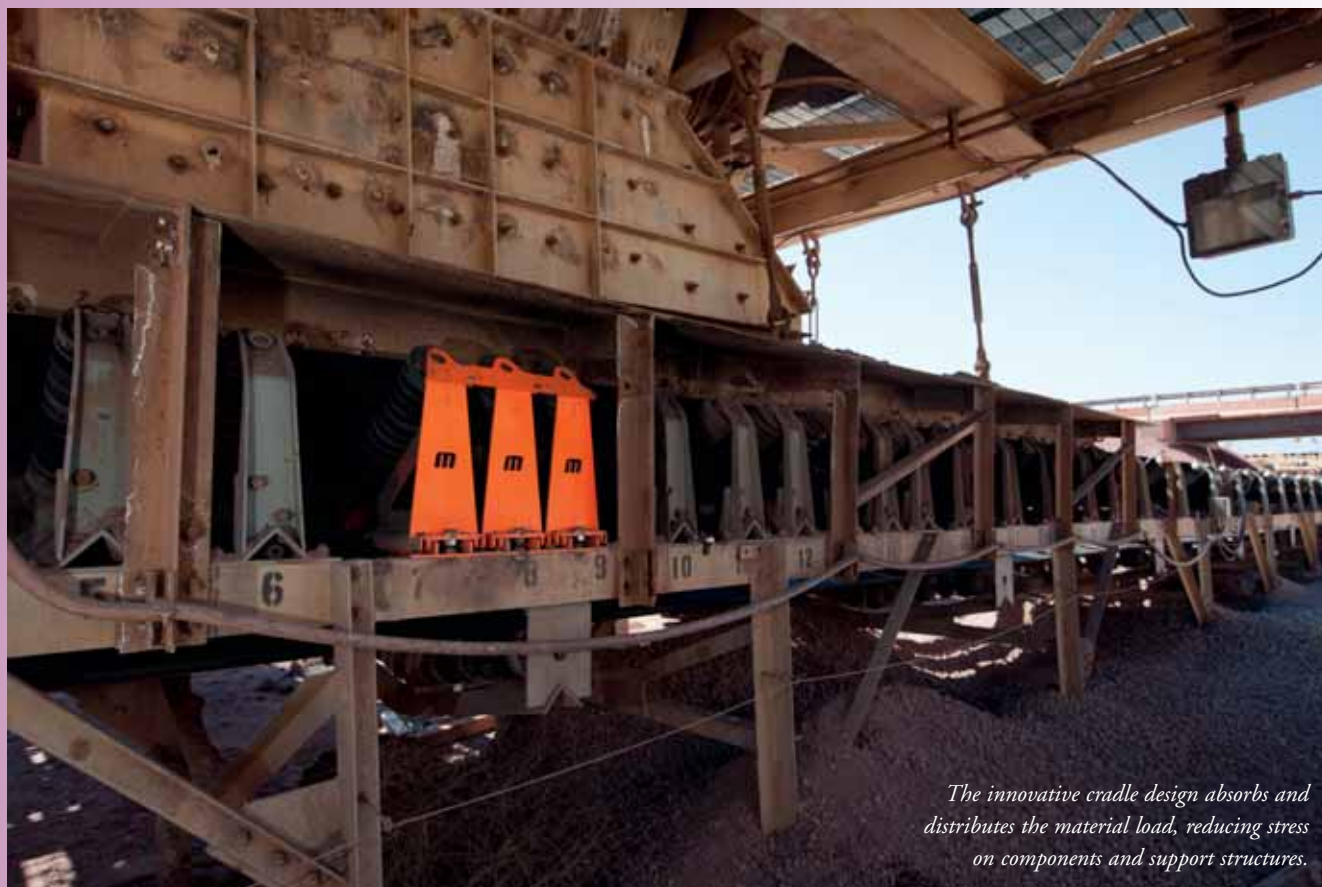
call 1 800 544 2947 | email [info@martin-eng.com](mailto:info@martin-eng.com)  
visit [martin-eng.com](http://martin-eng.com) | find us on [f](#) [t](#) [in](#) [+](#) [v](#)



A Global Company.

® Registered trademark of Martin Engineering Company in the US and other select locations. © 2013 Martin Engineering Company. Additional information can be obtained at [www.martin-eng.com/trademarks](http://www.martin-eng.com/trademarks).

# high-volume conveying



*The innovative cradle design absorbs and distributes the material load, reducing stress on components and support structures.*

together. These special brackets are designed to allow multiple modular cradles to be tied together, so that the idlers throughout the entire load zone work together as a system.

"This cradle is simple to install, and the easy access to the center roller makes the maintenance a one-person job," Brown added. "In addition to greater durability, it's intentionally designed to facilitate service, making the task of changing rollers safer and easier."

Founded in 1944, Martin Engineering is a major supplier, making bulk materials handling cleaner, safer and more productive. The company supplies flow aids and conveyor products around the world for a wide variety of bulk material applications, including coal, cement/clinker, rock/aggregate, biomass, grain, pharmaceuticals, food and other materials. The firm is headquartered in Neponset, IL, offering manufacturing, sales and service from factory-owned business units in Brazil, China, France, Germany, Indonesia, Mexico, South Africa, Turkey, India and the UK, and under exclusive licence with ESS Australia.



*The new cradles use Martin Engineering's Trac-mount™ technology to slide in and out easily for maintenance.*

Handling solutions  
GRABS & TONGS

**BLUG**  
Credeblug, s.l.

AZPEITIA (SPAIN)  
Tel.: 0034-943810150  
Email: info@blug.es  
[www.blug.es](http://www.blug.es)



# Replaceable conveyor belt cleaner tips

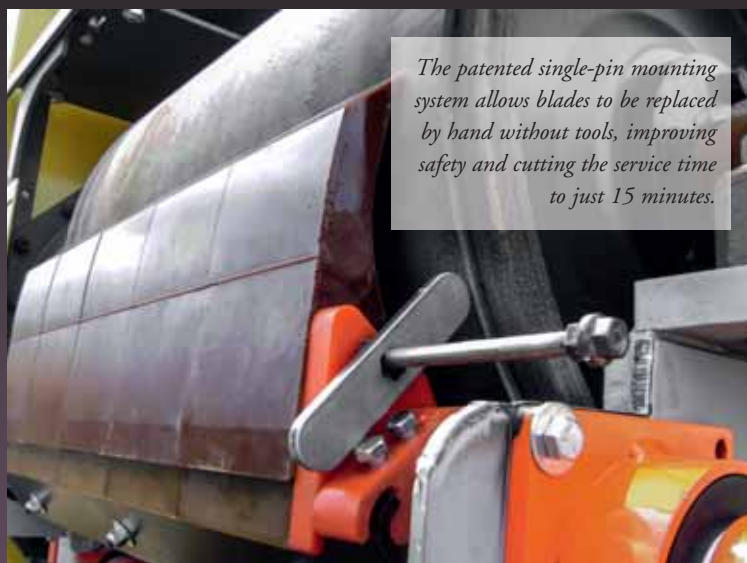
In a move designed to reduce landfill waste from worn-out conveyor belt cleaners, while reducing labour time and safety risks associated with blade changeouts, Martin Engineering has announced a new family of replaceable tips to maximize the amount of usable material on each cleaner blade. Introduced in direct response to customer input, the replaceable belt cleaner tips have increased wear life in secondary cleaners by as much as 50%, while cutting replacement labour time roughly in half. Because the new tips are pinned in position and require no hammers or other tools to remove and replace, the risk of injury during service is significantly reduced.

"We were looking for a way to reduce the amount of urethane going to landfills from worn-out cleaners," observed Martin Engineering Global Research & Development Manager Adam Childs. "At the same time, we wanted to find a way to simplify blade replacement, helping customers reduce or eliminate injuries during the replacement process and shortening maintenance times. The new blade tips accomplish both of those objectives."

Childs cited the example of one of the company's heavy duty primary cleaners. "The standard design has 8.12 total pounds of urethane in each blade," he explained. "Approximately one-third of that is in the tip or wear surface, with the rest making up the base. The result is more than five pounds of urethane per blade going to landfill at the end of the cleaner's useful life. It's not uncommon for South American systems to have 8–10 blades on a single conveyor, so that's a significant amount of material."

In test runs on a standard primary cleaner blade, Childs said researchers logged 681 hours of run time. Each time a blade reached the end of its life, the old style base had to be removed with a hammer and a new blade installed. The process typically required about 35 minutes.

"The new primary cleaners with replaceable tips use a total of 8.59 pounds of urethane," Childs continued. "But the ratio of blade material to base is nearly reversed. About 5.5



*The patented single-pin mounting system allows blades to be replaced by hand without tools, improving safety and cutting the service time to just 15 minutes.*

pounds of urethane is used in the tip, with only around one-third of the total weight in the base." Further, the replaceable tips delivered 719 hours of run time in primary cleaning applications, an increase of about 5%. Each reusable blade base is good for 10–12 tip change cycles before it must be replaced.

The blade mounting system underwent a re-design as well, with a patented single-pin configuration to simplify replacement. The new tips can be replaced by hand without tools, dramatically improving safety and cutting the service time to just 15 minutes. Because the frame slides out on a track for servicing, no confined space entry is involved. "The belt cleaner comes out, instead of a worker going in," said Childs. A patent is pending on the design.

Taken together, these innovations result in longer service intervals, shorter maintenance times and less downtime, as well as a reduction of nearly 50% in landfilled material. With less frequent replacement and the long service life of the blade bases, customers are also finding they can cut down spare blade inventories on hand. At one large South American customer where initial trials were conducted, the approximate cost reduction in urethane consumption alone is

projected to be more than \$85,000 per year, not including the labour savings and the value of improved safety.

Founded in 1944, Martin Engineering is the world leader in making bulk materials handling cleaner, safer and more productive. The company supplies flow aids and conveyor products around the world for a wide variety of bulk material applications, including coal, cement/clinker, rock/aggregate, biomass, grain, pharmaceuticals, food and other materials. The firm is headquartered in Neponset, IL, offering manufacturing, sales and service from factory-owned business units in Brazil, China, France, Germany, Indonesia, Mexico, South Africa, Turkey, India and the UK, and under exclusive licence with ESS Australia.



*The new replaceable belt cleaner tips have increased wear life in secondary cleaners by as much as 50%, while cutting replacement labour time roughly in half.*



# High-speed Palletizers 3000 Bags/hour

**MADE IN  
GERMANY**

## Material Handling Company

Loading systems  
Level measuring instruments  
Palletizers  
Warehouse systems  
Filling systems  
Conveyor systems  
Shiploader



**SMB**

Group

best solution

SMB International GmbH  
Friedrich-List-Str. 3-7 · D-25451 Quickborn  
Phone +49 (0)4106/123 88-0  
info@smb-group.de · www.smb-group.de



## New SENNEBOGEN dealer in Norway boosts company's 'GreenLine'

From July this year, SENNEBOGEN has strengthened its distributor network in Norway. In addition to its long lasting partner in Norway, IMB Maskiner AS — concentrating on the crane and port industry — VOLVO Maskin AS has joined the SENNEBOGEN team and taken over the distributorship for material-handling machines for industries such as waste and scrap-recycling, steel-industry, wood & forest industry, demolition as well as composting and mining.

Thanks to its well-known Service structure, VOLVO Maskin AS and its 20 service stations will add additional value to SENNEBOGEN's 'GreenLine' products and intensify the market development for SENNEBOGEN recycling machines in Norway. IMB Maskiner AS will continue concentrating on the complete 'CraneLine' for all industries, and ports in particular. This also includes quay-based material handling-machines (GreenLine) for on-and offloading/bulk handling of ships. In terms of after-sales service, VOLVO Maskin AS and IMB Maskiner have agreed to co-operate where this will be an advantage.

The name SENNEBOGEN stands for over 60 years of reliable and technically advanced equipment. At the highest level of quality, the machines are produced in Germany at the sites Straubing and Wackersdorf and distributed through a nationwide distributor network. In addition to consulting and the sale of machinery, a very fast service and a good supply of spare parts is standing in the foreground. Therefore SENNEBOGEN dealers are the competent contact for maintenance and service, and in case of need to quickly help locally.

With its extended product range, SENNEBOGEN offers solutions to any material handling task with machines weighing from 11–270 tonnes. SENNEBOGEN machines are purpose built for industrial three-shift operation and are well known for reliability and easy service access.

All material handling machines are also available with cost-saving and environmental-friendly electro engines. Sophisticated balancer and equilibrium concepts offer cost savings of up to 75% compared with conventional machines. With the huge range and variety of solutions such as electric motors, equilibrium balanced machines SENNEBOGEN is one of the major suppliers for the material handling industry.



*From left: Area-Sales Manager Robert Aumüller, Director Erich Sennebogen, Volvo Maskin Director Jon Vislie, Knut Grepperud, David Kristianslund (all Volvo), Tom Fredheim (Director IMB Maskiner) und Morten Karlsen (Volvo).*

**ESI Eurosilobv**  
ULTIMATE STORAGE SOLUTIONS FOR BULK SOLIDS

Downloads | References | News

Home | Concept Eurosilobv | Power | Chemicals | Agri | Service | About us | Contact

First 100,000 m<sup>3</sup> cool storage Eurosilobv in operation!

First 12,000 m<sup>3</sup> filter dust Eurosilobv in operation!

Visit our new site [eurosilobv.com](http://eurosilobv.com)

Newtonstraat 26-28  
P.O. Box 1047  
1440 BA Purmerend  
The Netherlands

Tel : +31(0) 299 - 630730  
Fax : +31(0) 299 - 630737  
E-mail : [esi@eurosilobv.com](mailto:esi@eurosilobv.com)  
Web : [www.eurosilobv.com](http://www.eurosilobv.com)

*ESI Eurosilobv,  
today's expert in  
bulk material storage*





# SENNEBOGEN

Up to 27 m reach with max. 7.5 t load,  
versatile equipments

Mastercab comfort cab with Skylift 900  
vertical adjustment over 9,5 m

Up to 30% energy saving thanks to  
energy recovery system

Crawler-gantry undercarriage  
for efficient port logistics

with original  
SENNEBOGEN grab

## 875E

### Specialist in port material handling

E-series: higher capacity - less consumption



SENNEBOGEN Maschinenfabrik GmbH  
Sennebogenstraße 10, 94315 Straubing, Germany  
Phone +49 9421 540-146

GO FOR GREEN  
→ [www.sennebogen.com](http://www.sennebogen.com)





# EFFICIENT CARGO HANDLING

## Reliable and Economical

Terex is a world leader in equipment and solutions for ports and terminals, offering a variety of cargo-handling options.

The range of Terex® Fuchs material handling machines is the ideal choice for cargo handling alongside vessels up to coaster size and in smaller terminals.

### What it means for you:

- ▶ Large working radius up to 23 m for efficient handling
- ▶ Fast work cycles provide efficient handling capacity
- ▶ Energy efficient drives for low operating costs
- ▶ Undercarriage and drive options tailored to your needs

[www.terex-fuchs.com](http://www.terex-fuchs.com)



**WORKS FOR YOU.™**

# RopeCon to transport gold ore in Mexico

At its Morelos Gold Project, Minera Media Luna, a 100% subsidiary of the Canadian company Torex Gold Resources Inc., is developing its first gold mine in Mexico.

At the beginning of this year, the Austrian company Doppelmayr Transport Technology, a member of the Doppelmayr/Garaventa group, a world leader in ropeway technology, was awarded a contract to build a RopeCon system for transporting the ore from the mine down to a stockpile. The aerial continuous conveying system is applied as an alternative to

trucking. It will transport the material at an hourly design capacity of 1,000 tonnes easily and safely through steep terrain from the crusher at the top, down to the mill at the bottom. The vertical fall is approximately 380m over a distance of 1.3km. An important advantage of the RopeCon system for this project is its low overall operational costs, as the system generates power due to the difference in height. Construction start is scheduled for the summer of 2014 with commissioning planned for the winter of 2014/2015.

## Terex Port Solutions' cranes impress Brazilian operator

One and a half years after delivery of a first G HSK 4316 B, Fospar S.A. orders an identical crane.

From Autumn 2013, another Terex® Gottwald portal harbour crane will be helping to efficiently move bulk cargo in Brazil. Terex Port Solutions (TPS) has received an order from Fospar S.A. (Fospar) to supply a Model 4 crane in the G HSK 4316 B variant. This new portal harbor crane, together with an identical machine delivered in 2012, will handle fertilizer at the bulk terminal of the customer in Paranagua (South Brazil).



### IDEAL SOLUTION FOR USE ON THE FINGER PIER

From the slew ring up, the G HSK 4316 B brings proven Terex Gottwald mobile harbor crane technology to the rails of narrow or special quays from where bulk vessels up to Panamax class are served. Its four-rope-grab variant with a 40-tonne grab curve in A7 classification (34-tonne grab curve in A8 classification) is particularly tailored to professional bulk handling. The crane is operated with power from the harbor mains and features a compact design, comparably low weight and an individual portal solution which makes it the ideal machine for the finger pier in the Fospar Terminal in Paranagua, where the first G HSK 4316 B has already proved its worth.

### FIRST G HSK 4316 B IMPRESSES FOSPAP WITH HIGH HANDLING RATES

Above all, the successful use of Fospar's first crane from TPS was a decisive factor in the rapid placement of a follow-up order: "In around the past one and a half years, as a powerful and reliable machine, the Terex Gottwald portal harbour crane has made a major contribution to increasing our handling rates", explains Ronaldo Sapateiro, plant manager at Fospar. "For this reason, we have decided to replace the old crane that we are still currently using on the finger pier with a further G HSK 4316 B."

### GROWING DEMAND IN A GROWTH MARKET

Bob Histon, who is responsible for Terex Port Solutions' sales and services in the Americas since early summer 2013, is pleased that the portal harbor crane has established its market position in Latin America: "Brazil is the growth locomotive of the region and the growing demand for our portal harbor cranes shows that we have the right products to meet our customers' needs."

He is also pleased that the machine ordered is once again a crane for bulk handling as Guilherme Santos, the customer consultant for Brazil adds: "We have to date predominantly been represented on the local market by mobile harbour cranes for container handling. Now, Terex Gottwald handling machines are increasingly taking over bulk terminals."

### GLOBALLY ESTABLISHED AS A COST-EFFECTIVE ALTERNATIVE

The customers in Brazil are thus following the example of bulk terminal operators in other world regions. Around the globe, Terex Gottwald portal harbour cranes have established themselves as a cost-effective alternative to, for example, bulk gantry cranes. The portal solutions are based on the respective terminal requirements to enable road vehicles, rail trucks and conveyor belts to be used unhindered beneath or beside the rail portals.



# Experience the Progress.

## Material handling equipment.

- Maximum efficiency through progressive technology
- Sophisticated machine concept for maximum productivity
- Quality components manufactured by Liebherr
- Ergonomic workspace for consistent high level of performance



Liebherr-Hydraulikbagger GmbH  
D-88457 Kirchdorf  
Tel.: +49 73 54 80-0  
E-Mail: [info.lhb@liebherr.com](mailto:info.lhb@liebherr.com)  
[www.facebook.com/LiebherrConstruction](http://www.facebook.com/LiebherrConstruction)  
[www.liebherr.com](http://www.liebherr.com)

# LIEBHERR

The Group



## Liebherr's LHM 600 wins the hearts of Latin American customers

When it comes to state-of-the-art mobile harbour cranes, Latin American customers have become increasingly interested in the Liebherr 600 series. In total, 10 units have been sold in the last 12 months in the Latin American market, for both container and bulk handling. These results clearly show the popularity of the LHM 600 and also the trend towards larger cranes in Latin America. With a maximum outreach of 58 metres and twin lift capability, the Liebherr mobile harbour crane LHM 600 is capable of servicing vessels up to 19 container rows.

In Latin America the population development of the strongest mobile harbour crane model available in the market is impressive. The first LHM 600 was delivered in 2009, followed by two further deliveries in 2010. In 2011 the number of units supplied rose to three. In 2012, the remarkable number of annual LHM 600 deliveries reached a short-lived record high of five units which will be easily topped in 2013.

Two of the below-mentioned LHM 600 deliveries (Argentina and one for Uruguay) are based on a special LHM design. An extended tower extension ensures that the position of the tower cabin is higher than 37 metres providing better sight into the ship for the crane operator. Additionally, the operator benefits from a higher fulcrum point without any influence on safety or operational parameters like lifting capacity and travelling speed. These are the first units featuring the highest tower version available. The first of these specially designed LHM 600s will start operation in September 2013.

In Montevideo, Uruguay, Montecon S.A. started operation in 2000. Since then, its Liebherr mobile harbour crane fleet has steadily grown. In the last 12 months, Montecon S.A. has ordered two more mighty LHM 600s. Hence, three LHM 600s will soon service vessels in the Port of Montevideo, supported by a number of previously delivered LHM models.

Hutchison Port Holdings (HPH) has ordered four LHM 600s for its ports in Latin America. HPH is one of the world's leading port operators with ports in 26 countries worldwide. In Argentina, Buenos Aires Container Terminal Services S.A. ordered its first Liebherr Mobile Harbour Crane, type LHM 600. The terminal was established in 1994. The new LHM comes in two-rope configuration for dedicated container handling.

Strong signals come from Mexico, where HPH alone has ordered three LHM 600s. An annual GDP growth of about 4% calls for new investments in efficient port equipment. For that reason, the 2013 year looks to be the most successful year in history regarding LHM deliveries to Mexico thanks in part to the order of four LHM 600 cranes.

In the course of 2013, a LHM 600 has started operation for HPH in Mexico. Terminal Internacional de Manzanillo S.A. de C.V. (TIMSA) opted for Liebherr's strongest mobile harbour crane. TIMSA is a multipurpose terminal for bulk material and container handling. The terminal is located on the west coast of Mexico, close to various metropolitan areas. The main task of the new crane is container handling.



Located on Mexico's Pacific coast, the HPH affiliate Lázaro Cárdenas Multipurpose Terminal S.A. de C.V. has ordered two LHM 600s. Each crane is equipped with a 104t winch and will mainly be used for handling containers and bulk cargo.

Also in Lázaro Cárdenas, Terminales Portuarias del Pacifico opted for a LHM 600. The terminal specializes in bulk material and steel products handling. The new crane will join an existing LHM 550, which has started operation in 2011. Both machines are equipped for highly efficient bulk operation. The new LHM 600 in four-rope configuration will be the first LHM in Mexico equipped with Liebherr's innovative hybrid power booster Pactronic®, allowing for up to 30% more turnover in combination with reduced fuel consumption and emissions of about 30%.

Brazil is the biggest market in Latin America for Liebherr mobile harbour cranes. After a number of very successful years, Liebherr has again received several LHM orders in 2013. In Manaus, close to the confluence between the Negro River and the Amazon River, Chibatão Navegação e Comércio LTDA decided to enforce their port with three LBS 600s. Liebherr Barge Slewing (LBS) cranes are an efficient combination of the innovative mobile harbour crane concept and a fixed pedestal mounted on a barge, which replaces the undercarriage. LBS cranes provide an economical and space-saving solution for the installation on quaysides and jetties, especially in Manaus where room for manoeuvring is limited. These three LBS will join an existing fleet of nine Liebherr fixed cargo cranes and six Liebherr rubber tyre gantry cranes in Manaus.

Liebherr continues its remarkable success story in Latin America having sold 10 units of the 600 series in the last 12 months. Due to the high demand in Latin America Liebherr has invested some \$20 million in a new sales and service centre in Miami. Opened in June, the new centre serves as a major hub for Liebherr's maritime cranes division and will further strengthen business relations to the Latin American region. The newly built complex is situated on a total property area covering about 40,00m<sup>2</sup>. The building has a total area of 3,800m<sup>2</sup>. In 2013 about 52 staff members will be working in this new facility.





## Online Analysis

### Mineral Analysis

Elemental and Moisture content of

- Copper
- Iron Ore
- Manganese
- Zinc
- Nickel
- Phosphate

**Coal Analysis:** Moisture, Ash, Sulfur, Calorific value



Real time analysis for the:

- Mine
- Concentrator
- Sinter Plant
- Port
- Power Station



### On belt Real Time Analysers:

- Over 1,000 installations worldwide
- Superior technologies
- Remote access, low maintenance and local support
- Safe and reliable
- 30 years of proven performance
- More than 100 African applications



### Scantech

Tel Aus: +61 737 108 406  
Tel RSA: +27 832 559 792  
[www.scantech.com.au](http://www.scantech.com.au)  
[sales@scantech.com.au](mailto:sales@scantech.com.au)



**Measure, Control, Improve... Minute by Minute**

**GEOSCAN**

**COALSCAN**

## Real-time measurement of conveyed material for advanced process control

Measuring conveyed flows continuously, and using minute-by-minute results to make real-time changes can improve many aspects of a plant's operation. Any processing operation using ore or concentrates as a feedstock needs to measure in order to control. Improved process control can provide major benefits such as: processing less waste, producing more consistent quality product, maximizing metal recoveries, generating less tailings and improving productivity. Each of these benefits individually can amount to millions of dollars per year in savings, and being able to perform better reconciliations and metal accounting is just a bonus.

Process plant performance in the coal, cement and minerals sectors has been significantly improved through the application of real time, full stream, non contact, multi-element analysers. Particle size and belt speed don't affect the analysis. Grade control need not stop at the haul truck. Analysers on conveyors at the mine (after the crusher) are used to divert increments of undesirable material, be it waste, low grade ore, or high deleterious content so it does not enter the process plant. There are myriad savings in grinding costs, power, reagents, etc. Benefits really add up when that waste is replaced by good ore and the plant output increases for the same throughput. Ore of product quality, eg. in iron ore plants, is diverted to bypass the beneficiation plant.

Scantech is a major manufacturer of on-belt analysers for conveyed bulk materials. One of its customers consistently achieves over US \$6 million per year in beneficiation cost savings alone by doing this but also maximizes plant capacity by only processing what needs to be upgraded.

Analysers help plants blend ores to ensure consistent ore feed. Reducing ore quality variability can increase metal recoveries by up to 15% in copper operations. Another customer blends copper ores to maximize leach circuit capacity and achieved a payback of less than two months. The customer now uses elements that weren't initially of interest (Fe and S) to control the mineralogy blend as well as copper content to



further benefit its process.

Analysers can be used on conveyors throughout the plant. Beneficiation circuit feed and product streams, eg on jigs, ensure optimal recovery. Analysers help optimize additive control in cement plants and adjust metal concentrate chemistry pre-smelting or sinter basicity. Measurement of product flows to stockpiles and load out flows to the train or ship are used to determine real-time stock levels (tonnes and grade) and indicate shipment quality compliance with product specification requirements. Where necessary, products can be blended or bulk sorted to improve shipment quality for each customer.


The combination of accurate, continuous microwave moisture measurements with elemental data allows dry weight percent of each element to be reported in real time. Real-time analysis allows mines to optimize processing operations. Detailed studies continue to be undertaken to help processing operations identify further improvement opportunities, eg. ore hardness through silica measurement to control grinding circuit feed rate and ore blend.

Scantech's core business is the development, supply and support of on-belt analyzers for the resources sector, world-wide. Scantech first supplied this technology to the coal sector in the early 1980s and has now developed analyzers for the cement, minerals, power and steel sectors. More than 1,000 analysers designed and built in Australia have been sold in 55 countries. Customer service and product support is enhanced through remote access capabilities for all current models and experienced staff located in major regional locations. As a specialized supplier Scantech is able to customize analyser solutions, including application specific calibrations and support programmes including site training and radiation services.

Scantech's units are used for conveyed bulk materials, particularly in the minerals sector with applications and years of proven operational performance in a wide range of commodities such as iron ore, manganese, copper, zinc-lead and phosphate rock.







# HOW WE OPTIMIZE YOUR MATERIALS HANDLING PROCESS? **THIS WAY!**

Operations everywhere rely on bulk materials handling systems for continuous performance. Sandvik has steadily developed into a technological frontrunner and leading global supplier of some of the world's most impressive machines for stockyards and other operations.

Rely on Sandvik to make your mining business more efficient and more competitive.

**Join the movement towards The Future of Mining.**  
It's This Way: [mining.sandvik.com](http://mining.sandvik.com)







# Stockyard equipment

stacking, reclaiming & conveying of bulk cargo



*Sandvik's high capacity iron ore handling machines for an export terminal, Australia.*

Louise Dodds-Ely

## Sandvik's expertise extends throughout the bulk handling process

Wherever bulk material is handled, Sandvik Mining's Product Area Mining Systems will be present. In addition to meeting the needs of the mining industry, the company also excels in meeting the needs of downstream operations, such as power plants and mills, ports and terminals with an approach tailored for each application.

Reclamation, stockyard storing, sizing, homogenization and transportation are all materials handling processes Sandvik supports. The offering for turnkey projects, individual new equipment or upgrades and modernizations includes consulting, systems design, engineering, procurement, erection and support. Sandvik applies materials handling and automation technologies to help customers best utilize their assets. Additionally Sandvik

designs and manufactures a full range of conveyor components like idlers, pulleys, belt cleaners, etc. used in materials handling equipment, whether for new systems or replacement parts for any existing system. The goal is to make the customers more successful through long-term cooperation and partnerships; success comes from efficient process design, innovative engineering and a dedication to reliability. Through the well developed Sandvik Mining and Construction organization, global parts logistics and local services keep the continuous materials handling processes running.

### BULK MATERIALS HANDLING SYSTEMS

Sandvik Mining and Construction's Materials Handling business



# Engineered for Life



Heyl & Patterson doesn't just engineer railcar dumping systems...We become a real partner in your operations for the life of your equipment, with:

- High-speed, semi-automatic unloading
- Various designs – Single, Tandem, Rotary, Wagon Tippler, Turnover, C-Shaped
- Rotation as fast as 35 seconds per car
- Rotate drive – Rack & Pinion or Chain
- Random car or unit train applications
- Inspections, upgrades and field service

Since 1887, the bulk materials handling industry has trusted Heyl & Patterson for innovative designs and reliable equipment.

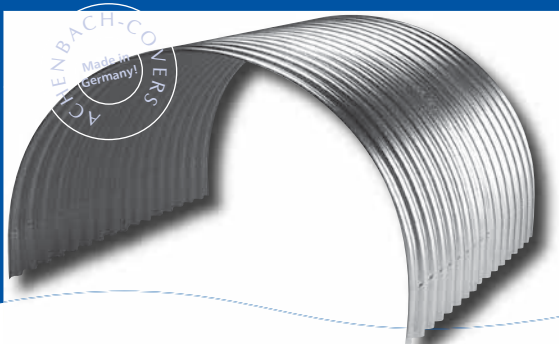


**HEYL & PATTERSON**  
Trusted Since 1887

412-788-9810

[info@heylpatterson.com](mailto:info@heylpatterson.com)  
[info.heylpatterson.com/dci](http://info.heylpatterson.com/dci)

Perfectly covered  
- with our hoods.



Achenbach metal hoods for conveyor belts

- The modern classic – in worldwide use
- Steel, aluminium, stainless – the appropriate material at any time
- Four corrugation profiles – suitable and cost-effective

Sale of organit-hard-PVC covers made in EU



Achenbach GmbH Metalltechnik  
Lindestraße 10 · D-57234 Wilnsdorf · Phone +49 (0) 2737/9863-0  
Fax: +49 (0) 2737/9863-10 · [www.achenbach-siegen.de](http://www.achenbach-siegen.de)



## Grain. It's your business.



We know exactly how valuable grain is to you and your business. With peak capacity of up to 30,000 tons in a single silo, the total site storage can be as large as you require. For a partner with the expertise, technology and manufacturing methods to ensure that your storage plant is second-to-none in terms of quality and processes, then look no further.

- **Silos** Supplied To European Din or Asae/astm Standards
- **Cleaners** • **Dryers**
- **Sales** • **Service** • **Parts**

**You can trust in Chief.**

**CHIEF**  
CHIEF INDUSTRIES UK LTD.

Tel +44 (0)1621 868944  
E-mail [sales@chief.co.uk](mailto:sales@chief.co.uk)  
[www.chief.co.uk](http://www.chief.co.uk)

*Complete Sandvik stockyard system for an coal export terminal in Colombia.*



offers all services related to bulk materials handling, including feasibility studies, conceptual plant layouts, design, engineering, and the entire execution of complete systems to handle coal, ore, bauxite and other different materials — a vast range of equipment for applications such as the following:

- ❖ conveying, stacking, reclaiming and blending of bulk materials;
- ❖ loading bulk materials into ships;
- ❖ unloading bulk materials from ships; and
- ❖ crushing, sizing and feeding of bulk materials.

This offering supports the continuous transfer of the material in various fields of materials handling solutions, whether as individual machines or as complete turnkey installations. The classical application of these systems and machines relates to stockyard facilities at mines, at export and import ports and in stockyards of power stations, steel works and processing plants. According to the requirements of the

downstream consumer, Sandvik's systems can reach output rates up to more than 10,000tph (tonnes per hour).

#### **COMPLETE HANDLING SYSTEMS FOR STOCKYARDS**

Stockyards, either as a circular or longitudinal layout incorporating particularly feed conveyors, stackers and reclaimers, have a central function in the fields of materials handling as they serve as material buffers, reserve or blended



*Stacker PS100 in South Africa.*



*Reclaimer PR200  
in South Africa.*



storage between incoming and outgoing materials. As buffering, composing and homogenizing performed by a stockyard can vary quantity as well as quality fluctuations can be balanced out with the correctly chosen system. As the priorities for each application and stockyard operations are different, it is necessary to consider various questions before selecting type and size: throughput required, characteristics of the materials to be handled, homogenizing effect required, open or roofed storage and importantly, the future upgrading of the storage. Sandvik offers a complete range of products to provide customized solutions for each customer's specific requirements. The equipment comprises:

- ❖ reclaiming technology for bucket wheel boom type-, bucketwheel bridge type-, scraper type-, drum type units;
- ❖ stacking technology for the most commonly used stacking methods: chevron, windrow and cone shell;

- ❖ combined stacking/reclaiming technology for bucketwheel- or circular units;
- ❖ conveying technology including transfer stations; and
- ❖ auxiliary equipment with hoppers, feeders, crushers, etc.

Covered storage is used where environmental aspects require the full enclosure of the stockpiles and stacking and reclaiming activities. It can either be arranged in the form of a longitudinal/rectangular configuration or in a circular configuration covered by dome-type structures.

#### **STACKERS (PS SERIES)**

Sandvik stackers effectively stockpile bulk materials in an efficient and orderly manner. Stationary or travelling, borne on rails or crawlers, they can be supplied in fixed, luffable or luffable-and-sleuable boom designs, with capacities from 150tph to 20,000tph. The choice of design depends on factors such as the



*Stacker/reclaimer PD200  
in Australia.*





Open-air Stockyard in Coal-washing plant

# Stockyard Equipment in the Coal Industry



Coal Stockyard with Pylon-type Stacker



Portal Scraper Reclaimer with Twin-Boom



Coal Stacker, Hammer-head Design



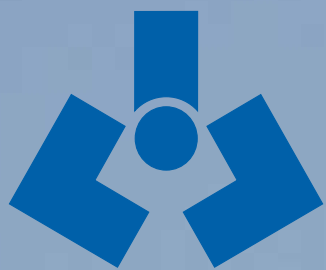
Circular Stockyard with Cantilever Reclaimer

# SCHADE

AUMUNDGROUP

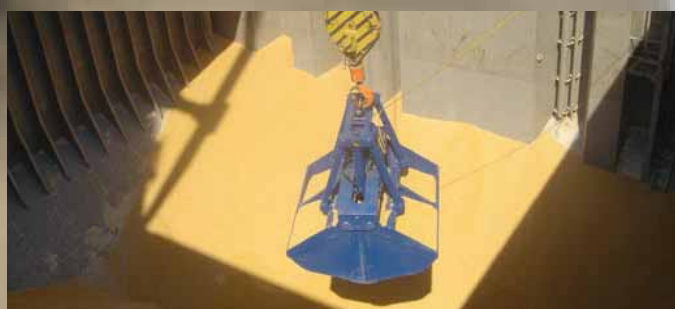
**SCHADE Lagertechnik GmbH • Dorstener Straße 360 • 44653 Herne • Germany**  
Tel.: +49-2325-58740 • Fax: +49-2325-587474 • e-mail: [info@schade-lagertechnik.de](mailto:info@schade-lagertechnik.de) • [www.schade-lagertechnik.com](http://www.schade-lagertechnik.com)





# Beco Grabs

## Bulk Grabs



We are one of the world's leading specialists in grabs for the bulk-market and are certified in accordance with ISO 9001:2008. This fact of course is, largely due to our grab construction experience, innovation and world-wide supply through matching the bulk,- and dredging requirements. Let us prove that our solutions meet your highest demands.

#### OUR PROGRAM OF GRABS:

- Mechanical clamshells
- Electro-hydraulic clamshells
- Booms and Fronts
- Hydraulic clamshells
- Orange Peel grabs

From within our group of companies we can supply



Dump trailers  
Earth moving  
machine-equipment

**buisca**  
CARGO SOLUTIONS



**BECO  
BOFORCE**  
Booms and Fronts

Beco Grabs \* P.O. Box 158 \* 4130 ED \* Vianen \* De Limiet 18 \* 4131 NR \* Vianen \* The Netherlands  
Telephone +31 (0)347-323100 \* Fax +31 (0)347-377780 \* E-mail: [info@becograbs.com](mailto:info@becograbs.com) \* Internet: [www.becograbs.com](http://www.becograbs.com)

*Conveyors in Sweden.*

stacking method and size of the stockpile, the type of material, the required throughput and the demand for mobility. Tripper cars or tripper systems for transferring material from the yard conveyor to the stacker are considered part of the stacker.

#### **RECLAIMERS (PR SERIES)**

Sandvik reclaimers are designed to reclaim bulk materials from stockpiles at mines, ports, steel plants, power stations, etc. in a quick, efficient and orderly way. They are available in several main types, including bucket wheel, scraper and drum-type reclaimers, and in many configurations and sizes, with capacities from 500tph to 20,000tph and more. The choice of design depends on factors

such as the size and shape of the stockpile, the type of material to be reclaimed, the required reclaiming rate and the need for blending or homogenization.

#### **STACKER/RECLAIMERS (PD SERIES)**

Sandvik stacker/reclaimers come in two main types: bucketwheel models for alternate stacking and reclaiming, and circular units, which normally stack and reclaim the material alternately but can be designed to do so simultaneously if required. The bucket-wheel models, normally supplied complete with tripper cars, are compact and economical for longitudinal stockyards where simultaneity is not required and where there can be large

*Shiploader PL400 in Brazil.*



# CIMBRIA MODUFLEX

CIMBRIA.COM

## DUST FREE LOADING SOLUTIONS CLEAN ENVIRONMENT AND WORKING SAFETY IN ONE PRODUCT

### CIMBRIA MODUFLEX

loading chutes for loading any dry bulk material into tanker trucks, open trucks, rail wagons, ships and for stock piling. The loading chutes can be supplied both with and without integrated filter and with full ATEX-approval.

### CIMBRIA BULK EQUIPMENT A/S

Drejervej 10 | 7451 Sunds | DENMARK  
Phone: +45 72 42 24 00 | [cbe@cimbria.com](mailto:cbe@cimbria.com)

CONVEYING | DRYING | SEED PROCESSING | ELECTRONIC SORTING | STORAGE | TURNKEY



>compounding & extrusion >materials handling >service

>>Why we enjoy an unloading challenge. Because time is money and this is also very true when it comes to alumina and petcoke unloading. With our Vacuum Ship Unloader VSU, featuring leading-edge technology and our deep process know-how, we can guarantee short ship lay times and ensure gentle and reliable unloading of your product. That's what we mean when we say „confidence through partnership“ . >>[www.coperion.com](http://www.coperion.com)



- > For unloading capacities up to 1.000 t/hr
- > Double or single boom technology

*Ship-unloader PU100  
in Australia.*



variations in the demand for stacking and reclaiming capacity. Standard circular units, which build a ring-shaped stockpile and are normally housed inside a covered dome because of environmental aspects, both continually stack the stockpile at one end of the ring and reclaim the material simultaneously from the other end.

#### **TRANSPORTATION SYSTEMS (PC SERIES)**

Sandvik has a highly skilled projects division specializing in the design, manufacture, installation and commissioning of conveyor systems for a full range of applications. The company also upgrades and modernizes systems and supplies a comprehensive range of its own quality components and spare parts.

#### **COMPLETE HANDLING SYSTEMS FOR PORTS**

All around the world, sea-going and coastal vessels are constantly being loaded or unloaded with different bulk materials. In order to ensure a thriving international sea trade, to load the material at the export terminal and unload the vessels in the import terminal, to store the material at the ports continuously and in a very short time, a high standard of perfection in port-handling methods is needed — an area where Sandvik has a vast experience.

Sandvik ensures a smooth transfer to and from bulk terminals with a complete offering of reliable ship-unloading and shiploading equipment.

Many different developments for all capacities and applications are included in Sandvik's range of shiploaders which provide travelling, telescopic, luffing and/or slewing as well as radial

functions. The ship-unloading of high-density bulk material at fast flow rates is conducive to the company's offering of grab-type unloaders of gantry or level luffing design. For the intermediate storage of bulk materials in ports, Sandvik's complete range of stockyard equipment and systems incorporates stackers, reclaimers and stacker/reclaimers.

The equipment can be supplied with various modes of operation, including manual operation by onboard operators, semi-automated and fully-automated operation integrated in a central, remote control system.

#### **SHIPLoadERS (PL SERIES)**

Sandvik linear gantry and quadrant bridge type shiploaders are constructed in proven, eco-friendly designs with a wide range of sizes to service vessels from 5,000 to 250,000dwt. Central to the Sandvik philosophy is minimal disruption of the port during installation of the shiploader and its supporting equipment. Sandvik's process for off-site construction, assembly, testing, commissioning and heavy-load transportation is highly advanced, resulting in installation of fully operational shiploaders with capacities up to 20,000tph in just a few days. The range includes a variety of shiploaders which provide travelling, telescopic functions, luffing and/or slewing installed onto longitudinal jetties, or radial shiploaders which incorporate a fixed pivot point.

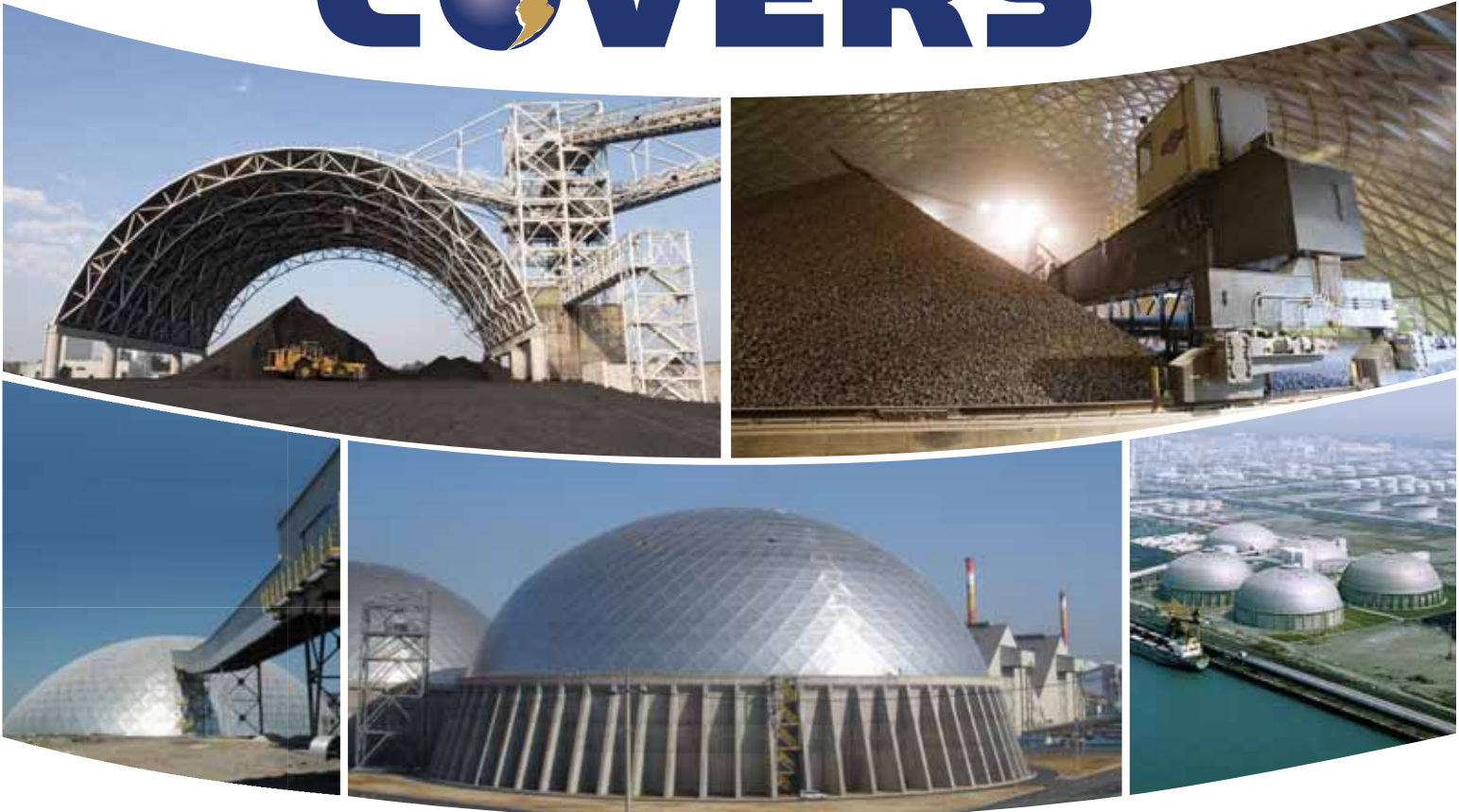
#### **SHIP-UNLOADERS (PU SERIES)**

Sandvik ship-unloaders of the linear gantry and level-luffing types are constructed in proven designs and a wide range of sizes to service vessels from 5,000 to 250,000dwt. Focusing on grab



INTRODUCING THE GLOBAL LEADER IN COVER SOLUTIONS.

# CST COVERS



**TEMCOR**

**CONSERVATEK®**

**SINCE 1964 • OVER 16,000 INSTALLED • OVER 90 COUNTRIES**

### **Dry Bulk Storage Solutions**

- All-aluminum clear-span structures
- High strength-to-weight ratio
- Maintenance free – never rusts, rots, chips or solar degrades
- Economical installation – light weight translates to faster erection times and reduced erection costs
- Project support around the world

**[www.cstcovers.com](http://www.cstcovers.com)**

CST Covers | 498 N Loop 336 E | Conroe, TX 77301 USA | p: 936-539-1747 | f: 936-539-5355



technology, they offer efficient, rational solutions to demands for quayside flexibility and are the perfect rigs for unloading materials with different bulk densities.

As with continuous ship-unloaders, they can be constructed, assembled, tested and commissioned off-site if necessary, then shipped to site and installed with minimal disruption to port activities.

#### AUXILIARY EQUIPMENT

Sandvik's product portfolio of standard equipment for bulk materials handling applications covers HC-series belt conveyors and HF-series belt feeders, both having fixed and mobile units. With a wide range of standard modules and components these devices can be tailored exactly to meet the needs of the application. The advantages of the mobile equipment make them ideal and cost-effective in conveying and stockpiling materials.

#### RECENT DEVELOPMENTS FOR STOCKYARD EQUIPMENT

Mining companies strive to maximize their production rates whilst keeping high safety standards to ensure a safe working environment for the employees. This leads to increasing attractiveness of fully or partially automated solutions for mining and materials handling equipment.

Sandvik Mining Systems has invested considerable efforts in automation, in the enhancement of their stockyard equipment by introducing auxiliary automation systems for different applications, such as collision avoidance and stockpile profiling, to name just a few. The automation package consists of state-of-the-art radar and laser sensors including dedicated software for data processing and interfaces to the machine PLC software via

common industrial platforms. The collision avoidance system for stockyard equipment can be used in both stackers and reclaimers to provide protection against moving equipment as well as to prevent impacts with stockpiles, as well as for shiploaders to reduce the risk of property damage. Stockpile profiling systems are being applied in bucket-wheel reclaimers. This add-on functionality further increases the machine's vision by scanning the face slopes and by adjusting the machine parameters in a predictive manner according to the shape of the stockpile benches.

These systems increase the level of automation on the machines and thus their serviceability for both the manually operated and the automated machine type without operator. Based on the type of application a different set-up and allocation of the sensors is required. For collision avoidance systems it may be necessary to allocate the sensors against other moving targets whereas for stockpile profiling they scan a solid ground and map its exact shape by creating 3D images, which are stored in an inventory database.

"The key requirements of the systems is the robustness of the sensors, fast signal response and reliable measuring results in order to increase the machine availability and to maintain high productivity levels of the machines under all operational circumstances," says Branco Lalik, Product Line Manager for Materials Handling, Sandvik Mining Systems.

The auxiliary automation systems for collision avoidance and stockpile profiling for stackers and reclaimers are specified according to the demands of Sandvik's customers. They will be integrated into the Sandvik in-house developed PLC software and the complementary SCADA system.





One Source

# High-performance vacuum unloading standard

KOVAKO™ Pneumatic Unloaders are offered as standard models that match optimal unloading capacity with typical vessel sizes –

diesel-power and multiple mobility options, there's a model to suit every terminal application.

KOVAKO Pneumatic Unloaders are built with FLSmidth's superior engineering and backed by our unequalled customer service.

No other unloader offers our unique combination of practicality, efficiency, performance and dependability!

Find out more at [www.flsmidth.com](http://www.flsmidth.com)



## A safe trip: custom design from Superior Industries slashes operating costs

For safe, economical, high-volume stockpiling, a Wisconsin, USA-based construction aggregate producer has replaced costly loader use with a 580-foot tripper conveyor.

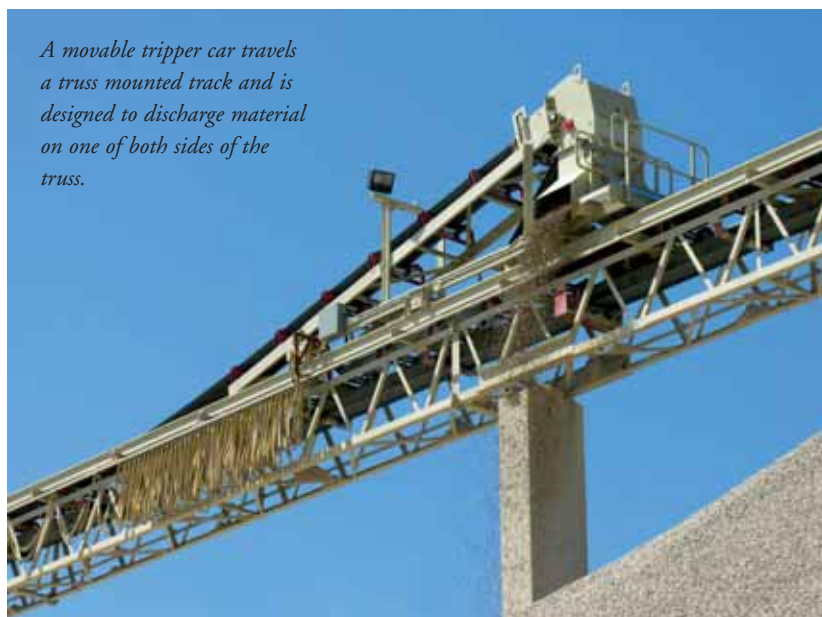
From April to November, Wissota Sand & Gravel stockpiles material 24-hours a day. “We load out trucks 52-weeks a year, but we can only produce material when Mother Nature lets us,” says Dennis Simniok, a 30-year industry veteran who is supervisor of the company’s Milwaukee, Wisconsin, USA pit. The operation yields 1.2 million short tons (1.9mt [million metric tonnes]) of material annually. To meet seasonal demand and to stock up for the brutally cold winter months, the site must build and maintain a stockpile of up to 200,000 short tons (180,000 metric tonnes) on its small 800-foot-long (244m) by 200-foot-wide (61m) footprint. Until just three years ago, the company tackled all its stockpiling with round-the-clock loader operation — a situation that created serious safety issues — and ballooning operating costs from maintenance, labour, fuel, and material loss due to contamination. Today, the site boasts a 580ft (177m), pillar-supported, tripper conveyor, one of the longest and tallest in the region. The custom-designed system was manufactured by Superior Industries of Morris, Minnesota, USA.

### SAFETY FIRST

There are a lot of factors that led the operation to replacing loader use with a tripper conveyor system, one of the most important being safety. A disproportionate amount of surface mining injuries and fatalities involve mobile haulage equipment operating at various dump sites. Adequate berms (up to axle height) must be maintained, and even then, backing through or over a berm is a common cause of stockpile accidents. “Think about it — you’re in a loader and suddenly you’re up to 60 feet (18m) above ground level, on an inclined ramp. And, if you’re stockpiling 24 hours a day, you have an individual doing that in the dark. It just becomes a huge safety issue,” says Simniok.

### PREVENTING MATERIAL LOSS

Not only does it take time and labour to build and berm a ramp



*A movable tripper car travels a truss mounted track and is designed to discharge material on one of both sides of the truss.*

for stockpiling, it results in significant material loss. Simniok emphasizes that even if it were safe for a loader to continually run up and down a ramp, it takes a tremendous amount of material to build the ramp — and then you end up with a contaminated pile. “The loader tracks sand up on the pile. Pretty soon, the ramp is all dirty and you have less salable product. When you load trucks in the winter, you can only load back to the ramp and then you’ve got to back away from it because the ramp is dirty and you can’t load out that material. Furthermore, every spring, you have this dirty ramp to deal with — material which you can only sell to sewer contractors at a cut rate,” he says.

### ELIMINATE COSTLY LOADER USE

Studies show that lifetime (8,000 to 12,000 hours) loader owning and operating costs are no less than 2.25 times higher than the unit’s initial purchase price — and that figure does not even include labour and the effects of an ongoing tyre shortage and fuel-cost crisis. It’s a very expensive way to stockpile. Plus loader component and tire wear accelerates when the machine is operated on inclines exceeding 6-percent.

“During the day, our loader and operator would have to load out trucks as well as stockpile. So we would usually put a couple of additional loaders on stockpiling for a several hours at the end of the day, so that one loader could keep up with the job at night. What’s more, you have to consider that each loader is stockpiling one bucket at a time. We were stockpiling 2,000 short tons (1,814 metric tonnes) a day, but producing 5,000 short tons (4,536 metric tonnes) a day. We really had to take a close look at the cost of running these machines,” says Simniok.

### STOP THE MONEY PIT MADNESS

Simniok says that they opted to put in a tripper conveyor due to site limitations which called for a long, narrow, yet high-volume stockpile to meet demand. Traditional radial stackers would not be able to do the job. They started looking at different tripper conveyors in different

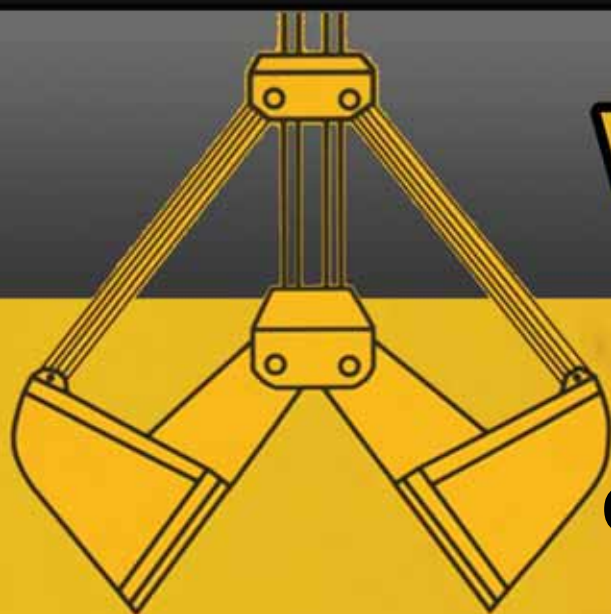


*Tripper conveyors are designed to build large volume stockpiles on limited real estate.*





**ORTS GmbH turns 40 this year!**



**ORTS** GmbH

**WWW.ORTS**

**The best link**

**Orts GmbH Maschinenfabrik,  
Schwartauer Str. 99  
D-23611 Sereetz  
Germany**



# ts-grabs.de

## between ship and shore.

**Tel: +49 451 395 850**

**Fax: +49 451 392 374**

**Email: sigvard.orts-jun@orts-gmbh.de**



# *World's No.1 CSU Supplier*



## Best Solution of Bulk Handling

IHI has supported Bulk Handling in the world over a century and continues to do in next 100 years.



### IHI Product Line up

- **Continuous Ship Unloader(CSU)**
- **Bridge Type Ship Unloader**
- **Mobile Multi-Purpose Crane**
- **Stacker**
- **Reclaimer**
- **Stacker-Reclaimer**
- **Conveyor**
- **Ship Loader**



**IHI Transport Machinery Co., Ltd.**

8-1, Akashicho, Chuo-ku, Tokyo 104-0044 JAPAN

Website: <http://www.iuk.co.jp/english/index.html>

configurations — taking a little bit from one setup and a bit from another.

“What we ended up with is a tripper conveyor system that runs unattended and stockpiles at 450 short tons (408 metric tonnes) per hour — with no man hours, no machine, and no fuel. Obviously, today’s fuel prices are triple what they were when we started up the system three years ago. So the payback is really huge right now,” he says.

#### TYPICAL TRIPPER CONVEYORS

Wissota Sand & Gravel operates a movable tripper. Trippers are devices that discharge material from a belt conveyor at points upstream from the head pulley. A tripper consists of a frame supporting two idling pulleys, one above and forward of the other. The conveyor belt passes over and around the upper pulley and around and under the lower pulley. The belt usually inclines to the upper pulley and may run horizontally, or it may then incline again from the lower pulley.

The conveyor belt itself drives a typical movable tripper, by an electric motor, or by a cable and winch. The tripper moves in a forward and reverse direction to make a long pile on one, or on each side of the belt conveyor.

#### A CUSTOM FIT

“Superior Industries came up with a tripper conveyor design that really fits our needs,” says Simniok who lists the following parameters:

- ❖ continuous operation;
- ❖ a remote-controlled tripper car;
- ❖ remote-controlled discharge from one side to the other;
- ❖ ability to be installed on 57-foot-tall (17m) concrete pillars;
- ❖ 30-inch (76cm) belt;
- ❖ ability to span at least 60-feet (18m) between pillars;

- ❖ capable of building a big-volume stockpile of at least 180,000 short tons (163,293 metric tonnes);
  - ❖ ability to handle 450 short tons per hour (408 metric tonnes) of wet material — without the head pulley spinning out
- Simniok says that they chose the Superior Industries design over the competitive bids due to the integrity of its structure. “It’s beefier with heavier angle iron and this gives us more bang for the buck. We didn’t want to skimp as we only want to install something like this just once. And, with the heavier truss design we found that we could make a longer, 65-foot (20m) span between pillars, which meant we had to install fewer pillars,” he says.

A flop gate allows a discharge of material to the north or to the south. Throughout the summer, he explains, they flop from side to side, going from pillar to pillar, until they have a pretty solid, full pile under that conveyor by the fall. “Toward the end of the season, we literally run that tripper every 30 or 40 minutes, inching it down the line to top the pile off so there are no pockets for the snow and ice to get into over the winter,” he says.

#### A TRIPPER TREND

“Tripper conveyors are getting more common and with this fuel crisis, we’ll be seeing more of them in the industry,” says Simniok. “But usually you’ll find tripper systems no more than 30 feet (9m) to 35 feet (10m) off the ground. At 580-feet (177m), our tripper conveyor is one of the longest in the region and is certainly one of the tallest, because of the site we have to work with. I see this system being in place forever, and we are thinking of installing another to handle our sand product. Obviously, conveyors like these are the most safe and cost-efficient way to move and stockpile material. This system has already paid for itself,” he says.

## efficient

loading and unloading bulk goods as fast as possible,  
at the lowest possible price per ton of cargo



We produce a full range of four rope grabs for medium and large lifting capacities, an assortment of Quick Release Links and Rope Pear Sockets. Without exception, these are top-quality, excellent performing products for the lowest costs per ton of cargo handled.

**nemag**  handles your bulk



# LIFT YOUR PROFITS WITH THE FLOATING POWER OF NKMNOELL

Winner of the IBJ Innovative Technology Award

Tranship more tons an hour of any bulk commodity, at lower costs per ton, anywhere in a port area, even with low waters or no quay facilities, from ship-to-ship, ship-to-shore, and even on open sea with full work comfort and safety...

Discover the power behind economic bulk transhipment and lift your profit with NKMNoell's new generation Floating Grab Cranes...

OPERATIONAL HIGHLIGHTS:  
CAPACITY UP TO 2,000 TONS PER HOUR  
OPTIMAL MOBILITY  
LOW FUEL CONSUMPTION  
LOW EMISSIONS  
LOW COST PER TON



Contact us for custom new build or retrofit, refurbishment and full upgrade of existing cranes. Our wide experience with harbour cranes means we always have the best solutions.

**NKMNOELL**  
SPECIAL CRANES

NKM Noell Special Cranes GmbH  
Kruisweg 643, 2132 NC Hoofddorp, Netherlands  
Tel: +31 20 655 0030 • Fax: +31 20 655 0040  
info@nkmnoell.com • www.nkmnoell.com

## Experience and imagination help EDGE Innovate live up to its name

*EDGE loader and stockpiler plant, Poland.*



EDGE Innovate is a blue sky thinking, imaginative and creative equipment manufacturing company. With its ethos of 'Innovation at Work' EDGE persists in pushing the boundaries of design and manufacturing to produce hard working, quality machinery to fit any materials handling requirement from recycling to quarrying.

The EDGE brand stems from a long tradition in the engineering industry in Ireland. With over 25 years experience designing and manufacturing machinery for a range of industries globally; the EDGE team is made up of 'old school' traditional quality engineering and innovative thinking alike.

*FMS shiploader option loading for Scruttons Ltd. at Belfast Docks.*







*FTS 360° Unlimited working  
at a CSN Brazil iron ore mine.*

The company's state-of-the-art manufacturing plant based in Ireland uses the latest technology and concepts to create a reliable, durable and cost saving product portfolio of mobile stackers, tracked stackers, stockpilers, tracked feeders, trommels, shredders and picking stations.

With the ability to handle a multitude of materials such as aggregates, fertilizers, coal, ores, wood and tyres, EDGE's machines are in operation across six continents in the harshest environments. From the blistering summer heats of the Australian outback to the chilling winter winds of Northern Canada, EDGE designs its machines to work as hard as its customers do.

EDGE Innovate can trace its roots back to its sister company KMC Engineering which was established in 1990 by family members Jim McKiver, Niall McKiver and Darragh Cullen. KMC Engineering quickly established itself as a leader in the sub-contract market exporting more than 5,000 units for Powerscreen and Finlay.

The EDGE Innovate brand was born in 2009 with a 150,000ft<sup>2</sup> custom built production floor base in Dungannon, County Tyrone. With an emphasis on unique and innovative designs, EDGE Innovate has quickly expanded its product portfolio supported by an ever-growing dealer network.

The year 2013 brings an exciting £3.4 million expansion plan, creating 84 new jobs supported by InvestNI and part funded by the European Regional Development Fund. Announcing the investment during a visit to the company, Northern Ireland Enterprise minister Arlene Foster said:

"EDGE Innovate is a recently established company with plans to roll out an extensive expansion strategy over the next five years. The firm's focus on export marketing and new product development will help to enhance its position within the global marketplace and achieve the sizable export sales it has forecast over the next six months."

To build on its successful start to 2013, EDGE Innovate has announced Pilot Crushtec International (Pty) Ltd as its new

dealer, representing EDGE Innovate in South Africa, Democratic Republic of the Congo, Zambia, Zimbabwe, Mozambique and Tanzania. Pilot Crushtec is a leading South African supplier of mobile and semi-mobile crushing, screening, recycling, sand washing, stockpiling, compacting and material handling solutions.

Pilot Crushtec markets its products and services in over 40 countries and is active in industries as diverse as coal, diamond, gold, cobalt and platinum mining, aggregate and sand quarrying, construction, civil engineering and recycling.

The ever-increasing EDGE Innovate portfolio boasts a number of products for the recycling and material handling industries. The ever popular FS-Series with its countless options is the perfect example of EDGE's innovative thinking to stay ahead of the competition. The FS-Series can be found working in successful mines and ports throughout the world with contracts won to supply CSN of Brazil and closer to home, Scruttons Ltd. of Northern Ireland.

The EDGE Feeder Tracked Stockpiler Series is designed to allow customers to efficiently load and stockpile a wide range of materials including crushed aggregate, compost, top soil, bark, coal, sand and fines. The main advantage of the FS-Series is that it can be fed directly by any Excavator or Wheeled loader. The FS is excellent at holding a buffer of material within the hopper allowing a regulated flow of material to the main conveyor belt. With fully speed adjustable belts the feeder stacker series eliminates the need for a separate feeder and stockpiler unit. The FS-Series has countless options available from tipping grids, vibrating grids to overband magnets. With numerous conveyor lengths the FS-Series can satisfy a wide range of customer needs. The versatility and robust design of the FS-Series allows this particular product to be as comfortable in the dock as it is on the harsh environment of the quarry.

EDGE Innovate strives to find innovative ways to stay one step ahead. In the first quarter of the year, it launched the new patent pending LTS Series. The LTS robust design enables it to convey heavy aggregate such as oversized iron ore whilst



*LTS 360° at its launch in  
June 2013.*

providing the customer with superb manoeuvrability around site with rapid set-up times. The benefits of the LTS were swiftly recognized by its dealer of the year, Pat Kelly of EDGE Equipment Australia, with orders placed for four LTS units.

Further options in EDGE's current product portfolio were added in June with the launch of its new 360° Unlimited Series. With the successful tender to supply CSN of Brazil, two FTS 360° Unlimited units were swiftly exported and put to work without delay. Available for both the FTS and LTS Series the 360° Unlimited option maximizes operations for loading of ships,

trains and barges by enabling the operator to rotate the stacker 360° uninterrupted. This enables the operator to position the tracks parallel to the vessel, allowing the stockpiler to travel along the side of the vessel without the need to adjust the orientation of the machine. This option still only requires one operator to run an entire stacker that will offer up to 1,000tph (tonnes per hour) for continuous loading.

With new products in the design process and the ever-growing options available, EDGE Innovate is confident that it is staying true to its ethos of 'Innovation at Work'.

## KIEPE – Keep a good thing going

**Vossloh Kiepe GmbH**

P.O.B. 16 02 51

D-40565 Düsseldorf (Germany)

Phone +49 (0) 2 11 74 97-2 80

Fax +49 (0) 2 11 74 97-4 20

info@kiepe-elektrik.com

www.kiepe-elektrik.com



### Scope of supply

- Pull Rope Switches
- Accessories
- Belt Misalignment Switches
- Speed Monitors



## DF Mining & Handling: serving the mining and energy industries worldwide



Duro Felguera Group dates back to 1858, when its founder Pedro Duro Benito, started Duro y Compañía. Its main activities were based on the production of iron and steel, and in the coal mining industry. By the end of the 19th century it had become the main iron and steel producer in Spain.

By 1905 it was listed on the Madrid Stock Exchange and by 1920 it had become the largest coal producer in the country. Further business endeavours contributed to the company's rise in the mining industries so much so that for the decades of 1940s and 1950s DF, coupled with Altos Hornos de Vizcaya, led the national steel market. Since then, Duro Felguera has focused its activities on the production of capital goods, diversifying its business areas in order to respond to the varying demands for equipment of companies in different industrial sectors.

Today, under the DF trademark, Duro Felguera specializes in the management of EPC projects, engaged in all phases of implementation, including the manufacture and supply of all equipment and civil works required for project completion mostly in the energy and mining industries.

### CURRENT ACTIVITIES IN THE MINING & HANDLING BUSINESS

DF Mining & Handling (DFM&H) is DF's brand currently engaged in the turnkey delivery of mining and mineral processing projects all over the world. It has been providing strong references for over 40 years and has a successful track record that keeps growing as new projects become available and new technologies are developed.

In the processing and engineering design fields, most activities are focused on: conceptual studies, pre-feasibility studies, feasibility studies, and engineering of mineral processes. On the project execution side in EPC/EPCM capabilities, DFM&H is involved in: design, engineering, procurement, construction, supervision, commissioning, plant operation and training.

The company's main goal is to

satisfy its clients with tailor-made solutions that are cost effective and timely.

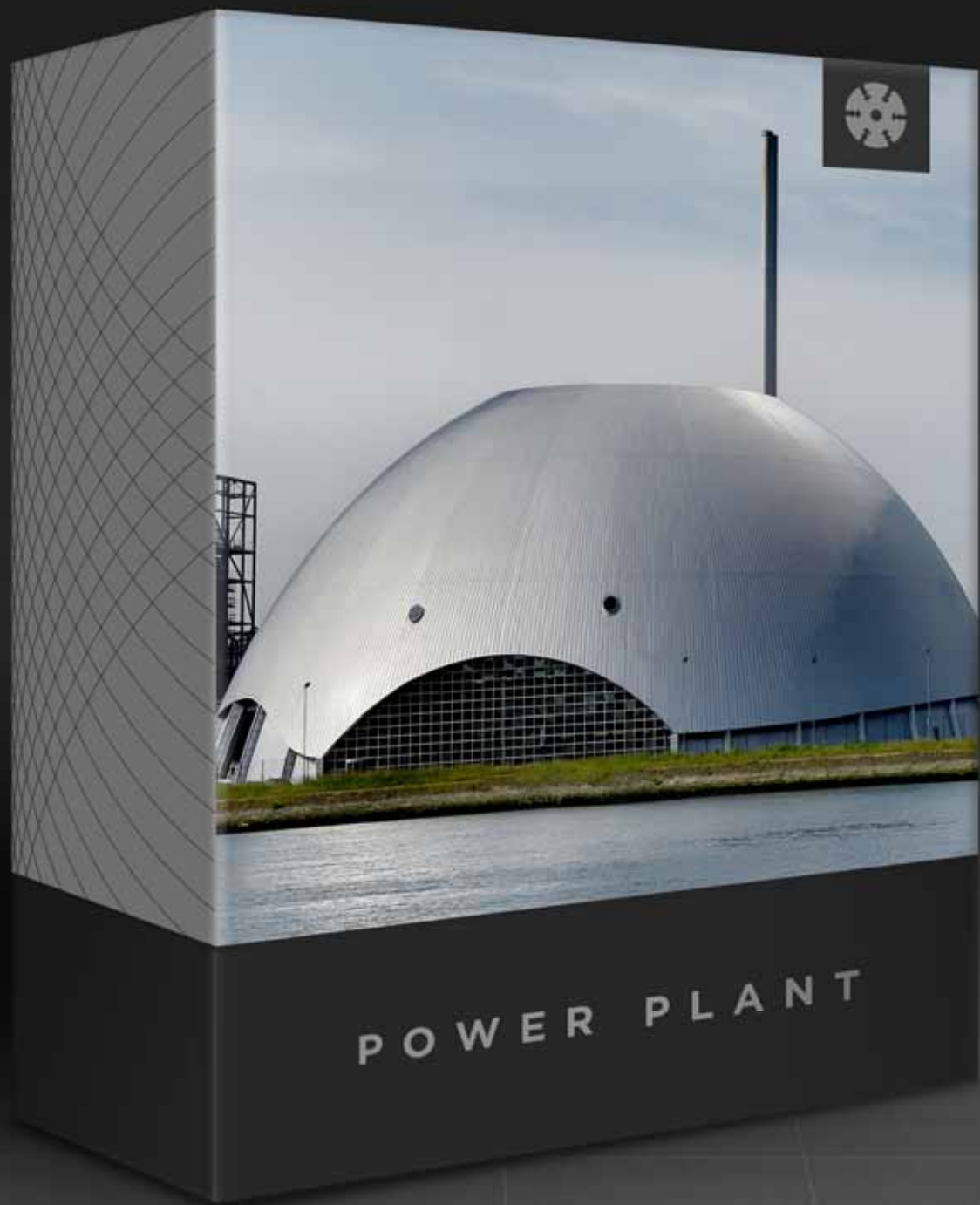
### EQUIPMENT MANUFACTURED

As a long-time provider of mining solutions worldwide, DFM&H has developed a wide range of equipment integrated into many important projects across the world. Equipment for open cast or underground mines includes: vertical shafts and all their associated equipment; underground and surface loading stations; crushing and screening plants; conveyor systems; truck loading and unloading stations; and ore storage and homogenization yards.

For mineral treatment plants, DFM&H offers not only the basic and detailed design but also construction and start-up in the following areas: crushing; grinding; classification; magnetic separation; gravity; flotation; and tailings deposition.

Other construction fields covered by DFM&H are storage and homogenization yards, port terminals (loading and unloading), and continuous haulage needs. Its handling capabilities are proven within a wide range of technologies in its complete range of stackers and reclaimers, train loading and unloading systems, grab ship-unloaders, shiploaders, and conveyor systems.





Our modular process  
covers your site in a snap.

 **G e o m e t r i c a**®

[biomass.geometrica.com](http://biomass.geometrica.com)



Equipment designed and manufactured by DFM&H can handle the most diverse types of materials, including: coal, iron ore, aggregates, cement and clinker, petroleum coke, sulphur, and phosphates. With its engineering capabilities and expertise, DFM&H is always considering new materials and is accustomed to adapting its designs to handle all commodities in today's mining trade.

#### CLIENT BASE — AND STAYING COMPETITIVE WORLDWIDE

With projects all over the world and an increasing number of order intakes, main clients include: CVG Ferrominera Orinoco (Venezuela), XStrata Zinc (Switzerland), Berkeley Resources (Australia), CAP Minería (Chile), Pemex (Mexico), Cemex (Mexico), Long Beach Port (USA), Arcelor Mittal (Luxembourg), Kinder Morgan Terminals (USA),

Gangavaram Port Limited (India), Repsol (Spain), YPF (Argentina), Endesa (Spain), Kobe Steel (Japan), Qatar Steel (Qatar), and EZZ Steel (Egypt), among many others.

DFM&H is constantly working to become a first tier EPC company. It competes as well as collaborates with all major companies in the mining business worldwide.

Each customer demands solutions adapted to their needs. DFM&H offers technology and competitive advantages to reach these goals. Innovation drives it to provide specific solutions to each project. DFM&H is involved in every step of the value chain, efficiently manages very diverse work scopes, and is extremely versatile. Its international presence with permanent offices on all continents gives it deep knowledge of ongoing business in developed and emerging markets, and provides it with a much needed support system for all its projects around the world. It is currently represented in India, Mexico, USA, Japan, Brazil, Venezuela, United Arab Emirates, Australia and China.

Finally, DFM&H's management team defined a major priority in attaining efficiency and total compliance with work schedule

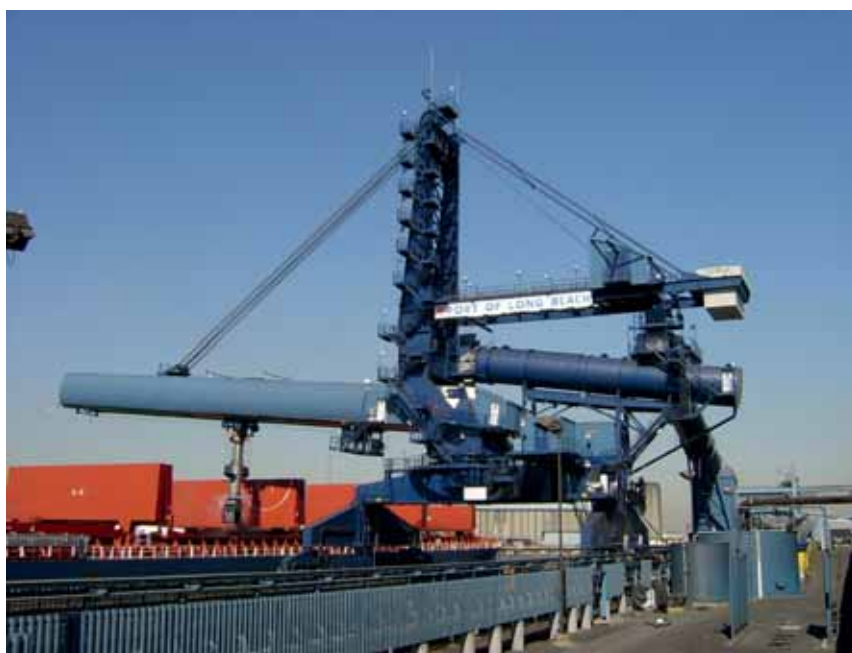


mandates, along with the personal and professional development of its technicians. Its mission is to select the best talent for each job and to encourage resourcefulness and continuous improvement. DFM&H personnel cover all the disciplines that EPC projects require and its cumulative know-how defines its strength as a collaborative and driven team.

DFM&H has evolved to become an internationally renowned supplier of maintenance logistics systems for solid bulk products. The company's strength is based on a profound knowledge of its customer's needs which translates into the development of reliable and efficient designs for their projects.

#### RECENT CONTRACTS AWARDED

- ❖ engineering, procurement and construction contract for 55mtpa (million tonnes per annum) processing facility at the Roy Hill iron ore mine project in Western Australia with joint venture partner Forge Group. Total contract value €992 million.
- ❖ travelling, luffing, slewing and shuttling 5,000tph (tonnes per hour) shiploader for coal, suitable for bulkers of 40,000–118,000dwt for Kinder Morgan Terminals in the USA.
- ❖ Gangavaram Port expansion (India), including two ship-unloaders, two stackers and two reclaimers, a belt conveyor system and loading station and integration with existing iron ore and coal port terminal, previously awarded to DFM&H as well.
- ❖ engineering, manufacturing, supply, supervision of erection, training and start-up, plus commissioning for a new iron ore processing plant with capacity for 4mtpa. Client: SNIM (Mauritania).
- ❖ fertilizer handling system for Kakinada Seaport (India) including delivery of two movable berth hoppers, belt conveyor system 1,900tph, warehouse storage for unloaded cargo, tripper conveyor with reversible cross conveyor, six reclaiming hopper with screw type transfer mechanism, train loading station and all electrical and control systems.





# HIGH LIFECYCLE PROFITABILITY

The Konecranes AGD Grab Unloader offers you the best lifetime value. A simple, remarkably effective rope reeving design and standard components give you high operational reliability and reduced maintenance. And your drivers will enjoy the good response time of the modern AGD control system.





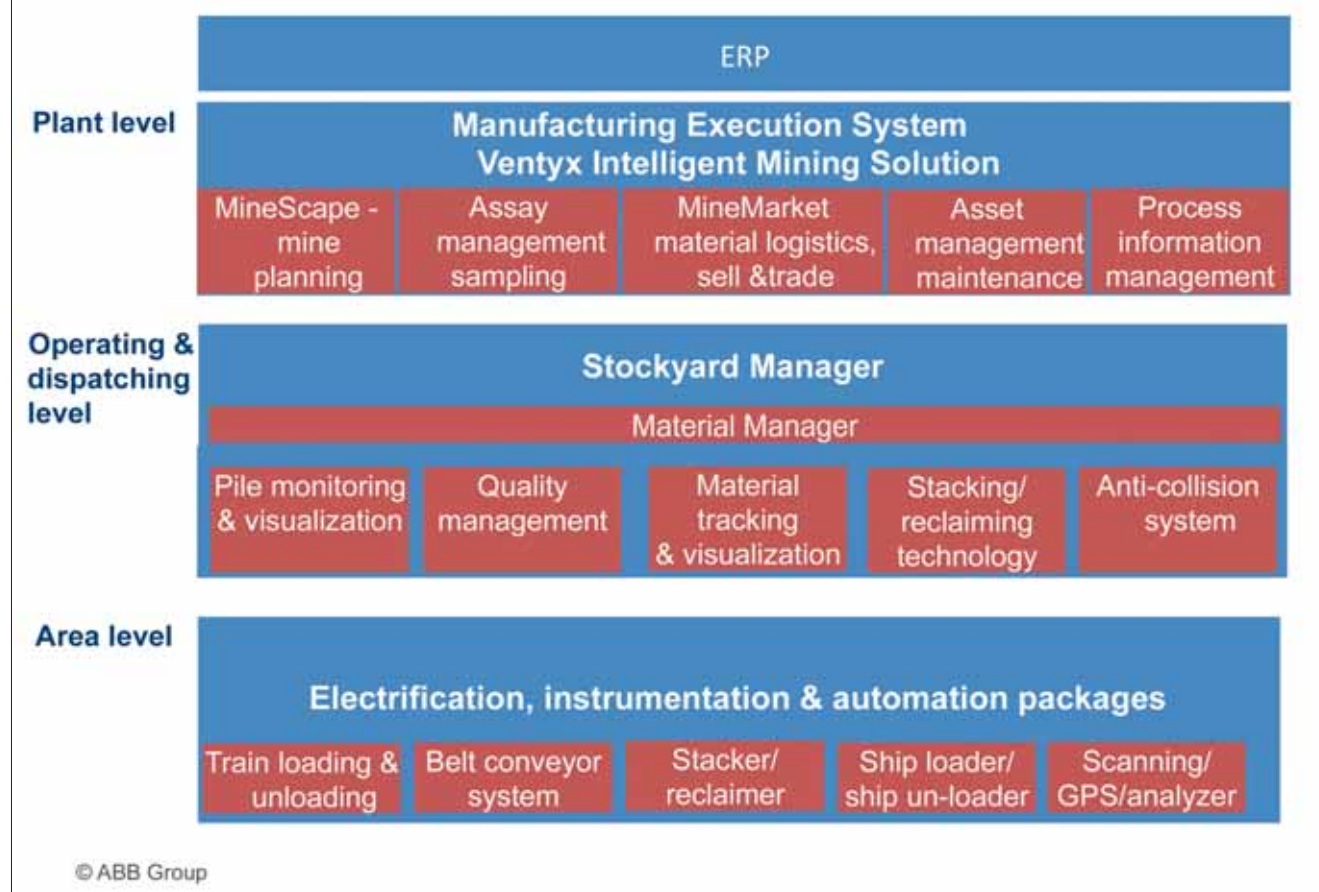
## Seamless integration from mine to market?

Naturally.

Material handling systems are an integral part of a complete material flow and quality management system. While in recent years the main focus was on optimization of single aspects like mine planning or advanced automation solutions, today a seamless integration of all subsystems is key to ensure overall optimization from mine to market. ABB's state-of-the-art stockyard management system integrates process control, Manufacturing Execution Systems (MES) and ERP systems to optimize the degree of material handling efficiency and to secure material supply in the requested quantity and quality. For more information, visit us at [www.abb.com/mining](http://www.abb.com/mining)

## Stockyard Manager – ABB integrates process control, MES and ERP

Figure 1: Modular system for bulk materials handling.



In recent years, market focus has often been on the optimization of individual parts of the mining process — such as mine planning, or advanced automation solutions. However, what is needed now is a seamless integration of all subsystems and an overall optimization from the mine to the market.

An integrating tool is required to minimize the effort required for all steps in the material flow chain, like material processing, storage and handling. This tool should build interfaces and interaction between the different levels — from the order fulfillment in the ERP system all the way through to the basis operation on the pile or even in the mine or the plant.

Additionally, the increased degree of efficiency in modern coal power plants demands an integrated coal handling management system, in order to ensure that the coal supply is of sufficient quality and quantity.

To fulfill these demands, ABB has developed a modular system, as shown in Figure 1 above.

For operators in the central control room to achieve fully automated operation, they need real-time information about the material quantities, properties and locations, be it in a surge bin, on a belt or on the stockpile.

These requirements can be met by a computer-calculated model of the stockpile (or belt or surge bin, respectively) which is based on exact information from a database. The database provides information about the material quality in the transportation and stockpile models that monitor the material flow online.

The necessary input for the model is delivered by laser scanners and positioning systems mounted on the stockyard machines. This allows for autonomous operation of the machines.

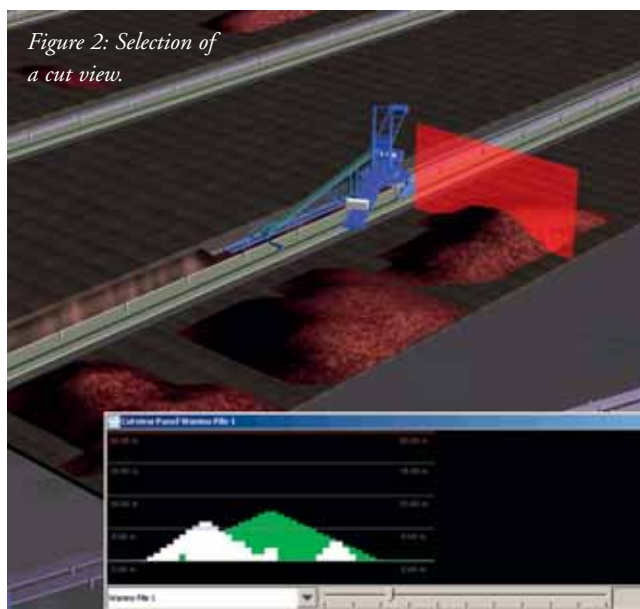


Figure 2: Selection of a cut view.

The scanners can provide surface information which will be used to recalculate the model. This solution enables a real-time and full-terrain update of the pile surface. This information remains accurate even after material movements due to environmental influences like storms or heavy rain, or due to the use of mobile machines such as graders or bulldozers. Furthermore, a scanner detects the superstructure of ships, wagons and other objects and hence enables — in combination with an adjustment to the GPS data — a goal-directed behaviour for loading or unloading.





[www.rblrei-france.com](http://www.rblrei-france.com)

## BULK UNDER CONTROL



Overland Conveyor



Hopper

Stacker



Loader / Unloader

Process



### CONTACT US /

Z.A Les Landes  
BP 50159 49481 St Sylvain d'Anjou  
Tél : + 33 (0)2 41 21 19 40  
Fax : + 33 (0)2 41 21 19 59

### HEAD OFFICE /

11, Boulevard Brune  
75682 PARIS Cedex 14  
Tél : + 33 (0)1 53 90 22 40  
Fax : + 33 (0)1 53 90 22 24

[contact@rblrei-france.com](mailto:contact@rblrei-france.com)



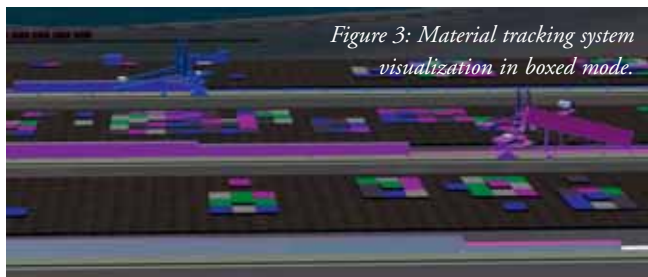


Figure 3: Material tracking system visualization in boxed mode.

For optimized material processing and handling, a pile monitoring and visualization module records material movements to and from a stockpile and calculates the material distribution on a stockpile accordingly. The module supplies information about the material on the stockpile and its shape, as well as its different properties (quality). Material distribution on the stockpile will be calculated with a computational module based on the information from the modules Material Tracking, Stacking and Reclaiming Technologies and the results of the 3D laser scanning.

The stockpile visualization component offers a graphical representation of the information stored in the stockyard management system, using modern browser technology. The visualization shows an overview of all stockpiles on the job site. The stockyard can be displayed in 2D or in 3D.

For a detailed analysis of the stockyard, it is possible to zoom and adjust the angle of the view. The view can be adjusted from different viewpoints and separate piles which could be split into small individual virtual piles that can be selected individually. Slice or cut views can be shown where the different material types and their respective properties are stored.

The system processes a complete job like unloading a whole batch with subsequent stacking, or a complete loading process of a ship including reclaiming material from the pile, haulage and loading. With a continuous overview of the tonnage and properties of the material, the system calculates the best route by optimizing the material flow to ensure the ideal employment of the machines.

The stockyard management system is fully automatic, so no workers are required to operate the stackers and reclaimers, train- or shiploaders/unloaders. It is a complete, comprehensive and fully automated system (see Figure 1) for material handling. The system includes a number of advantages:

- ❖ minimizing the administration effort;
- ❖ constant and optimized belt load and consequently optimized material throughput;
- ❖ less equipment wear due to fewer stress factors (no system overload);
- ❖ reduced maintenance costs;
- ❖ fewer faults and less damage triggered by operator failures;
- ❖ cost savings due to fewer operators; and
- ❖ energy savings by smooth and continuous operation

A proven collision-avoidance system prevents injuries or damage to equipment, whether the machines are handled by operators or not. Warning signals are issued by a laser scanner, a GPS or pile height sensors (mounted on the left and right hand side of the boom/bucketwheel respectively) help to prevent collisions of the boom/bucketwheel with the pile.

One notable recent project is a stockyard management project with a Brazilian mining company in Malaysia. In 2012, ABB won an order to fully automate the process control system at a new iron ore distribution hub on the west coast of Malaysia.

The facility will distribute ore shipped from Brazil to steel company customers in the Asia Pacific region. The project will include a palletization plant, a jetty and warehouses. ABB's delivery will automate the material handling process, which will be completely unmanned, for maximum efficiency and personnel safety.

ABB's scope of supply includes the design, engineering, fabrication, delivery, system integration, installation, testing and commissioning of a 800xA process control system to manage all plant equipment at the hub including the conveyors, stackers, reclaimers and ship unloaders. The unmanned stackers and reclaimers will be aided by 3D pile scanners and a GPS positioning system to ensure the highest level of accuracy and precision in sorting and distributing customer orders.





## Analysing the stockyard: Netherlands-based TBA offers its expertise

In 2010 bulk material handling accounted for 3.3 billion tonnes of the seaborne trades. Whether it is an export or import terminal, a stockyard is one of the basic elements of a dry bulk terminal where a variety of handling equipment is deployed; in addition, it is often a strategic stock and it is always a crucial component in the overall terminal logistic performance.

Following arrival at the terminal, bulk cargoes are usually held in storage before delivery either by vessels, barges, trains, trucks or conveyors. Two main activities take place at a storage area; one is to stack the commodities and the second to reclaim them. Hence, for a stockyard analysis various factors need to be taken into account, such as:

- ❖ the material properties of the commodities handled at the terminal;
- ❖ the strength of the ground conditions;
- ❖ equipment limitations (e.g. outreach and height of machines, capacity);
- ❖ availability of storage space (land);
- ❖ the 'peak' demand (operational and seasonal);
- ❖ the technology deployed; and
- ❖ environmental concerns.

### INFLUENCING FACTORS FOR STOCKYARD DESIGN

#### Physical factors

##### Material properties

Bulk material properties determine the behaviour of the material during handling and storage. Parameters such as internal friction and wall friction are essential to design or choose a suitable silo or hopper for storage.

The inherent material properties influence the choice of storage options. Open storage options are common for materials like coal, aggregates, and iron ores. Materials such as grain, sugar, cement, and wood pellets are often stored with enclosed storage systems. Certain commonly used storage methods may not work for all bulk materials. For instance, compaction is a common practice in coal handling to minimize the risk of self-heating in a stockpile. However, if applying compacting to the storage piles of solid biomass, it only stimulates self-heating furthermore.

For a hopper, the cone angle is affected by the wall friction angle and the effective angle of internal friction. Subsequently, the cone angle affects the minimum opening of the hopper and its discharging capacity.

##### Equipment characteristics and stacking method

The equipment that should be considered for a stockyard analysis study is not limited to the actual storage choices (e.g. an open storage area or enclosed silos); transshipment equipment such as stackers and reclaimers ought to be taken into consideration as well. These transshipment facilities can also provide extra services such as blending, mixing and homogenization. Such considerations are:

- ❖ **types of equipment for open or enclosed storage:** not all

### Important parameters for a stockyard analysis



equipment suits both storage types; some will be used only for open storage (e.g. boom type bucket-wheel reclaimers) and other types are for enclosed storage only (e.g. screw stacker-reclaimers). Some equipment can be used for both open and enclosed storage, such as slewing luffing stackers, drum-type reclaimers, and circular portal stacker-reclaimers.

- ❖ **capacity of required storage and the applied handling equipment types and numbers:** the logistical performance of a stockyard is often influenced by the transshipment equipment deployed for stacking and reclaiming; however, the capacity limitation of the actual storage can also affect the capacity of the handling equipment deployed.
- ❖ **the equipment width and height differs from open storage and enclosed storage, affecting the stockpile dimensions:** for instance, for a large-scale bulk terminal it is common to have stockpiles 60–90m wide, and around 15–18m high. For an enclosed storage, the stockpile height depends on equipment and building restrictions (e.g. silos, domes, stackers, and reclaimers).

##### Land availability and ground conditions

Equipment dimensions and stacking method affect the required storage land size and consequently the related costs. They are a starting point when looking at greenfield developments. For brownfield development or expansions, the availability and condition of land will often restrict the choices available for an optimum stockpile arrangement.

Soil conditions influence the density of the storage which often relates to the utilization of storage area. Although the bulk material properties are the most important factors, the equipment characteristics, the stacking method, and the strength of the soil are to be considered for storage land size estimation.

##### Financial factors

In the terminal design, the total investment required for the facility often overrides other design factors. A more holistic approach is required where the choice of the stacking method depends on the bulk material properties and the availability of

surface area. A lower CAPEX alternative can often result in a higher OPEX operation, which then has to be burdened over the entire lifecycle. To realize a better ROI or a faster payback period, the CAPEX and OPEX should be balanced. A qualitative and quantitative multi criteria analysis (including cost per tonne and initial investment) should be used to compare the feasible options.

### Social factors

Because of various activities at a bulk terminal (e.g. loading/unloading operations), a series of environmental impacts need to be taken into account for their influence on local communities and ecosystems. Noise and dust are of major concerns, and as a result bulk terminals are under increasing pressure from legislation because of sustainability guidelines and the increasing awareness for the environment.

Due to these potential threats to the environment and the society, each country in the world has its own environmental regulations that terminal operators and port authorities need to follow. In general, prior to any terminal construction/expansion or port development, an Environmental Impact Analysis (EIA) and increasingly it has become a normal practice to provide the findings of impacts listed in a Environmental Impact Statement (EIS) or equivalent as required by local authorities. Consequently, bulk terminals nowadays put more focus on both the equipment and handling methods in order to have environmental friendly operations.

### Technology

Utilization of software can radically improve stockyard utilization. Planning tools can allow the user to forecast space requirements and prioritize the area clearing to create sufficient space for forthcoming deliveries. Terminal Operating System (TOS) or Terminal Management System (TMS) software can also create prioritization rules to empty specific areas and use bulk density and angle of repose algorithms to allow the user to better understand the capacity of the yard. COMMTRAC from DBIS is one such system available in the market.

### STORAGE DESIGN

The performance of the terminal is limited to the least performing element in the overall terminal facility. The design of the terminal should cater to handling of the peak loads with regards to storage space and choice of equipment.

### Required premises and initial static analysis

The first step is to collect relevant premises for both the initial static analysis and the dynamic analysis with a simulation model. In addition to the bulk material properties and the equipment characteristics, information regarding the number of material types, the stacking method and the logistic flows are also necessary for the stockyard study.

Usually each bulk material needs to be stored separately; hence under the same annual throughput, the more types of materials the larger the storage area will be. If further separation is required (e.g. certified as sustainable biomass materials), it also impact storage demand such as higher required storage land area and higher energy consumptions.

The impact brought from the sizes and the actual arrivals of vessels, barge, trains and trucks are related to the incoming and outgoing logistic flows.

An import dry bulk terminal can be used to demonstrate the influence from the effects of size and arrivals. If initially the

terminal storage stock level is zero, under static situation the required storage capacity is related to the ratio of size differences of two types of supply ships. At the same annual throughput, if the size of barges, trains and trucks stays the same, the larger vessels size will cause longer average material storage time. However, the vessel size effect is more influential than the impact from the size of barges, trains and trucks.

### Dynamic analysis using simulation modelling approach

The initial analyses regarding the premises are conducted based on static situations where only the average values (e.g. arrival rate, transport mode size) are taken into account. Any kind of incident such as stoppage due to weather condition (e.g. rain), machine breakdowns, and seasonal influences of bulk material availability are not included in the theoretical calculations.

To analyse the effect of time dependent processes, it is necessary to test the performance of the stockyard under various stochastic situations (e.g. the arrival pattern of vessels, influence of constraints/stoppages). This kind of dynamic analyses can only be performed with simulation models that capture the dynamic operations at a dry bulk terminal.

Typically there are more parameters that need to be used as input in addition to the premises used for the initial analyses: equipment efficiency (technical productivity v.s. achieved operational productivity), stoppages (e.g. rainfall, equipment breakdown, scheduled maintenance, hatch changing, shift changing), number of berths, mixture of the transport mode (e.g. vessel mix), seasonal influence, process times (e.g. sampling and weighing).

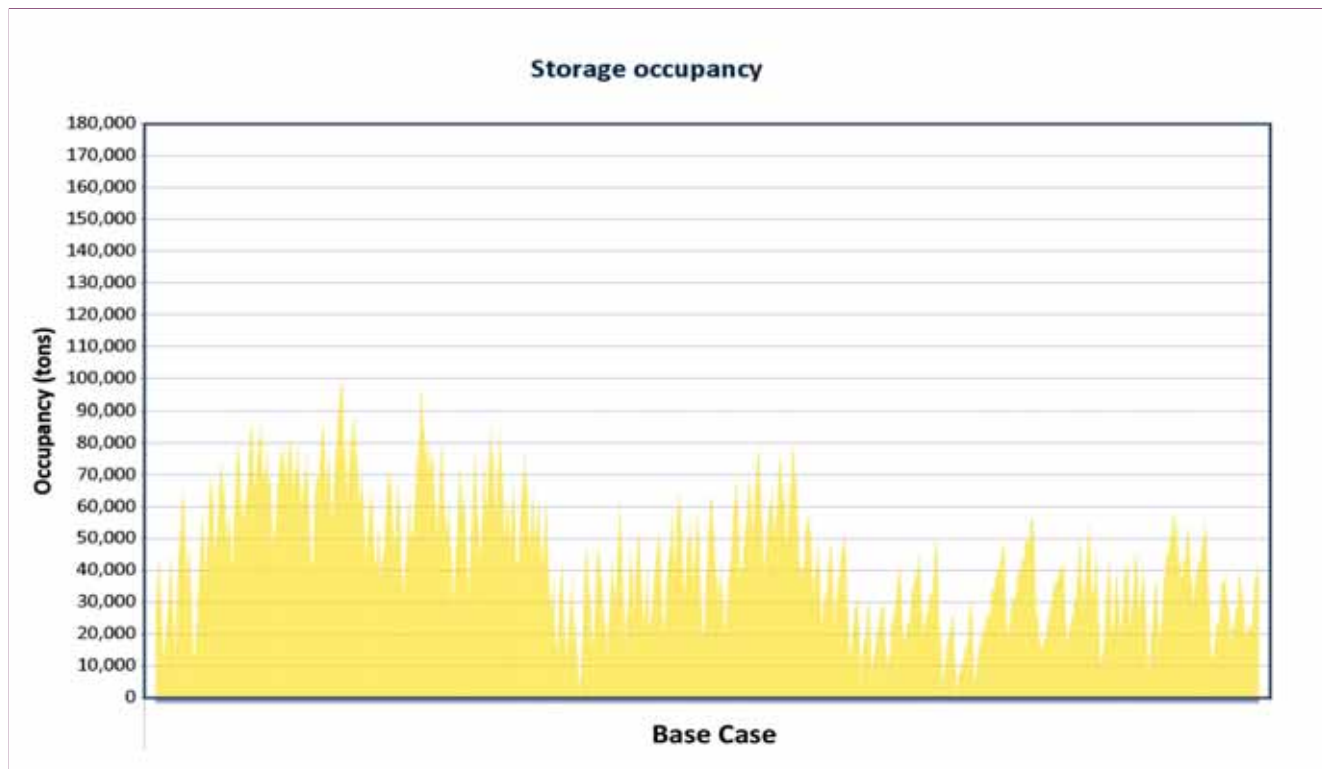
Furthermore, the arrival patterns of the transport modes are rather important because in reality the arrivals do not completely comply with the schedules. Often the arrivals can be assumed to follow a certain arrival distribution (e.g. uniform distribution, exponential distribution). When the stochastic effects are taken into account, 50% of the required storage capacity is not enough as a safety stock level. Irregular arrivals also may lead to higher storage time; and together with the higher storage capacity the overall costs (including both CAPEX and OPEX).

### CASE STUDY

One of the key objectives for a grain terminal was to determine the actual storage capacity required for the planned expansion. The current situation made it difficult to estimate as the logistics environment led to a lot of down-time and inefficient use of the storage space. The terminal was facing with situations where the storage was either near empty or at times completely occupied. Determining the accurate storage capacity was crucial as related investment costs (acquiring land, storage warehouses) were dependent on the success of the project. A dynamic approach using simulation based modelling was applied in meeting the objective.

The base case scenario indicated a peak storage capacity of approximately 90,000 tonnes. This scenario was then tested again with various sensitivities based on local constraints due to weather conditions and logistics environment. It was evident that higher limits for the constraints would raise the peak storage requirement, the simulation analysis allowed to identify these limits as indicated in figure below. From additional rainfall to delays to barges and vessels, the peak storage requirement indicated was in the range of 100,000 tonnes to 150,000 tonnes. The terminal operator was able to determine a optimum storage capacity for a terminal expansion based on the critical investment





limit for the projects feasibility, commercial requirements for adequate capacity, and control of the logistics flow.

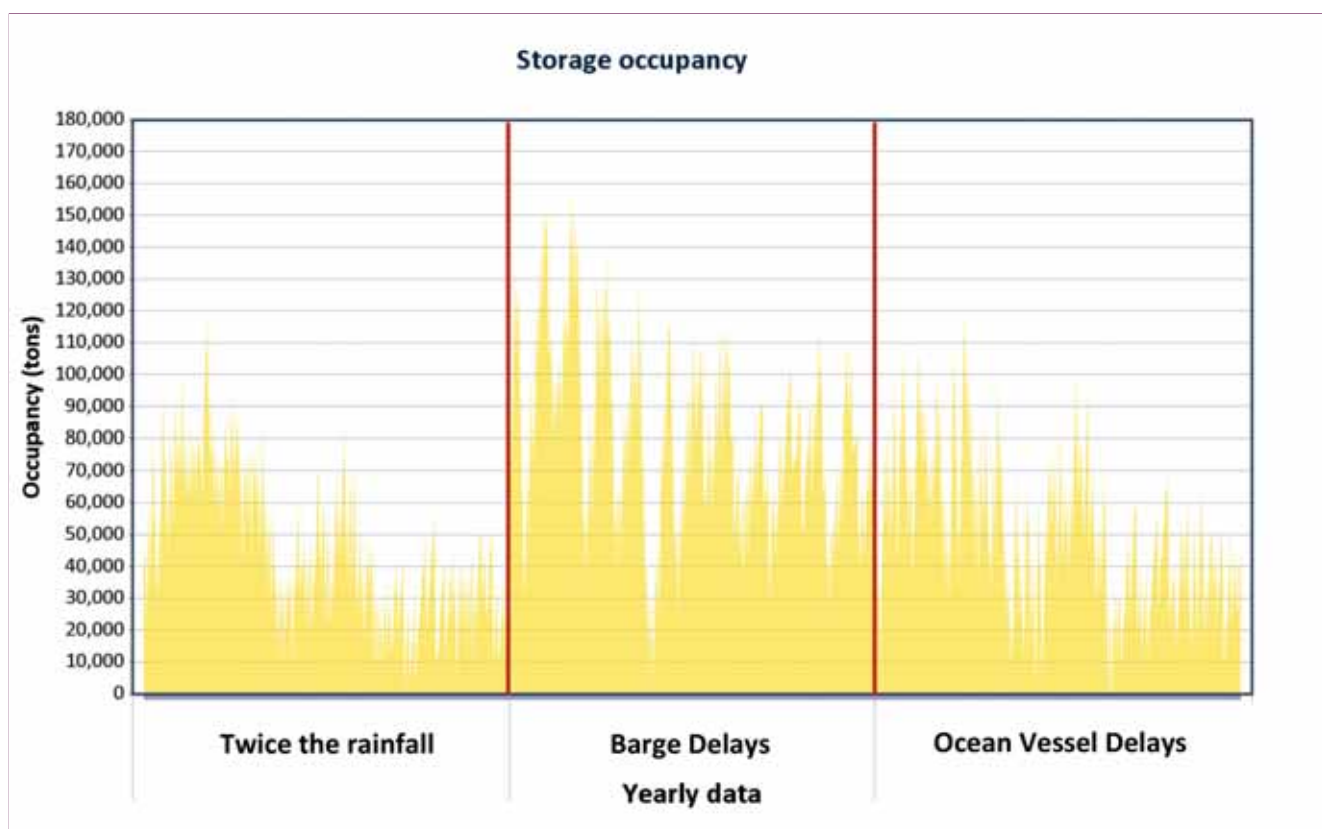
Nowadays, many terminal operators in the bulk industry are starting to understand the importance and make use of a simulation based modelling approach to determine the optimum storage capacity and make operations efficient. Many bulk terminals around the globe are nearing end of lifecycle for the deployed infrastructure and equipment. As a result of which, many terminal expansion projects are at the threshold of adapting to the new requirements of the industry and the yardsticks of performance. The quantum leap in equipment technology, automation and software adds a whole new dimension in deciding the right equipment/storage arrangement, which otherwise would have been a case of simple transition and/or expansion project. This dynamic approach allows them to make a quantitative analysis of the most feasible options and

assists them in making the correct decisions. New terminal development projects are also adapting this approach to set things right from the start and be prepared for future challenges and remain competitive.

#### **TBA: GENERAL COMPANY BACKGROUND**

Netherlands-based TBA is a major international provider of consultancy and software. Its product and service portfolio concentrates on marine and intermodal terminals (bulk and containers). TBA's clients include all major terminal operators worldwide and many local port operators. TBA has completed over 200 terminal projects with varied scope; from design review to complete master planning. TBA supports a terminal operator during all stages from concept to realization and thereafter in operations. TBA specializes in ensuring that the planning is realized and targeted performance levels are achieved.

**DCi**





# Bulk Material handled by Experts

Tenova TAKRAF is a key supplier of individual machines and integrated systems for handling bulk materials in mine stockyards, ports, power stations and metallurgical plants. Each project is approached from the end-user's viewpoint in order to deliver optimized solutions that meet and exceed requirements and expectations.

Complex material handling operations starting from train unloading via stockyard handling and blending to ship loading are handled on the basis of extensive experience and know-how in bulk handling. Stackers, Reclaimers, Stacker/Reclaimers, Scrapers, Ship Loaders and Ship Unloaders are reliably in operation all over the world.



Total technology solutions for mining, bulk materials handling and minerals beneficiation.

## **TAKRAF GmbH**

Torgauer Straße 336

04347 Leipzig

Germany

Phone +49 341 2423 500

Fax +49 341 2423 510

[takraf.sales@tenova.com](mailto:takraf.sales@tenova.com)

[www.takraf.com](http://www.takraf.com)

[www.tenova.com](http://www.tenova.com)



**tenova**  
TAKRAF



TENOVA is a worldwide supplier of advanced technologies, products and engineering services for the iron & steel and mining industries.





## High performance during long time

**THE WORLD'S LARGEST  
SELECTION OF ROTATORS**  
Indexator's rotators contribute to a high level of productivity and good total economy.

**ELIMINATE DISTRIBUTION  
VALVE** Eliminates the need for distribution valve to grapple cylinders.

**COMPLETE SOLUTION** Swivel, bearings and motor packaged in one well protected rotator – the materials and components are carefully selected.

**HIGH TORQUE VANE MOTORS**  
The modular design together with few moving parts make these rotators durable and easy to service. Documented long lifetime.

[www.indexator.com](http://www.indexator.com)





# Indexator

keeping it in the family



In 1973, Allan Jonsson bought the Swedish company Indexator. Since then he has continuously expanded it with products that were at first focused on the needs of Scandinavian users.

He realized early on, that rotators offered more flexibility for a number of industrial sectors. As a result, Indexator has now

grown to be a globally recognized producer of rotators for the transport, materials handling and recycling industries.

#### ROTOTILT — A FLEXIBLE SOLUTION

The primary goal of the company was always to be a leader in





#### Motor Driven Reels

- Monospiral and Level-Wind configurations
- Rugged and dependable magnetic coupler for dusty environments



#### Cable Festoon

- Corrosion-resistant, long-life rollers; precision sealed bearings
- Systems customized for the application
- Preassembled option, for easy installation



#### Cable Chain

- Rugged design for demanding environments
- Long operating life
- Custom-configured

## Rugged Energy & Data Transmission Systems

Conductix-Wampfler has one critical mission: To keep your bulk material handling operations running 24 / 7 / 365. You need proven, worry-free energy solutions - and Conductix-Wampfler has them. Our systems provide reliable electric power and water to stacker/reclaimers, barge and ship loaders/unloaders, bulk conveyors, tripper systems, and gantry cranes. Conductix-Wampfler systems are rugged, low maintenance, and time-tested in tough, dusty environments. All products are backed by the largest sales and service network worldwide!

[www.conductix.com](http://www.conductix.com)





the area of product development and to offer robust, powerful equipment.

This led to the concept of Rototilt®, a solution to enable the more flexible use of excavators, and allowing them to take on a multi role function in existing and new applications. Rototilt allows digging, tilting and rotating in a single movement.

#### ULTRA MODERN MANUFACTURING PLANT

To fulfil the high expectations in quality, availability and dependable deliveries, Indexator continuously invests in its ultra-modern manufacturing plant.

A total of 200 employees work at Indexator and most of them in the North-Swedish town of Vindeln, generating a turnover of circa SEK 430 million.

Indexator uses a Computer Integrated Manufacturing (CIM) solution, which includes a Flexible Machining System (FMS).

This allows full integration of the design, sales ordering, production planning and manufacturing functions. To ensure the quality of the complex designs, work is done exclusively via a modern 3D CAD system. Indexator is rightfully proud of its world class manufacturing abilities.

#### STRONG BRAND AND A WORLDWIDE BUSINESS

Within the forestry sector Indexator is a worldwide-established brand, the experience gained is now being applied to great effect in both the construction and waste recycling sectors.

Indexator exports about 65% of its production to over 40 worldwide markets. In addition to the international distributor network Indexator also has two subsidiaries, Indexator GmbH that covers Germany, Austria and Switzerland and Indexator Inc

that covers North America.

Besides rotators for forestry, general cargo and materials handling, Indexator also manufactures Rototilt for excavator attachments.

Indexator invests considerable resources in product design and development, working closely with the world's leading manufacturers of forestry, transport, construction and recycling equipment.

Manufacturing of Indexator rotators takes place in Vindeln, Sweden, in the company's technically advanced factory which ensures the high quality and finish of every single component used in its wide range of rotators.

All Indexator rotators are individually tested ensuring that the company delivers a precision manufactured, reliable product to its customers.

Indexator has an extensive worldwide network of distributors and service centres to offer comprehensive backup for its rotator and Rototilt products.

#### INDEXATOR — THE QUALITY FACTORY

Quality is what characterizes Indexator. Everything it does is governed by delivering the best quality possible. Its rotators always, at the very least, meet its customers' requirements and expectations. Production technology is important, but it is the employees who have the lead role in the quality work.

#### EVERYTHING UNDER ONE ROOF

Indexator's production facilities are located in Vindeln, outside of Umeå in northern Sweden. The 8,500 square metre production facility for rotators shares space with corporate management,



# PLM CRANES

More than 60 years of experience in developing and offering customer solutions to the crane industry.

T: +31 (0)167 – 52 85 10

E: [info@plmcranes.com](mailto:info@plmcranes.com)

W: [www.plmcranes.com](http://www.plmcranes.com)

## Technical Data

Type	PLM 6400
Year build	2013
Application	Pedestal mounted, floating hoist crane
Capacity	400 ton @ 20m
Boom length	60m – 70m
Total weight	583 ton
Main hoist (2x)	SWL 200 ton
Aux. hoist 1	SWL 20 ton (controlled free fall)
Aux. Hoist 2	SWL 20 ton
Tugger winch (2x)	SWL 3 ton
System	Diesel - Hydraulic
Yoke block (2x)	50° swivel angle (per yoke block)
Drivers cabin	Tilttable
Possibility to mount two (2) 20ft powerpack containers for piling on the crane construction	

product development, sales and after-market support.

This closeness provides advantages in the form of an overview and short decision-making channels.

#### COMPETENCE AND COMMITMENT

Indexator's rotator factory is designed for rational flows and high-capacity utilization. In the centre is the completely automated material handling system, FMS, and advanced processing machines. The collective competence and commitment of the company's employees is what allows Indexator to live up to the name "quality factory".

#### FULL-SCALE TESTING

Not everything is automated. Preliminary and final assembly is done by hand in order to ensure quality and configuration. All rotators undergo a test cycle where all functions are checked. Testing is completely automated to avoid human influence, but is monitored by an operator. No deviations are tolerated.

#### QUICK SPARE PART DISTRIBUTION AND LOCAL SERVICE

Indexator's rotators are designed for tough work and long life, but sometimes parts have to be replaced. When that happens the customer wants the parts fast!

#### Indexator is there

Indexator has developed an efficient system for global spare part provision and service in close proximity to customers. This can be organized in different ways — every market area has its own prerequisites.



But the goal is always the same: to quickly get the ordered spare part in order to minimize downtime and lost revenue for the customer.

#### QUALIFIED TECHNICAL SUPPORT

Indexator provides technical support via telephone and e-mail. A staff of experienced employees with major product knowledge accepts questions and orders from customers and workshops. **DC:**

**B**ulk **L**ogistic **L**andmark  
edeschi Lieberr Logmarin

## Your dry bulk material is our concern



**BLL** takes care of handling your bulk materials from production to consumption, including:

- Project feasibility study
- Consulting, design and engineering
- Equipment procurement and supply
- Supervision and technical assistance
- Technology transfer and implementation
- Training, performance monitoring

...and more

**BLL** ... A sea of knowledge and expertise!

[www.bulklogisticlandmark.com](http://www.bulklogisticlandmark.com) • [info@bulklogisticlandmark.com](mailto:info@bulklogisticlandmark.com)

**B**ulk **L**ogistic **L**andmark specializes in:

*Offshore: floating cranes, floating terminal, self-discharging vessels and barges*

*Onshore: cranes, hoppers, grabs, conveyor belts, crushers, stackers, reclaimers, storage facilities, shiploaders*







1984  
to  
2013

[www.guvengrab.com](http://www.guvengrab.com)



**GÜVEN KEPÇE MAKİNA**  
**İÇ ve DIŞ TİCARET LİMİTED ŞİRKETİ**  
**Factory & Head Office**

Nazım Hikmet Caddesi 536 Sokak No.:9  
41420 Akseköyü - Çayırova - Kocaeli / TURKEY  
Phn:+90 262 743 88 58 pbx  
Fax:+90 262 743 11 41  
info@guvengrab.com

[www.guvengrab.com](http://www.guvengrab.com)





# Güven Grabs

handling all types of bulk cargo



Güven Grabs (Güven Kepçe) was established in 1984 in K.Maltepe/Istanbul as Güven Kepçe Sanayi. The company's factory is based in Gebze, Kocaeli. The company produces all types of loading and unloading equipment and grabs, which are exported internationally.

Güven has designed a wide range of grabs, and these have been registered by the Turkish Patent Institute with Industrial Design Registration Certificates.

Güven aims to be the company of choice for its customers, and wants to offer the highest quality products that it can. It is very proud to have a growing international portfolio

Güven Grabs likes to meet its customers' requirements fully and quickly. It ensures that its employees are highly trained to enable it to do so. Güven brings together technology with the unique creativity of its staff.

#### **GÜVEN GRABS' PRODUCT RANGE INCLUDES:**

❖ **radio remote control grab:** this operates with a cylinder and with oil circulating. It is battery-operated with a remote control unit, without any need for motor, electricity etc. The

grabs does not require a cable winding system. It can be attached on to the hook of any kind of crane and the handling of the load can be started. It can be controlled through a remote control unit up a distance of 100 metres. It can be used for handling of every type of bulk load and it is the most efficient and economical digger type. More than 1,200 units have been manufactured between the years of 2005 and 2012 and almost all of them have been exported to the company's international customers. This constitutes 75% of the total production capacity. The grab is produced in sizes ranging from 2m<sup>3</sup> up to 50m<sup>3</sup>. The design and patent is owned by Güven Grabs. All the design and the patent is possessed by Güven Kepçe.

❖ **electro hydraulic clamshell grab:** this can be used for handling of every type of bulk load. It is powered by electricity at 380–440 volts. It is manufactured in sizes ranging from 1m<sup>3</sup> up to 50m<sup>3</sup>.

❖ **mechanical single wired touch down grab:** this can be used to handle all types of bulk. It is used on single wire cranes. The grab opens by touching on the bunker or on the ground.





# Innovative Bulk Handling Solutions



Bulk Discharge • Bagging • Expediting • Consultancy • Terminal Management

For all your Bulk Solutions contact us now



+44 1708 386 555



marketing@nectar.co.uk



www.nectargroup.net

1 Ashton Gate, Ashton Road, Harold Hill, Romford, Essex RM3 8UF United Kingdom





It is manufactured in sizes ranging from 1m<sup>3</sup> up to 30m<sup>3</sup>.

❖ **mechanic double wired clamshell grab:** this can be used for handling and loading all types of bulk. The digger can only be used on cranes with double drums. It is manufactured in sizes ranging from 1m<sup>3</sup> up to 50m<sup>3</sup>.

❖ **mechanical single and double wired polyp peel grab:** this is used on single and double wire cranes. It can be used for handling and loading of materials like coal. It is manufactured in sizes ranging from 1m<sup>3</sup> up to 40m<sup>3</sup>.

❖ **mechanical single wired coal grab**

❖ **mechanical log grab:** this is manufactured for use on single and double wire cranes. It is used for loading and handling operations. It is manufactured in sizes ranging from 1m<sup>3</sup> up to 25m<sup>3</sup>.

❖ **mechanical rock grab**

❖ **electro hydraulic orangepeel underwater dredging grab**

❖ **hydraulic orangepeel excavator grab**

❖ **mechanical double wired orangepeel grab**



❖ **mechanical hand-trip grab**

❖ **mechanical clamshell roundnose grab for dredging:** this mechanical clamshell roundnose grab has been manufactured for Izmit Bay Bridge construction. It weighs 35 tonnes, and has a capacity of 12m<sup>3</sup>.

#### SERVICE

Güven Grabs offers 24-hour service facilities for its customers. In order to save its customers transport costs, it provides door-to-door service delivery and assembly on site.

#### QUALITY CERTIFICATES

Güven Grabs places great emphasis on the quality of its production, and this is reflected by the certificates that it has been awarded for its products. The company's focus on product design is able to provide better service to its customers by obtaining the Design Registration Certificate, Utility Model Certificate and Industrial Design Registration Certificate.

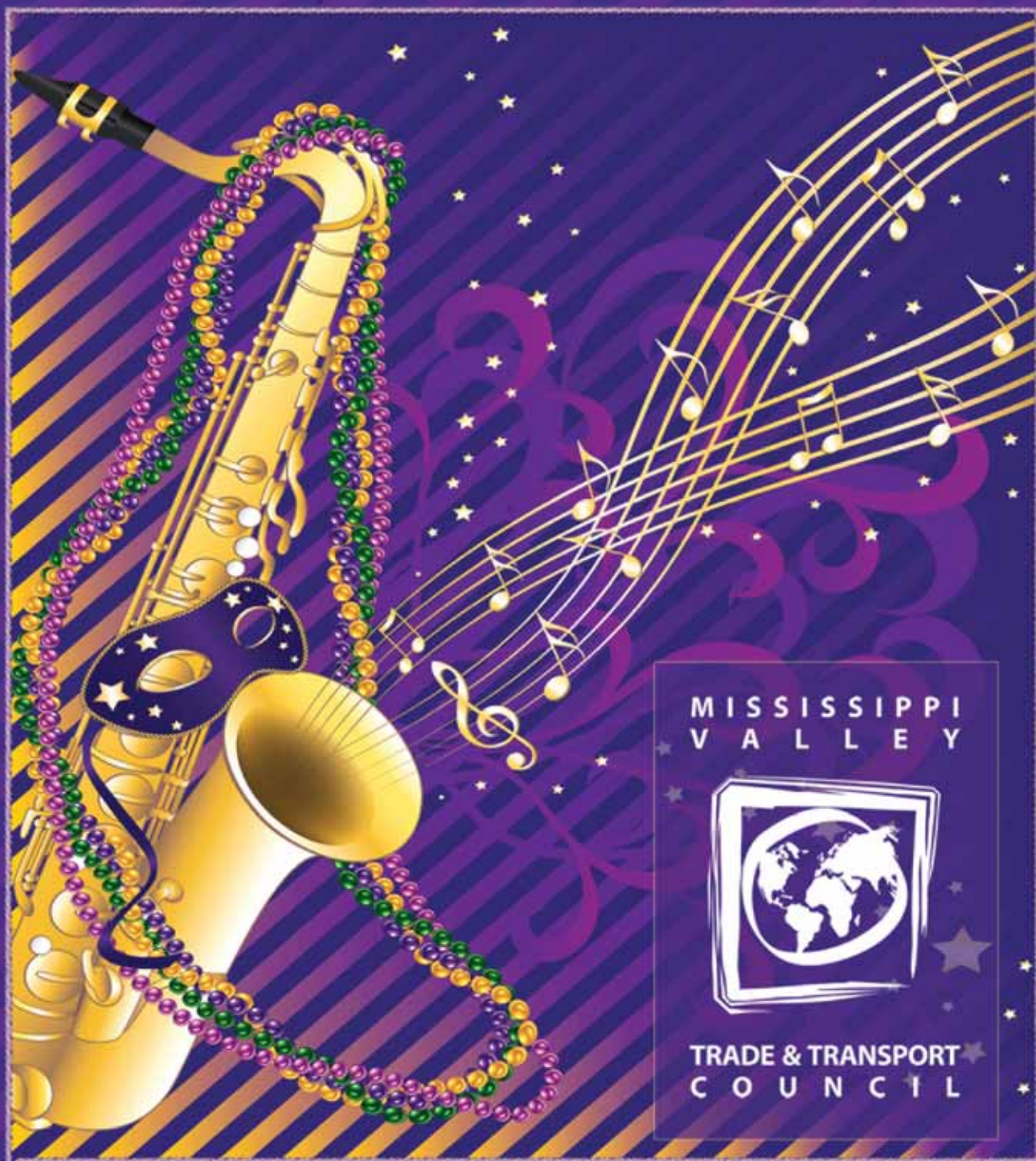
DCi





2 0 1 4

# WORLD TRADE AND TRANSPORT CONFERENCE



FEBRUARY 26-28, 2014 ♣ NEW ORLEANS

MVTTTC.COM



# Telestack system installed in Liberia

*Figure 1: TS2058 all wheel travel mobile shiploader loading vessel at 2,000tph from HF2020 heavy duty tracked mobile hopper feeder.*



## Telestack's innovative mobile shiploading system forms integral part of Buchanan port operations in Liberia for Arcelor Mittal

Telestack has recently installed an innovative custom design mobile shiploading system in the Port of Buchanan for loading vessels up to Baby Capesize. Installation started in September 2012 and the system was operational within one month. Approaching iron ore exports of 5–6mt (million tonnes), the customized solution was delivered as part of Arcelor Mittal's Phase I investment and Telestack sales engineers worked closely with Arcelor Mittal maritime operations personnel and the port operations team to develop a unique rapid deployment solution for the particular application.

Telestack Limited continues to excel in providing customized bulk material handling solutions to its global customer base. The company offers the ship and barge loading/unloading industry a highly innovative and customized mobile conveying system. Telestack's success derives from achieving sustainable value for the client; using mobile bulk handling technology to enhance operational efficiency,

minimize environmental impact and maximize product flexibility, serviceability and availability.

### APPLICATION

The iron ore is transported by rail wagons from the mine approximately 400km away and is discharged using excavators into hoppers then onto a linear tripper conveyor which stockpiles the material approximately 100m from the jetty edge.



*Figure 2: Caterpillar 988 loading HF2020 tracked mobile hopper feeder.*



Figure 3: HF2020 mobile tracked hopper feeder.



The project consists of two specialized completely mobile and independently powered machines to cope with extreme climatic conditions in West Africa. This — coupled with the highly abrasive, high silica content iron ore — makes it a very demanding application.

After stockpiling with the tripper conveyor, the material is reclaimed using Caterpillar 988 wheel loaders with 8m<sup>3</sup> buckets. Each bucket contains approximately 20 tonnes of iron ore and, as such, the track mobile apron belt feeder hopper had to be constructed of very heavy duty components and of a robust design in order to deal with a surge when tipping.

#### THE HEAVY DUTY HF2020 MOBILE TRACKED HOPPER FEEDER

The HF2020 mobile tracked hopper feeder includes a 30m<sup>3</sup> (heaped fill) with an integrated apron belt feeder, an incline conveyor and a self contained powered generator all mounted onto one heavy duty track mounted chassis.

The 2,000tph (tonnes per hour) rated unit has a dual crawler track speed in order to change hatches at the same speed as the ship loader. The machine also incorporates an auto sampling system at the transfer point which can be pre-programmed to take a sampled cut based on;

- ❖ sequence timing;
- ❖ weight measurement passing over conveyor (linked to belt weigher); and
- ❖ manually at any time.

This allows the loading process to comply with ISO:3082 2009 iron ore sampling standards which is a vital requisite to loading of iron ore. This is very

Figure 4: heavy duty hopper feeder transfer point with auto sampling system.



# PIT TO PORT RAPID DEPLOYMENT SOLUTIONS



- 1 Open Pit Link Conveyors
- 2 Open Pit Stacking
- 3 Open Pit Reclaiming
- 4 Pit Loadout - Rail / Truck / Barge

- 5 Unloading at Inland Terminal / Sea Port  
from Rail / Truck / Barge
- 6 Port Stacking / Reclaiming
- 7 Vessel Loading

**THE  
POWER  
TO MOVE  
MATERIALS™**

[info@telestack.com](mailto:info@telestack.com)  
[www.telestack.com](http://www.telestack.com)

ISO 9001:2008 Registered Firm

SEE US AT:



20TH - 22ND  
OCTOBER



26TH - 27TH  
NOVEMBER





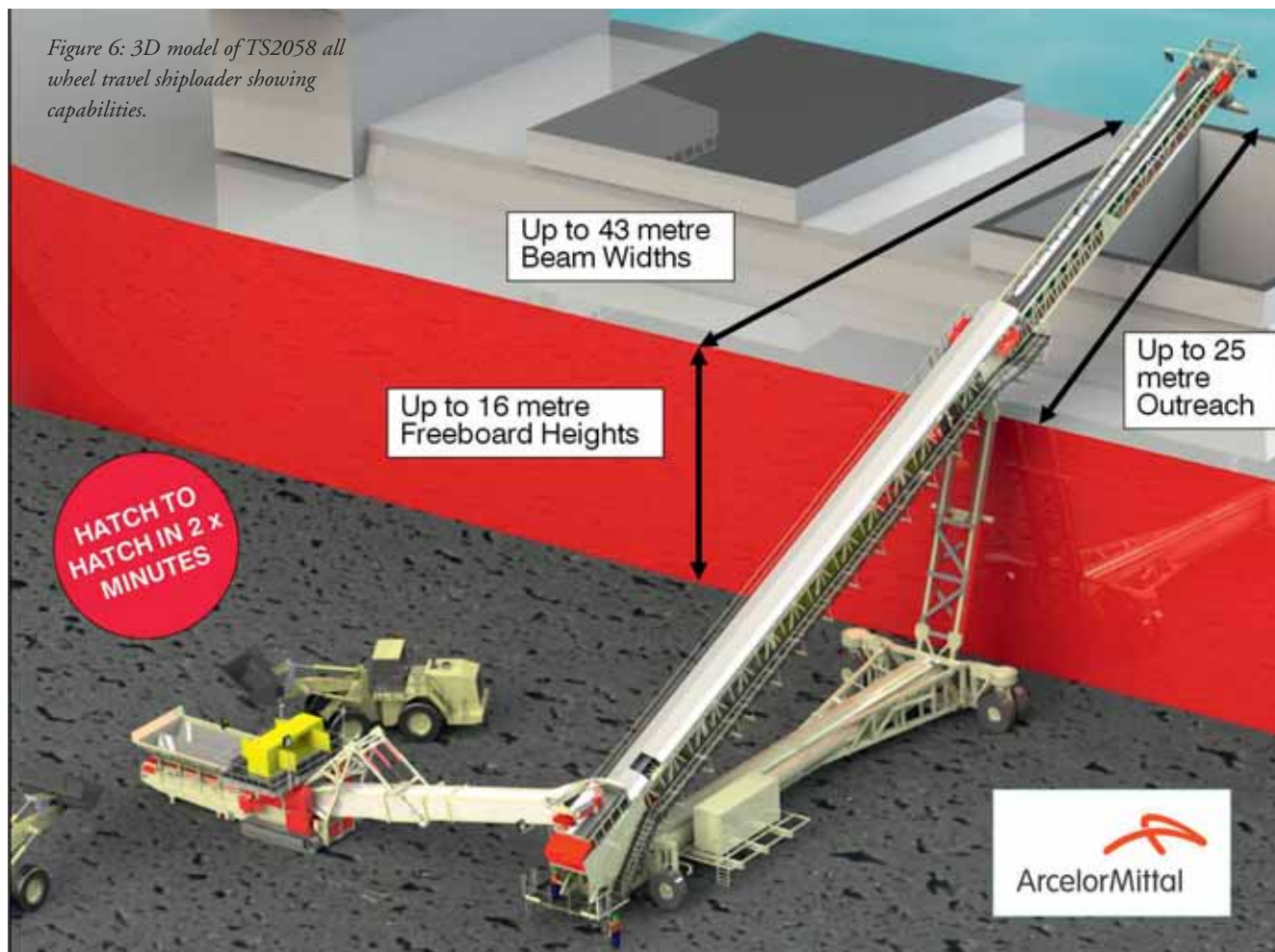
Figure 5: TS2058 all wheel travel mobile shiploader.

important in rainy season when potentially as the iron ore can have a high moisture content which can cause liquefaction of cargo in the hold of the vessel during transportation.

The auto sampler also includes a lined chute to bring the

material to an ergonomically efficient height for the operators to further process. The machine also included a custom paint specification to 275 micron and sandblasting to SA3 for the highly corrosive environment in which it is operating.

Figure 6: 3D model of TS2058 all wheel travel shiploader showing capabilities.



### THE ALL WHEEL TRAVEL MOBILE SHIPLOADER

The TS2058 all wheel travel mobile shiploader was specifically developed to cater for vigorous demands and high capacities, loading high density ore on to vessels from Panamax size up to Baby Capesize. The TS2058 is the first unit of its kind in the world incorporating a telescopic boom and an all travel bogie system. The 58m telescopic boom is rated at 2,000tph of iron ore and it can cater for vessels which have a freeboard height of up to 16 metres and a beam of 43 metres.

At this maximum freeboard, the machine has a reach of 25 metres into the hold of the vessel. This enables excellent trimming ability when loading vessels. The boom also incorporated removable dust trays which prevented any material from falling onto the jetty or into the water.

The machine was designed with features that enable the operators to move between hatches in as quick and efficient a manner as possible. The 1.8-metre-diameter wheels give a high ground clearance and have been designed to cater for adverse ground conditions during the rainy season. The sophisticated hydraulic system enables variable speed (between 2–5km per hour) when travelling in;

- ❖ parallel mode during hatch change;
- ❖ radial mode when trimming the vessel; and
- ❖ steering mode when in transport position.

### FASTEST HATCH CHANGES TIMES

The all wheel travel heavy duty undercarriage of the TS2058 enables hatch change times of approximately two minutes hatch change distance which is the fastest hatch change in the industry for mobile bulk material handling equipment.

The large diameter all terrain tyres have excellent load bearing capacity and also minimize ground pressure



*Figure 7: radial trimmer chute directing material flow.*



*Figure 8: parallel mode.*



Figure 9: radial mode.

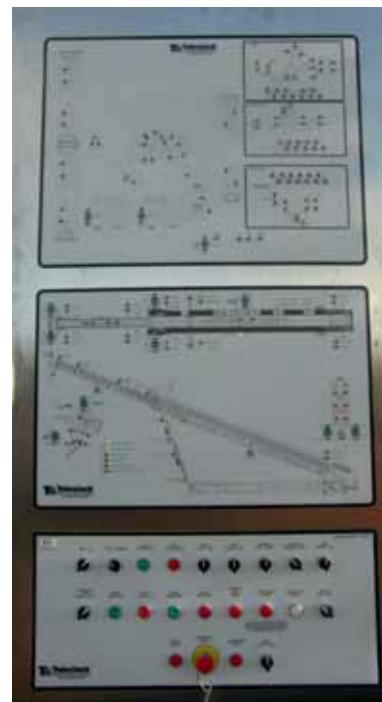


Figure 11: high specification control panel.

loadings which was also a critical factor in the design of this unit. The machine also incorporated a very high specification electrical system with a control panel and electrical junction boxes manufactured from stainless steel. The machine was operated by an Allen Bradley 1500 processor and in total there were 70 switches in order to enable correct control of the various travel modes.

The TS2058 also included a remote control with joystick operation to enable accurate moving of the machine and in trimming of vessel. Also integrated on the TS2058 is a radial

trimmer chute with ceramic liners was fitted to enable the operators to direct the material under the hatch coming area.

The client is on target this year to export 5–6mt this year through this system and as such this demonstrates the equipments robust design, reliability, manoeuvrability, availability and consistency to deliver high capacities for export. The success of this innovative shiploading system is shown in the mobility and the operational flexibility of this system.

A video of the system in operation can be seen on Telestack's website.

DCi

Figure 10: in-line mode.



# New E-Crane to handle coal at Kinder Morgan



Kinder Morgan placed an order for an E-Crane early in 2013 for its International Marine Terminals (IMT) facility in Port Sulphur, LA near New Orleans. Kinder Morgan is currently engaged in a multi-phase expansion of the terminal to increase the throughput and storage capacity of the facility. This expansion includes the addition of a new continuous barge unloader (CBU), a new Gulf barge unloader, expansion of reclaim and product blending capabilities, expansion of coal yard storage area, and various other upgrades to the facility.

The new E-Crane, which was installed and commissioned in August of this year, is used for a barge cleaning operation on the Mississippi River. The Kinder Morgan IMT Terminal uses a continuous barge unloader to unload coal out of barges. The CBU unloads the majority of coal out of each barge but is unable to clean the entire barge. The E-Crane is then used to clean the left-over coal out of the barges which is unreachable by the CBU.

The E-Crane ordered by Kinder Morgan is an MH1200 Series/Model 11290 PD-E E-Crane. The E-Crane has a maximum outreach of 29 metres (95 feet) and a maximum lift capacity of

19 metric tonnes (20.9 US tons). The E-Crane is mounted directly to a floating barge, with principal dimensions 112ft x 54ft x 8ft, which was custom modified to support the crane. The crane is powered by a 400kW (536hp) diesel generator which is mounted directly on the barge alongside the E-Crane. The attachment used to clean coal is an 8m<sup>3</sup> (10.5yd<sup>3</sup>) hydraulic clamshell bucket.

Along with cleaning the excess coal out of barges, the E-Crane is used to lift payloaders in and out of the barges. The payloaders are placed into the material barges in order to consolidate all of the coal to one side of the barge. The payloaders are attached directly to the E-Crane underneath the grab in order to easily and quickly move them in or out of the material barges. Payloaders are stored directly on the crane barge inside containment areas located on the barge deck. This allows for maintenance to be performed on the payloaders directly on the barge. Bucket maintenance is also performed inside of these containment areas.

Kinder Morgan is very pleased with the success of its new machine. It has already placed an order for a second, identical





**The World's Most  
Complete Line of  
Chain and Enclosed  
Belt Conveyors.**



#### **TRAMROLL™**

Enclosed belt conveyor with innovative features such as; self-reloading and self-cleaning tail section, and multiple inlets. The heaviest-duty design in the industry.



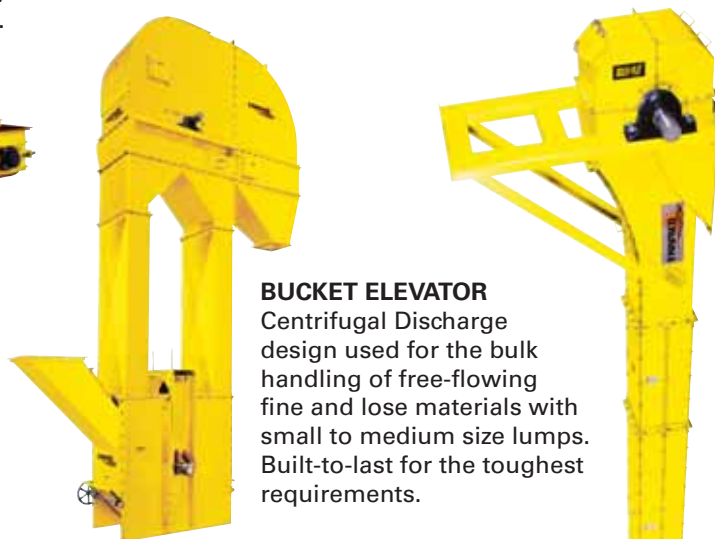
#### **JETBELT™**

An efficient system requiring less horsepower than other systems. Used for dry bulk handling requirements in a variety of products.



#### **MODEL RB**

Designed for self-cleaning and quiet operation with a u-shaped trough for handling soft stock or materials that are easily crumbled or broken.



#### **BUCKET ELEVATOR**

Centrifugal Discharge design used for the bulk handling of free-flowing fine and loose materials with small to medium size lumps. Built-to-last for the toughest requirements.



#### **MODEL G**

Built standard with 10-gauge construction to accommodate large capacities of free-flowing materials. Provides years of trouble-free service under extreme applications.

#### **BULK-FLO™**

The heavy-duty chain conveyor designed specifically for processing applications such as; wet and sticky, varying sizes and densities, and abrasive or corrosive materials.



**1-316-264-4604**  
**www.tramcoinc.com**

**AGI**  
AG GROWTH INTERNATIONAL



E-Crane to add to its facility at IMT. This E-Crane will be dock-mounted and will also be used for barge cleaning operations. Fred Pope, Project Manager at Kinder Morgan, summarizes, "The E-Crane design and operating flexibility is ideal for our needs at International Marine Terminal. E-Crane offered to provide the crane with a custom modified barge and managed the procurement, fabrication, assembly, commissioning, and training on a turn-key basis. We're very pleased with the finished product which is now in service. A second fixed E-Crane has also been ordered for use at IMT."

#### BENEFITS OF BARGE MOUNTING

The E-Crane balanced design makes it ideal for barge mounting. The E-Crane design is based on a parallelogram style boom which provides a direct mechanical connection between the counterweight and the load. This unique four bar mechanism ensures that the E-Crane remains in a near perfectly balanced state throughout its entire working range. While conventional cranes use as much as 80% of their available energy just to move the boom, stick, and grab, the E-Crane allows gravity to work for you instead of against you, reducing horsepower requirements and power consumption by up to 50% and significantly reducing maintenance and operating costs. Along with the significant energy savings that

a balanced design provides, it makes the E-Crane ideal for mounting on a floating barge. Because the crane is balanced, the movement of the E-Crane causes very minimal listing and movement of the barge.

A barge mounted crane is also beneficial because it floats up and down along with the material barges when the water elevation changes. This means that the cycle of picking material out of the barge is never affected by water fluctuation.

#### KINDER MORGAN, A REPEAT CUSTOMER

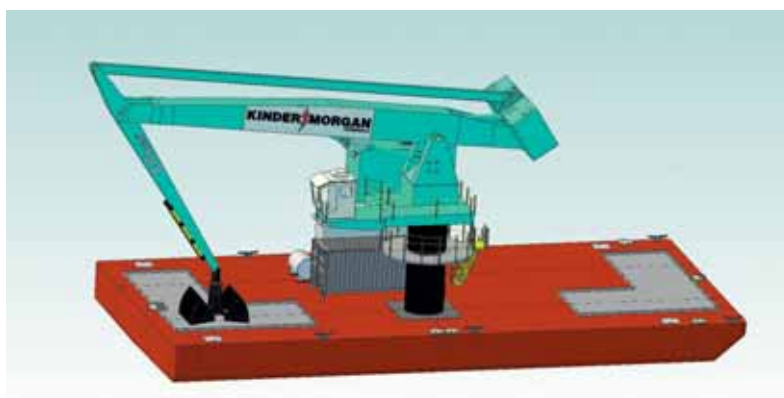
The Kinder Morgan company has realized the benefits of the E-Crane for a variety of operations. This new E-Crane at IMT is the third E-Crane for Kinder Morgan. A 1500 Series/Model 11264+ rail mounted E-Crane is currently operating at the Kinder Morgan Severcorr facility in Columbus, MS. This crane is used to unload pig iron from barges into a hopper which loads trucks. Another 1500 Series E-Crane/Model 9317 PD-E operates at Kinder Morgan Port Sutton in Tampa, FL. This crane is used for

unloading bulk fertilizer from large ships.

#### ABOUT E-CRANE

E-Crane Worldwide is a modern, state-of-the-art engineering and heavy equipment construction company, based in Adegem, Belgium and with subsidiary companies for sales management, technical support and service in The Netherlands (E-Crane International Europe) and Ohio, USA (E-Crane International USA). E-Crane Worldwide develops turnkey material handling solutions with engineering services, equipment manufacturing, erection, operator/maintenance training and custom tailored ongoing service programmes for its clients.

DCi





# Recognized potential promise fulfilled



*A new DSI waterside truss bridge connects the main yard conveyor to the shiploading dock conveyor*

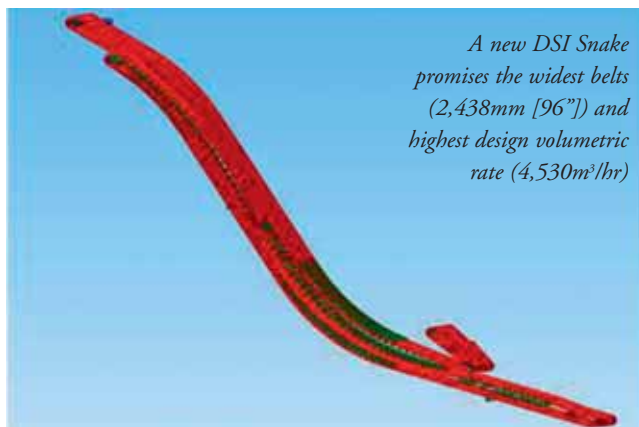
## Demand surges for Dos Santos International's products

It's hard to argue a down global economy with the rise in inquiries for products and services from Dos Santos International (DSI). In 2012, the inquiry level rose 30% from years past, including 2005 when the economy as a whole seemed to be flourishing. The pace in 2013 is even stronger. The recognized potential for DSI systems, particularly for Snake Sandwich High Angle Conveyors, the DSI flagship, is impressive to say the least. The DSI Snake conveyors utilize two smooth surfaced conveyor belts, face-to-face, to gently, but firmly, hug the bulk material between them as they elevate the product continuously at high incline angles even to 90° (vertical). Featuring unlimited capacity and smooth surfaced rubber belts that can be scraped clean the system is ideal for the high volumes in tight spaces at transfer terminals both land and marine based.

DSI's activities in the conventional conveyors and their structural and mechanical engineering services have been

particularly strong with yard and port projects in North America, Europe, Asia and the Middle East.

Activities in the USA southern coast, on the Gulf of Mexico,



*A new DSI Snake promises the widest belts (2,438mm [96"]) and highest design volumetric rate (4,530m³/hr)*

include engineering support and equipment sales for a major terminal expansion. Heralded by the new DSI truss bridge, that connects the customer's major storage yard to the shiploading dock, the project includes a major conveyor complex for increased yard storage, a new stacker/reclaimer, two fixed wing stackers and three shiploaders. A new DSI Snake will provide the most direct path from the continuous barge unloader (CBU) to the reversing yard conveyor. Thus the unloaded bulk can be sent to the storage yard or directly to the ship via the new shiploaders. This new DSI Snake will utilize the widest belts and deliver the highest volumetric rate to date.

The new, promised potential comes on the heels of the promises fulfilled. In this regard who could forget the highly compact, highly mobile DSI Snake Shiploader at the Port of Adelaide, on Australia's southern coast? There is no better example of the versatility of a DSI Snake. Australia's first Snake Shiploader elevates a variety of high value ores from trucks to ship. Conventional conveyors would not have fit the limited dock space which required a smaller footprint. Dos Santos International, being a global authority on high angle conveying was able to fit the space easily by being able to elevate at a 50° angle.

Materials for export are trucked to the dock and dumped onto a special, 3.2 metre-wide feeder. The ore is fed continuously and uniformly onto the mobile snake's receiving chute. The Snake Shiploader elevates the bulk over the ship's deck to the hatch where it is discharged into the ship's hold. At the Snake's discharge, a special telescoping chute, with rotating,



pivoting spoon, facilitates even and complete filling of the holds. The mobile Snake is carried on a tripod of twin rubber-tyred wheels. Each set of twin tyres is mounted at a vertical kingpin and can rotate 360° about the vertical axis. Thus, without repositioning, the Snake can set up to travel in any direction. With the tail tyres fixed, the front tyres can be oriented and travelled for a slewing motion. The unit was complete in November 2006. Now, with seven years of proven operation this first DSI Snake Shiploader for Australia has set the pace for many more high volume high-angle installations at materials handling docks and yards throughout the world.

DC

# TCA TECHNOLOGY? THINK AGAIN..



Australia  
Titanium Ore – 50°  
Mobile shiploader – 1000 t/h



Canada  
Diamond ore – 50°  
3 units – small footprint



Spain  
Green Pet Coke – 90°  
"S"-Shape



Canada  
Pebble Ore – 90°  
Ability to fit in tight space



DSI Snake Sandwich High Angle Conveyor  
elevating coal at a 75° angle for a steel plant  
in Northern Spain.

**Dos Santos International** is the world's foremost authority on high angle conveyor applications and design of sandwich belt high angle conveyors. Founded on more than thirty years of materials handling and engineering experience, we offer the most advanced high tech conveying solutions. **BUT THE TECHNOLOGY ISN'T NEW.** Dos Santos high angle solutions have proven time and time again to be the most reliable and economical solution in the industry.

Dos Santos Sandwich Belt High Angle Conveyors offer many advantages. They are **PROVEN** in over 100 installations worldwide. They are **RELIABLE**, even in the most rugged mining conditions, yet gentle enough for friable materials. They are **COMPACT** and **VERSATILE** achieving high lifts within tight spaces, while imposing the smallest of footprints. They are most **ECONOMICAL** over the life of each project. Elevating millions of tons of material, at various installations all around the world, users agree that they are the most reliable, low cost, low maintenance, high angle conveyor systems available. **Let us prove it to you.**

- THE GREATER THE LOAD •
- THE HIGHER THE LIFT •
- THE BETTER WE LOOK •

Dos Santos International  
531 Roselane Street NW Suite 810  
Marietta, Georgia 30060 USA  
T: +1 770 423 9895  
F: +1 866 473 2252  
<http://www.dossantosintl.com>

**DOS SANTOS**  
  
**INTERNATIONAL**



Construction - Earthmoving

Agriculture - Forestry

Mining - Quarrying - Cement

**Material Handling - Utilities**

**Marine - Port Installations**

Water - Chemical - Recycling

Energy - Petrochemical

Plastics - Rubber

Pulp - Paper - Print

Food - Beverage - Tobacco

Industrial Equipment



[www.brevini.com](http://www.brevini.com)

[www.piv-drives.com](http://www.piv-drives.com)

## Solutions for ship unloaders

For many years, PIV Drives and Brevini Riduttori have been industry leaders in power transmission solutions for all kinds of marine, port and material handling applications. PIV and Brevini, both part of Brevini Power Transmission, offer a wide range of products: from standard modular gear reducers to custom solutions for special applications. Our unparalleled quality and reliability are acknowledged worldwide. Through a global sales and service network, we are proud to provide prompt delivery and excellent service.



PIV Drives GmbH - Justus-von-Liebig-Straße 3 - 61352 Bad Homburg - Germany  
Tel. +49 (0)6172-102 0 - Fax +49 (0)6172-102 381 - [info@piv-drives.com](mailto:info@piv-drives.com)

# Far beyond drives

## and control systems



(source: igus GmbH)

*If open energy supply systems are blocked shifting values increase. The new and compact evaluation unit igus PPDS.EU.01 signals the status at all travel distances so that all motors can be stopped via the system control.*

Jay Venter

## The brain of the energy chain: PPDS from igus monitors trouble-free energy chain function

### THE CONDITION-MONITORING-SYSTEM CONTROLS SHIFTING FORCES AND DIRECTLY INTERVENES IF ANY PROBLEMS OCCUR.

System downtime is expensive — costing time, money and nerves. To reduce downtimes, and avoid damages, igus GmbH is offering its PPDS advanced and PPDS pro Condition-Monitoring-Systems to monitor shifting forces at energy chains.

Machine stoppages can't always be fully avoided — even with most extensive precautionary measures. When energy supply systems are open, parts or tools can fall into the chain and block the motion. The possible consequence: damages that require partial or complete replacement of the chain and the guided cables.

In these cases, to keep damages to a minimum, igus offers the appropriated 'Push Pull Force Detection System' (PPDS) for such applications. igus could significantly reduce the space requirement due to the use of state-of-the-art electronic components: previous and partly clumsy switchboxes for evaluation units of shrink about two-thirds in size and price. With it the 'brain of the energy chain' now becomes cost-effective standard equipment.

### RELIABLE PREVENTION OF DAMAGES

It has been ten years since igus introduced the first PPDS. Its function: the PPDS monitors occurring shifting forces at energy chains. If something blocks the motion, shifting forces increase. From a firmly defined threshold value, PPDS sends a signal to the system control to stop all motors. This avoids severe damages at the energy chains and the cables. The field of application of the PPDS family starts at travels of 10 metres and reaches up to plants with travels of 500 metres and more.

### COMPACT MONITORING OF THE STATE FOR ALL SIZES

To monitor ways between 10 and 100 metres, the especially cheap PPDS basic has been part of the igus programme since 2012. It registers shifting forces via two small sensors that are located between the connecting element of the energy chain and the towing arm. The evaluation unit PPDS.EU.01 displays the forces, records occurring exceeding of the limit values and in case of emergency — sends the signal to the machine control. A complete system inclusively sensors, evaluation unit and connection cable is available from stock for less than €1,000.

For travels of 100 metres and more, the floating moving ends are used to compensate lateral tolerances during the floating end drive. For this purpose igus provides the PPDS advanced with a special sensor variant. This allows reliable monitoring of shifting forces also in this case. In the heavy-duty area with its very long travels and high additional loads, igus offers the PPDS pro. It is particularly designed for the application, controls shifting forces on the basis of position dependent limit values. Previously an evaluation for the systems advanced and pro, clumsy switchboxes were used, whereas today thanks to smart electronics, a compact unit of the protection class IP65 — smaller than a DIN A4 sheet — overtakes this task.

igus GmbH is a world-leading manufacturer in the field of energy chain systems and polymer plain bearings. The family-run company is based in Cologne, represented in 29 countries and contracts 2,200 employees worldwide. In 2012 igus generated a turnover of €399 million. igus operates the largest test laboratories and fabrics in its branch to offer customers innovative and tailor-made products and solutions within the shortest time.



## Nimble giant

**WORLD'S BIGGEST POLYMER ENERGY CHAIN: BEING MANY TIMES LIGHTER THAN COMPARABLE STEEL CHAINS IT EASILY MOVES OVER 100KG OF FILLING PER METRE.**

*igus GmbH, Cologne*

*Impressive scale: The rotating bridge of the sludge processing plant at a span of nearly 180 m.*



This sludge processing plant was planned, constructed and commissioned over a period of only 30 months. Its key components are an arched bridge as well as two mobile, high-performance pumps that transfer the sludge by means of extremely stable and thick hoses. The largest plastic energy chain in the world today is used to reliably guide the heavy hoses.

Despite the enormous filling weights, this chain guarantees the anticipated long service life of the entire plant. From the very first day, the plant construction company and system supplier successfully collaborated during the design of this large-scale project. This early collaboration is now bearing fruit.

The Port of Antwerp is the largest port in Belgium. More than 187mt (million tonnes) of freight was cleared during 2011 alone. With these figures it can be counted among the largest ports in Europe and the world. "In the interests of smooth loading and unloading operations, the shipping lanes must always remain open, thus permitting the gigantic container ships to clear their loads as quickly as possible," emphasizes Joury van Gijsegheem from the specialized company, DEME. The Belgian company specializes in, among other things, the maintenance and dredging of shipping channels, land reclamation, and offshore oil and gas services.

Because the available space to deposit dredged sediments has continued to shrink over time, alternatives needed to be found. The Port Authority and Flemish authorities have now decided to invest in a state of the art mechanical sludge dewatering plant that conforms to the latest ecological standards. After the shipping channels have been dredged, the roughly-sorted sediments are pumped through a pressurized pipeline to the plant at a distance of 4km, where they are mechanically dewatered, processed in an environmentally-friendly manner and then stored. Nearly 500,000 tonnes per year are processed this way. The ambitious project was christened under the name 'AMORAS' (Antwerp Mechanical Dewatering, Recycling and Application of Sludge). A consortium of companies, 'SeReAnt', of which DEME is a member, is responsible for the construction and entire operation of the plant.

### FIFTEEN YEARS OF OPERATIONAL RELIABILITY

The planning and construction of the sludge processing plant took approximately 30 months and concluded at the end of

2010. Once finished it became operational for a period of no less than 15 years. "And these 15 years are set in stone", claims Joury van Gijsegheem. As project manager, he is responsible for the planning and operation of the exterior plant. "All key components were designed for this minimum operational period." But the requirements profile goes a step further. The dewatering plant is in continual use nearly 365 days per year. Operational reliability is paramount. Unnecessary maintenance and downtime must be avoided.

A central component of the sludge processing plant is an imposing arched bridge with a span of nearly 180m in the exterior grounds. Two mobile, independently operated high-performance pumps are mounted on the rotating bridge. These pumps travel a distance of nearly 140m at a maximum speed of 15m/min by means of an energy chain. The excavator pumps vacuum roughly 600m<sup>3</sup> of sediment or sludge every hour from the sediment basin below and convey the sludge through enormous hoses, with a diameter of 300mm, for further processing. The basins are partitioned into four sections. Each has a capacity of roughly 120,000m<sup>3</sup>.

An extremely robust polymer chain from igus GmbH, Cologne, is used to reliably guide the hoses across the entire distance. The maintenance-free E4.350 model can be opened from both sides and is from the E4.1 series, which has proven itself in countless applications. It has demonstrated its versatility in composting and water treatment plants, machine tools and construction equipment, crane technology and wood processing, among others.

### TESTED UNDER REAL-LIFE CONDITIONS

The world's largest plastic energy chain to this point, the E4.350, with an inner height of 350mm and inner widths of up to 1,000mm, can be deployed on oil platforms as well as in steelworks and heavy machinery construction. Wear, corrosion, oil and sea water resistance are among its technical features. A number of tests were conducted at the in-house igus laboratory under real-life conditions in the run-up to the decision in favour of using this chain model. These tests ultimately confirmed the suitability of the — at the time — newly designed energy supply system in this demanding environment. "In particular, we examined the behaviour of the filled hoses under real-life conditions," explains



igus GmbH, Cologne

*Tested-tested-tested: the E4.350 at the igus exterior testing facility in Cologne. As is the case for all igus products, it was tested under realistic conditions for service life and functionality.*

Frank Schlögel, who manages the Projects/Energy Chain Engineering area at igus. “The temperature and pressure changes cause the hose to expand in the chain by as much as 60cm.”

The tests show that the energy chain has no difficulty guiding even voluminous and heavy loads. A special design using glide rollers was developed to perfectly guide the hose within the energy chain and to minimize the resulting mechanical abrasion. These rollers, made from the tribologically optimized bearing material iglidur J, are integrated into the opening crossbars. Light, corrosion-free and insensitive to dirt, they ensure that the energy supply system can glide without problem around-the-clock. This significantly reduces the friction caused by the hose in the chain, thereby ensuring stability. “For this and comparable cases, where we wish to supply our customers with ideally adapted solutions, our expertise in developing special plastic materials continues to pay dividends, in that we have the required know-how under our own roof. The variety of special plastic materials from the energy chain and bearing field, in combination with our in-house test laboratory, gives us the ability to conduct on-the-spot tests under realistic conditions, resulting in the best solution for the customer,” states a confident Frank Schlögel.

“We were also convinced by the fact that the entire energy chain system is very compact,” reminisces Joury van Gijsegem. “This was genuinely important to us, for instance, because we had to deploy drive cables in addition to the hoses, and could not provide an unlimited amount of space.” Moreover, in comparison to a steel chain, the plastic chain is much lighter. This not only provides savings on the required drive rating on the travelling pump systems, but also in the weight of the overall rotating bridge system. The rollers integrated into the load bearing surface of the chain links additionally reduce the displacement forces by up to 75%. “For example, we can use smaller motors. On the one hand, these are less expensive, and on the other, the weight load on the bridge is further reduced. This in turn improves economic feasibility.”

A specially-designed guide trough made of hot-dipped galvanized steel and floating moving ends are deployed in addition to the energy supply. These are needed to compensate for potential lateral displacement tolerances. The energy chain, which is filled with hoses and cables, is now always reliably guided over the entire length under any weather conditions. Despite operational difficulties and environmental conditions, no

failures have been recorded to the present day.

#### INCREASED OPERATIONAL RELIABILITY BY MEANS OF AUTOMATIC MONITORING

It was decided to integrate the PPDS (Push Pull Force Detection System) monitoring system in order to increase the operational reliability of the bridge design. The diagnostic tool, which in particular has proven to work over long distances, continuously measures the push/pull forces on the energy chain and compares these with a calculated target value. Should malfunctions occur, the plant is automatically stopped as a preventative measure to avoid damage. “At any time, we can also consult the data stored on our data server retroactively,” the project manager confirms. “We are therefore always on the safe side, and, if needed, have enough advance notice to schedule maintenance and service work.”

#### COMPELLING PROJECT EXPERTISE

The decision in favour of the relatively light-weight, plastic energy supply system was made quickly. From the very first day, both companies confidently co-operated on the engineering process.

For one, this relates to the complex design process of the bridge structure. A host of design drawings for the respective project status were readily made available. The extensive laboratory tests, conducted in advance, also provided compelling evidence. According to Joury van Gijsegem, “the sustained support during this large-scale project ultimately led to success.” “Our combined efforts from the first to the last day made this project possible.”

The plant construction company also relied on the available assembly expertise. The energy supply system specialist configured and installed the entire system on site and on time, while utilizing its own employees and assistance from the construction site. The system has been operating without a problem from day one. “At no time have we regretted the decision to use the plastic energy supply system,” Joury van Gijsegem emphatically concludes. “We also benefitted greatly from bringing the system supplier into the project from the very beginning. From the very start all the way through system acceptance, our excellent collaboration contributed greatly to the smooth execution of the project”.

*The terms “igus, e-chain, chainflex, readycable, easychain, e-chain, e-chainsystems, energy chain, energy chain system, flizz, readychain, trifix, twisterchain, invis, drylin, iglidur, igubal, xiros, xirodur, plastics for longer life, manus, vector” are protected by trademark laws in the*



igus GmbH, Cologne

*One of the two travelling pump units on the bridge with retracted pivoting arm, as shown in the photograph. Clearly visible: The interface to the hose system and the gliding energy supply chain, including guide trough.*



Increased capacity due to optimized geometry of torque-transmitting components.

Torques of up to 1025 kNm and radial loads of up to 550 kN can be transferred with a maximum coupling diameter of 1025 mm.

High wear resistance due to quenched and tempered hub- and gear teeth.

Especially designed for the use in rope drum drives.



Siegerland Bremsen

## Industrial Brake Systems Drive Components

Made by SIBRE



### Drum Coupling ABC-V Designed for heavy duty

**FAST.** PINTSCH BUBENZER Service Brakes. Made in Germany.



In the sectors of container handling, shipbuilding and offshore engineering, mining, the steel industry, utilization of wind, mechanical engineering and construction of special vehicles, PINTSCH BUBENZER is a world leader in braking system design and manufacturing, with safety built into every product.



Visit our homepage [www.pintschbubenzner.de](http://www.pintschbubenzner.de)



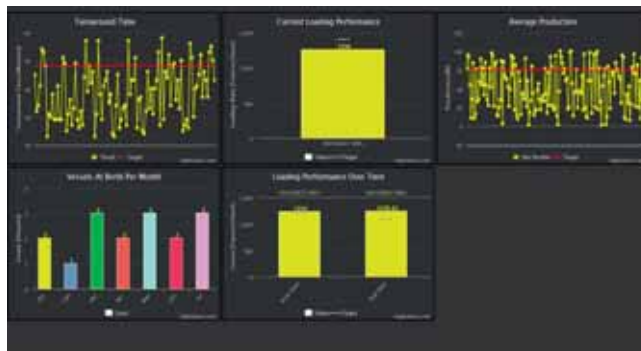
## DBIS (Software and Automation) Ltd delivers web accessible KPI Dashboard



DBIS (Software and Automation) Ltd has recently delivered its KPI dashboard tool to a number of clients.

DBIS delivers terminal management software to bulk operators and currently has 24 operational systems on four continents.

In 2012 DBIS hosted a User Group Meeting where their clients from around the world gathered to discuss new developments and topical issues from the industry. The outcomes of the meeting were used to create the product roadmap for DBIS and one key item was a KPI Dashboard, which could be accessed via the web and provide operational data to key stakeholders in real time.



The objective was to utilize data mined from the automation systems to ensure that the dashboards presented the user with a true account of events in the timeliest manner. Interfaces to PLC and SCADA systems would be required to make this possible and therefore only an organization with expertise in both automation and IT systems would have the capability to deliver the required systems.

The KPI dashboards are now live at two operations and have greatly reduced the administrative burden of producing operational KPI reports and provide managers with the latest information on which to base their decisions.

## With overload safety: SIBRE drum coupling for high torques and loads

The German company SIBRE (Siegerland Bremsen GmbH) is a system supplier with representatives throughout the world and operates production branches in China and sales and service branches in India, Spain, Italy and the USA. The current portfolio is characterized by a wide breadth and depth of standardized industrial brakes and components for drive technology.

The drum coupling ABC-V is optimally in line with the distribution channels and the one-stop-supplier-strategy of SIBRE. The drum coupling is completely designed and made in the German headquarter. The design of the SIBRE drum coupling is performed on the basis of the steel iron guidelines (Stahl-Eisen-Betriebsblatt) SEB 666 212. Due to compatible fitting sizes, ABC-V couplings are interchangeable with various series of barrel couplings on the market.

Launched in 2010, the ABC-V is specifically designed for the transfer of medium and high torques in crane hoists, conveyors, stackers, ship unloaders, container cranes as well as in heavy, rough smelting works. Torques of up to 1,025kNm and radial loads of up to 550kN can be transferred with a maximum coupling diameter of 1,025mm, which provides a high overload safety.

High quality coated forged steel guarantees durability, wear resistance and high material strength. Together with the arched barrel rollers (hardened roller bearing steel) the hub can oscillate relative to the housing. This allows for a compensation of angular displacement up to  $\pm 1^\circ$  and an axial shifting from  $\pm 4\text{mm}$  up to  $\pm 10\text{mm}$ . The increased capacity of the ABC-V results from an optimized geometry of torque-transmitting components. Quenched and tempered hub- and gear teeth provide a high wear resistance.

### GENERAL ASSEMBLY

The drum coupling largely consists of an axially fitted hub part and housing part. Barrel pockets are equally arranged in the

intersection of hub and housing. The torque transmission of the hub part onto the housing part occurs with positive locking. Hardened barrel rollers are fit into the barrel pockets, which are formed from the two circular gearings, as power transmission elements. The sealing of the coupling is achieved through double-sided covers with lip seals. This prevents escape of lubricant from the coupling and the intrusion of dirt into the coupling. The semicircular gearing of the hub over the outer diameter is crowned.

### CONSTRUCTIONAL ADVANTAGES

Together with the arched drum roll it is possible for the hub to oscillate relative to the housing part, therefore angular displacement and axial shifting are also possible as above-mentioned. Due to the convex and concave fit of the barrel roller to the coupling hub and the coupling's exterior housing, the forces are spread across a large contact surface which leads to favourable compressive forces.

The coupling housing comes with a flange for bolting the coupling e.g. to the rope drum. The transmission of momentum between the coupling and the rope drum occurs partially by friction and partially by interlocking form fit of the oppositely lying camming surfaces of the housing. Grade 10.9 high-tension bolts are to be used as connection bolts. The coupling is built with visual wear and position display. Thanks to a wear cam on the housing part and wear grooves on the hub part, the wear on the coupling gearing can be easily checked from the side of the coupling. The wear cam further serves for checking the axial location of the coupling housing to the coupling hub.

The circular gearings of the drum coupling have a much more favourable tooth flow load compared to the involute gearing of a gear coupling. Due to the wide tooth base of the drum coupling the tooth bending stress is much lower than with a comparable gear coupling.

DCi



# INDEX OF ADVERTISERS

Company	Page	Company	Page
ABB Switzerland Ltd	112	Mississippi Valley Trade & Transport Council	130
Achenbach GmbH Metalltechnik	88	Nectar Group Ltd	128
Alex Stewart International	151	Nemag BV	103
Antwerp Port Authority	55	NKM Noell Special Cranes GmbH	104
Anvil Attachments	Inside Back Cover, 150	OBA - Bulk Terminal Amsterdam	60
Associated Terminals LLC	40	ORTS GmbH Maschinenfabrik	100, 101
BLUG Credeblug S.L.	75	Ovet BV	58
Bulk Connections	48	PINTSCH BUBENZER GmbH	146
Bulk Logistic Landmark	125	PIV Drives GmbH - a Brevini Power Transmission Co.	
BV Beco	92	Belly Band, 142	
BV Zeehavenbedrijf Dordrecht (ZHD Stevedoring)	50	PLM Cranes B.V.	124
Chief Industries UK Ltd.	88	Pogo Bispo Multipurpose Terminal - TMPB	47
Cimbria Bulk Equipment	94	Port of Amsterdam	62
Coaltrans Conferences Ltd	160, 168	Port of Dunkerque	66
Coelcerici Logistics S.p.A.	Front Cover	Port of Kokkola	43
Conductix-Wampfler AG	122	Port of Pori	44
Cooper/Consolidated	22	Quebec Port Authority	46
Coperion GmbH	94	RBL-REI France	114
CST Covers	96	RC Inspection B.V.	10
Damen Shipyards Gorinchem	18	RHB Stevedoring & Warehousing	54
DAP Barging BV	20	Rhenus Midgard GmbH & Co. KG	16, 57
Dos Santos International, LLC	141	Ronin GMS	172
Duisburger Hafen AG	64	Rotterdam Bulk Terminal (R.B.T.) B.V.	56
Duro Felguera Mining & Handling	157	Royal Haskoning DHV	190
Dust Control Technology	156	Sandvik Mining	86
e-coal.com	6	Scantech International	84
ESI Eurosil BV	78	Schade Lagertechnik GmbH	91
European Bulk Services (EBS) BV	52	Seabulk Inc	24
Europees-Massagoed Overslagbedrijf (EMO) BV	68, 69	SEA-invest	38
FLSmith Inc.	98	SENNEBOGEN Maschinenfabrik GmbH	79
FLSmith Wadgassen GmbH	Outside Back Cover	SIBRE - Siegerland Bremsen GmbH	146
Geometrica Inc	109	SMB International GmbH	77
Grindrod Management Services (Pty) Ltd	3	Stema SA	45
Gruen Grab and Machine Ltd. Co		Superior Industries, Inc.	176
Coal Handling Directory Cover, 126		Swire CTM	175
Heyl & Patterson Inc	88	TAKRAF GmbH	119
Hudig & Veder BV	16	Telestack Limited	133
IHI Transport Machinery Co., Ltd. (IUK)	102	Terex Fuchs GmbH	80
Indexator Rotator Systems AB	120	ThyssenKrupp Resource Technologies GmbH	178
INTER BALT Sp. z o.o.	41	TMSA Tecnologia em Movimentação S/A	
iSAM AG Gesellschaft fuer angewandte Kybernetik	163	Coal Handling Directory Cover (Back)	
Konecranes Finland Corporation	111	T Parker Host, Inc	5
Liebherr-Hydraulikbagger GmbH	82	Tranco, Inc	138
Liebherr-Werk Nenzing GmbH	165	TTS Group ASA	16
Loibl Allen-Sherman-Hoff GmbH	11	Verbrugge Terneuzen Terminals	70
Mack Manufacturing Inc	167	Verstegen Grippers BV	Inside Front Cover
Mantsinen Group Ltd Oy	166	Vibrafloor	26
Maritime Bulk Terminal Gdynia Ltd	49	Vossloh Kiepe GmbH	107
Martin Engineering	74	Zeeland Seaports	50
Metro Ports	15		



## SUBSCRIPTION FORM

PLEASE COMPLETE AND FAX TO: +44 (0)1206 562566

Dry Cargo International, Clover House, 24 Drury Road, Colchester, Essex CO2 7UX, UK  
Tel: +44 (0)1206 562560 Fax: +44 (0)1206 562566 Email: info@dc-int.com

[www.dc-int.com](http://www.dc-int.com)

### SUBSCRIPTION RATES

	1 year <input type="checkbox"/>	2 years <input type="checkbox"/>	3 years <input type="checkbox"/>
UK	£170.00	£280.00	£365.00
Europe	£210.00	£355.00	£460.00
USA & ROW	£260.00	£445.00	£580.00

No. copies required: \_\_\_\_\_

Please charge my credit card: ☐ VISA ☐  ☐  ☐

Cardholder's name: \_\_\_\_\_ Expiry date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

I enclose a cheque for: \_\_\_\_\_ Payable to **Trade Publishing Int'l Ltd**

☐ Please invoice me

Name .....

Position .....

Company Name .....

Address .....

City .....

Postcode/Zip Code.....

Country.....

Tel .....

Fax .....

Email .....

Make sure you don't miss the next issue...



# COAL HANDLING *directory*

2013



Shiploaders ❖ Grab Loaders ❖ Grab Unloaders ❖ Grabs ❖ Continuous Ship Unloaders ❖ Barge Loaders ❖ Barge Unloaders ❖ Self Unloaders & Equipment ❖ Belt Conveyors/Loaders ❖ Stackers ❖ Reclaimers ❖ Stacker Reclaimers ❖ Conveyors & Conveyor Accessories ❖ Front-End Loaders ❖ Hoppers ❖ Crushing ❖ Screening ❖ Blending ❖ Weighing ❖ Sampling & Inspection ❖ Dust Control & Suppression ❖ Drives, Controls & Automation ❖ Enclosed Storage ❖ Stockyard Systems ❖ Railcar Loaders & Unloaders ❖ Engineering Consultants ❖ Coal Handling ❖ Other



# Ideal Solutions for Port Facilities

- Equipment for solid bulk material handling
- Designed to meet customer's needs
- High quality, excellent durability

- Reliability and short term delivery
- Shiploader retrofit and upgrading
- Dust aspiration systems



**Sugar 3,000 t/h**



**Grain 1,500 t/h**



**Iron Ore - 4,000 t/h**



**Grain/Ore 1,000 t/h wood chips**



**Grain - 1,500 t/h**



**Grain - 2,500 t/h / wood chips**



**Kaolin 1,100 t/h**



**Grain - 1,500 t/h each tower**



**Dust trap - Upgrading**



**TMSA**  
Tecnologia em Movimentação

Porto Alegre/RS - Brazil  
Phone: +55 51 2131-3333  
E-mail: comercial@tmsa.ind.br  
Website: www.tmsa.ind.br





*Guven Grabs manufactures a wide range of grabs. The company custom-designs grabs especially for new-generation bulkers. Seen here, Guven's grabs are handling coal for a 35,000dwt bulk vessel.*

**Guven Grab & Machine Ltd Co**  
Nazim Hikmet Cad.  
536.Sk. No:9  
Akse Koyu Cayirova  
41420 Kocaeli  
TURKEY  
T: +90 262 743 8858  
F: +90 262 743 1141  
E: [info@guvengrab.com](mailto:info@guvengrab.com)  
W: [www.guvengrab.com](http://www.guvengrab.com)



#### 4B BRAIME Elevator Components

Hunslet Road  
Leeds  
West Yorkshire  
LS10 1JZ  
UK  
Contact: Mrs Simone Block  
Job Title: Marketing Manager  
T: + 44 113 246 1800  
F: + 44 113 243 5021  
E: [4b-uk@go4b.com](mailto:4b-uk@go4b.com)  
W: [www.go4b.com](http://www.go4b.com)  
A leading manufacturer of material handling components for the agricultural and industrial sectors. We provide components for bucket elevators and conveyors, such as steel and plastic elevator buckets, elevator bolts, elevator belting, drop forged chains as well as electronic monitoring equipment, such as level monitors, misalignment switches, bearing temperature monitors, etc.

#### A. Friedr Flender AG

Alfred Flender Strasse 77  
Bocholt  
D-46395  
Germany  
Contact: Mr Matthias Wenning  
Job Title: Marketing  
T: + 49 2871 922 780 / + 49 2871 920  
F: + 49 2871 921 602  
E: [matthias.wenning@flender.com](mailto:matthias.wenning@flender.com)  
W: [www.flender.com](http://www.flender.com)

#### A/S Cimbria

Fårtoftvej 22  
Thisted  
7700  
Denmark  
Contact: Mr Lars Noergaard  
Job Title: Sales Director  
T: + 45 7242 2420  
F: + 45 7242 2499  
E: [ln@cimbria.com](mailto:ln@cimbria.com)  
W: [www.cimbria.com](http://www.cimbria.com)  
Cimbria is one of the world's

leaders within handling and storage of grain & seed and other products. The business areas cover project engineering and process control - and development, production, sales and installation of equipment, special installations and complete turn key projects.

#### ABB AB



Crane Systems  
Tvarleden 2  
Västerås  
72159  
Sweden  
Contact: Ms Maarit Nystrom  
Job Title: Marketing and Sales  
T: + 46 21 321411  
F: + 46 21 34 02 90  
E: [cranes.sales@se.abb.com](mailto:cranes.sales@se.abb.com)  
W: [www.abb.com/cranes](http://www.abb.com/cranes)  
GPO for fully automatic unloading. Electrical drive and control systems for harbour cranes, including fully digital AC and DC powered drives.

#### Abbey Rollers Limited

Togher Industrial Estate No. 2  
Pouladuff Road  
Cork  
Ireland  
Contact: Mrs Martha Murphy  
Job Title: Sales and Marketing  
T: + 353 21 496 2745  
F: + 353 21 431 4898  
E: [sales@abbeyrollers.ie](mailto:sales@abbeyrollers.ie)  
W: [www.abbeyrollers.ie](http://www.abbeyrollers.ie)

#### Achenbach GmbH Metalltechnik



#### ACHENBACH

Lindestrasse 10  
Wilnsdorf  
D-57234  
Germany  
Contact: Mr Uwe Achenbach  
T: + 49 2737 98 63 0  
F: + 49 2737 98 63 10  
E: [u.achenbach@achenbach-siegen.de](mailto:u.achenbach@achenbach-siegen.de)  
W: [www.achenbach-siegen.de](http://www.achenbach-siegen.de)  
Conveyor covers - Achenbach is manufacturing hoods made of metal (steel, aluminium, stainless) for covering standard or special belts. Hoods made of hard-PVC and fixings round up the Achenbach range.

#### AE AntiEmission GmbH

Nordhang 74  
Gevelsberg  
58285  
Germany  
Contact: Dipl.-Ing A Eskandani  
Job Title: President  
T: + 49 2332 66 49 92 0  
F: + 49 2332 66 49 92 5  
E: [Info@AntiEmission.de](mailto:Info@AntiEmission.de)  
W: [www.AntiEmission.de](http://www.AntiEmission.de)  
Fog cannon Fog mast Air nozzles for material flow enhancement in silos, bunkers, transfer points. Dust control for - bulk material handling and processing - lignite, hard coal & biomass power plants, waste processing, mining, quarries, construction & demolition sites, harbors - haul roads  
Engineering & Consultancy

#### AE Automation (M) Sdn bhd

10-12, Jalan Mas 6  
Taman Cheras Mas  
Cheras  
Selangor D.E.

43200  
Malaysia  
Contact: Mr Ken Lim  
Job Title: Managing Director  
T: + 60 7 455 6333  
F: + 60 7 455 6666  
E: [ken@aeauto.com.my](mailto:ken@aeauto.com.my)  
W: [www.ae.com.my](http://www.ae.com.my)

#### AFM Industries

828 Ritson Road  
Oshawa  
Ontario  
L1H 5L4  
Canada  
Contact: Mr Rob Butterworth  
Job Title: President  
T: + 1 905 443 0150  
F: + 1 905 443 0155  
E: [rbutterworth@afmindustries.com](mailto:rbutterworth@afmindustries.com)  
W: [www.afmindustries.com](http://www.afmindustries.com)  
World leader in steel cord belting technologies. Inventor of high angle Autostable Belt® and fully enclosed Square Belt®. Special elastic steel cords, with rubber covers, offer unique solutions to bulk handling problems, eg impact, ripping, high angle troughing, tracking, flexibility, elongation etc.

#### AgriCo Sales, Inc.

14900 Intracoastal Drive  
New Orleans  
Louisiana  
70129  
USA  
Contact: Mr Bob Rieck  
Job Title: Vice President - Sales  
T: + 1 504 436 9400  
F: + 1 504 754 7732  
E: [brieck@agricosales.com](mailto:brieck@agricosales.com)  
W: [www.agricosales.com](http://www.agricosales.com)  
Design and build turnkey projects for handling a wide range of bulk commodities. Specializes in the manufacture of shiploaders, conveyor systems and storage facilities.

#### Akerbergs Maskiner AS

Marsallé 40  
Horsens  
8700  
Denmark  
Contact: Mr Steen Lauge Jensen  
Job Title: Sales Manager - Port Equipment  
T: + 45 76 281 841  
F: + 45 75 641 774  
E: [slj@akerbergs.dk](mailto:slj@akerbergs.dk)  
W: [www.akerbergs.dk](http://www.akerbergs.dk)  
Manufactures mobile harbour cranes and grabs.

#### Alex Stewart International



2b Sefton Business Park  
Netherton  
Liverpool  
Merseyside  
L30 1RD  
UK  
Contact: Mr Graham Stewart  
T: + 44 151 525 1499  
E: [graham.stewart@alexstewartinternational.com](mailto:graham.stewart@alexstewartinternational.com)  
W: [www.alexstewartinternational.com](http://www.alexstewartinternational.com)  
The Alex Stewart International network of companies provides inspection and delivers fast, reliable and accurate analytical services covering base metals, non ferrous ores and concentrates, minor and precious metals, ferro-alloys, recycled scrap metal, complex materials and plastics, fuels, agricultural commodities and also for the environment. Alex Stewart International's inspections include trustworthy supervision, weighing, and sampling services.



# HAVE ENGINE - WILL TRAVEL

## Diesel-Hydraulic Grapple Model DHSG

Our new Hydraulic Grapple with its self-contained diesel engine gives you the freedom to use on any crane. It connects easily and is operated by radio remote control to offer you the ultimate in flexibility.

- Engine models up to 150HP
- Air or water cooled engines to match your environment
- Removable bottom hatch for easy engine access and maintenance
- High-strength, wear-resistant alloy steel tines
- 50 Gallon Fuel Tank will run over a continuous 12 Hour Shift
- Environmental food grade hydraulic fluid option



**Available Now for  
Rent or Purchase.**



Log on to [INFO.anvilattachments.com/diesel](http://INFO.anvilattachments.com/diesel) for videos and more information or contact us today at 225-654-8222.

**AMECO SA**

43, Rue du 21 Novembre  
Illfurth F-68720  
France  
Contact: Mr Stephane Killian  
Job Title: CEO  
T: + 33 389 255969  
F: + 33 389 255968  
E: info@ameco-fr.com  
W: www.ameco-fr.com  
Supplier of mechanical  
shiploaders and unloaders,  
scrapers, reclaimers, stackers and  
bucketwheel reclaimers, as well  
as other enclosed and open  
storage systems.

**Anvil Attachments**

PO Box 216  
261 Highway 19  
Slaughter  
Louisiana  
70777  
USA  
Contact: Mr Shane Toncrey  
Job Title: Marketing Director  
T: + 1 225 654 8223  
F: + 1 225 654 3125  
E: Sales@AnvilAttachments.com  
W: www.AnvilAttachments.com  
Manufacturer of grabs, grapples  
and clamshell buckets for cable,  
hydraulic and electro-hydraulic  
operation. Models for ships-gear,  
gantry, crawler cranes, and  
hydraulic equilibrium cranes.  
Brands include Pro-line, Hawco,  
Anvil, Owen, Yaun, Williams &  
Drott. New, used, rebuilds,  
repairs, parts and service since  
1905.

**Arlona Engineering**

PO Box 41125  
Rossburgh  
Durban  
KZN 4072  
South Africa  
Contact: Mr Steve Christy  
Job Title: Managing Director  
T: + 27 31 205 95 90  
F: + 27 31 205 98 35  
E: steve@arlona.co.za  
W: www.arlona.co.za  
Established in 1975, Arlona  
Engineering is the largest  
manufacturer and supplier of  
stevedoring equipment in South  
Africa. Products are designed  
and manufactured to suit the  
arduous conditions experienced  
on the African continent.

**ASGCO**

Gading Bukit Indah / F16  
Jl. Bukit Gading Raya  
Kelapa Gading  
Jakarta  
14240  
Indonesia  
Contact: Mr Ray Nainggolan  
Job Title: Asia Ind. Representative  
T: + 61 417 299 902  
E: ray@asgco.asia  
W: http://www.asgco.com

**ASGCO Manufacturing**

301 Gordon Street  
Allentown  
PA  
18102  
USA  
Contact: Ms Peggy Anthony  
Job Title: Marketing Manager  
T: + 1 800 344 4000  
F: + 1 610 821 0216

E: panthony@asgco.com  
W: http://www.asgco.com/

**ATIC Services**

91bis, rue du Cherche Midi  
Paris  
75006  
France  
Contact: Ms Marie-Pierre Lachaud  
T: + 33 1 536 338 63  
F: + 33 1 536 338 58  
E: info@atics.fr  
W: www.atics.fr

**ATIC Services - Asia Pacific**

Suite 708/1 Newland Street  
Bondi Junction  
Sydney  
NSW 2022  
Australia  
Contact: Ms Julie Forster  
Job Title: Agency Manager  
T: + 61 289 646 250  
E: atics@atics.com.au  
W: www.atics.fr  
ATIC Services provides a range of  
services along the coal chain:  
sourcing, seaborne and inland  
waterway transportation, port  
handling in the ARA area,  
sampling and quality control. In  
recent years, seaborne logistics  
services have undergone  
significant growth.

**Atlas Manufacturing Co. Inc**

PO Box 1969  
Monticello  
MS 39654  
USA  
Contact: Mr Ashley Watson  
Job Title: Sales Manager  
T: + 1 601 587 4511  
F: + 1 601 587 5393

E: ashley@atlasmanufacturing.net  
W: www.atlasmanufacturing.net  
Manufactures new and custom  
designed single, two, three, four  
rope and hydraulic grabs. Best  
seller - Atlas radio remote  
controlled single line grab,  
incorporating fewer moving parts,  
allowing easier operation and  
lower operating costs. Grabs  
constructed using high quality  
alloy steels with heat treated pins  
and bushings.

**AUMUND Foerdertechnik  
GmbH**

Saalhoffer Strasse 17  
Rheinberg  
D-47495  
Germany  
Contact: Mr. Joerg Hoffmann  
Job Title: Managing Director  
T: + 49 2843 720  
F: + 49 2843 60270  
E: info@aumund.de  
W: www.aumund.com  
AUMUND Foerdertechnik is active  
worldwide in the field of bulk  
materials handling and storage in  
the cement, lime and gypsum  
industry, in minerals and mining,  
in power stations, iron and steel  
plants, foundries, the chemical  
industry and bulk terminals.

**Aurecon**

PT Aurecon Indonesia  
Alamanda Towers 24th Floor, Unit  
C-D  
Jl.T.B. Simatupang Kav. 23-24,  
Cilandak Barat  
Jakarta  
12430  
Indonesia  
Contact: Mr Jeff Tutticci  
Job Title: BD Manager  
T: + 62 21 2965 4000  
F: + 62 21 2965 4001  
E: Jeff.Tutticci@aurecongroup.com  
W: http://www.aurecongroup.com  
Aurecon provides engineering,  
management and specialist  
technical services for support  
infrastructure solutions for  
international and local coal and  
mineral clients in full or partial 'Pit  
to Port' projects.

**Aurecon**

L10 - 55 Grenfell Street  
Adelaide  
South Australia  
5000  
Australia  
Contact: Mr Stephen Symons  
Job Title: Development Manager  
T: + 61 8 8237 9905  
F: + 61 8 8237 9778  
E: SymonsS@ap.aurecongroup.com  
W: www.aurecongroup.com

**Aurecon Hatch**

L4, 152 Wharf Street  
Spring Hill  
Brisbane  
Queensland  
4000  
Australia  
Contact: Mr Peter Thomson

**We inspect**

Our inspectors oversee  
loading and discharge to  
ensure that your cargo  
meets your contractual  
obligations

**We sample**

Our ISO certified sampling  
methods guarantee  
homogenous, representative  
samples every time

**We analyse**

Our qualified chemists utilise  
state-of-the-art equipment  
to deliver the most precise  
and prompt results



**Alex Stewart  
(International) Corporation**  
Official ASIC Partner

**Celebrating our 35th Anniversary  
in 2013, Alex Stewart International  
is very pleased to announce the  
expansion of its new metal and  
mineral laboratory facilities at  
Sefton Business Park, Liverpool**

Our Global Network spans 36 Offices and  
17 Laboratories. To find out more visit:  
[www.alexstewartinternational.com](http://www.alexstewartinternational.com)



T: + 61 7 3166 7777  
F: + 61 7 3173 8001  
E: brisbane@aucongroup.com  
W: www.auconhatch.com  
Aurecon Hatch is Australia's leading consultant focussed on the complete coal production chain, including coal mine infrastructure and transportation - heavy haul railways, ports and marine infrastructure, and shiploading facilities.

### Ausenco

855 Homer Street  
Vancouver  
British Columbia  
V6B 2W2  
Canada  
Contact: Mr Fred Bjork  
Job Title: Mngt, Client Solutions-  
Ports & Terminals, Process  
T: + 1 604 638 4818  
F: + 1 604 688 5913  
E: fred.bjork@ausenco.com  
W: www.ausenco.com  
Leading engineering contractor operating worldwide in the bulk terminals, mining, and slurry pipeline industries, providing services in mine materials handling, transportation and export/import facilities. Services span all aspects of project development including planning studies, detailed design, EPCM and EPC design/build project implementation methods. Other services: Heavy Haul Rail, Simulation, Marine Structures, Coastal Engineering, Project and Construction Management Services

### Bedeschi SpA

Via Praimbole  
38 Limena  
Padova  
35010  
Italy  
Contact: Mr Pietro De Michieli  
Job Title: Sales & Project Director  
T: + 39 049 766 3100  
F: + 39 049 884 8006  
E: sales@bedeschi.it  
W: www.bedeschi.it  
Founded in 1908 and since the early '70s has offered its experience to the cement, gypsum, mining, energy production (coal and petcoke) industries and pollution prevention, with a complete line of solutions for crushing (primary and secondary) and bulk material handling.

### Bekaert NV

Product Group Steelcord  
Bekaert Street 2  
Zwevegem  
B-8550  
Belgium  
Contact: Mr Hans Desmet  
Job Title: Marketing  
T: + 32 9 3749 148  
F: + 32 9 3749 292  
E: hans.desmet@bekaert.com  
W: www.bekaert.com  
Bekaert is a leader in manufacturing of wire and wire products for a wide range of industrial and household applications. Steel cord is the best way to reinforce a tire, a conveyor belt. Bekaert produces conveyor belt cords and woven steel cord fabrics for conveyor belt reinforcement.

### Beltana Trading EK

Sorenfeldring 27  
Hamburg  
22359  
Germany  
Contact: Mr Jörg Heyenga  
T: + 49 40 6037456  
F: + 49 40 6037457  
E: info@beltana.de  
W: www.beltana.de  
Specialises in supply of high quality fabric and steelcord conveyor belts for horizontal, inclined and vertical systems.

### Benetech GmbH

Karl Liebkrecht Str 27  
b. Leipzig  
Deuben  
DE-06682  
Germany  
Contact: Mr Frank Lippert  
Job Title: Managing Director  
T: + 49 34441 445 0  
F: + 49 34441 445 20  
E: benetech@gmx.de

### Benetech, Inc.

1851 Albright Rd  
Montgomery  
IL  
60538  
USA  
Contact: Mr Christopher F Blazek  
Job Title: Vice President,  
Marketing  
T: + 1 630 844 1300 x214  
F: + 1 630 844 0064  
E: blazekc@benetechusa.com  
W: www.benetechusa.com  
Benetech provides engineering, equipment, installation, and field services for bulk material handling projects, dust control equipment, advanced transfer chutes, flue gas conditioning chemicals and systems, and slagging/fouling control products. Our Plant Professionals division provides operating and risk management consulting.

### Beumer Group GmbH & Co KG

Oelder Strasse 40  
Beckum  
North-Rhine Westphalia  
D-59269  
Germany  
Contact: Dr Gerd Oberheuser  
Job Title: Head of System  
Technology  
T: + 49 2521 24 0  
F: + 49 2521 24 280  
E: beumer@beumergroup.com  
W: www.beumergroup.com  
Curved belt conveyors can be supplied as open-air or enclosed, weather-tight systems. A diversified line of apron conveyors also supplied: high material flow volume, large centre distances, varying conveyor routes, handling of considerable conveying heights and intermediate discharge facilities.

### BGS Holland

Hoogeveeneweg 5  
Nieuwerkerk ad IJssel  
2913 LV  
The Netherlands  
Contact: Ms Martina Hermans  
T: + 31 180 317838  
F: + 31 180 315538  
E: info@bgsholland.nl  
W: www.bgsholland.nl  
Dust free loading chutes for shiploaders, truck and railcar loaders.

### Binder + Co AG

Grazer Strasse 19-25  
Gleisdorf  
A-8200  
Austria  
Contact: Ms Almut Schneiden  
T: + 43 31 12 800 0  
F: + 43 3 112 800 300  
E: office@binder-co.at  
W: www.binder-co.com

### Birrus International Pty Ltd

10 Dandenang Street  
Dandenong  
Victoria  
3175  
Australia  
Contact: Mr Paul Shultz  
Job Title: Engineering Manager  
T: + 613 9769 2646  
F: + 613 9769 2535  
E: pshultz@birrus.com.au  
W: www.birrus.com.au

### BLUG Credeblug S.L.



Juan XXIII - 9  
Azpetia  
Guipuzcoa  
20730  
Spain  
Contact: Mr JR Zubeldia  
Job Title: Commercial Manager  
T: + 34 943 810 150  
F: + 34 943 815 665  
E: jrzubeldia@blug.es  
W: www.blug.es  
BLUG has over 40 years experience, more than 5,000 grabs delivered worldwide and offers a wide grab catalogue. BLUG solutions - from single-rope operated radio controlled and automatic grabs, to 4-rope and electro-hydraulic high volume grabs - to fit any crane, material and production requirements.

### BMT Transport Solutions GmbH

Karpfangerstr. 14  
Hamburg  
D 20459  
Germany  
Contact: Mr Tobias Merten  
Job Title: Logistics Consultant  
T: + 49 40 36 00 664 23  
F: + 49 40 36 00 664 29  
E: tm@bmt-ts.com  
W: www.bmt-ts.com

### Bogaert Transmission (GEHA)

Industriepark  
Neringstraat 5  
Londerzeel  
B-1840  
Belgium  
Contact: Mr Luc Vliminckx  
T: + 32 52 75 0421  
F: + 32 52 30 01 98  
E: info@bogaert-transmission.com  
W: www.bogaert-transmission.com  
Specialists for over 30 years in supplying, engineering and manufacturing high quality chains and sprockets as well as for bucket-elevators en masse conveyors, apron conveyors etc and for cement, coal, fertilizer, steel, ore, minerals and other plants and factories.

### Bosch Rexroth B.V.

Kruisbroeksestraat 1  
Boxtel  
Noord-Brabant  
5281 RV  
The Netherlands  
Contact: Mr Edwin Doedee  
Job Title: Sales Manager,  
Materials Handling & Mining  
T: + 31 411 65 19 51  
F: + 31 411 65 14 83  
E: cylinders@boschrexroth.nl  
W: www.boschrexroth.nl  
Has a worldwide responsibility for turnkey projects and the development and production of Hydraulic Cylinders. Core competence is the development of engineered-to-order products, mostly one-off solutions for specific applications.

### Bosch Rexroth Mellansel AB

PRS-MLL  
Mellansel 890 42  
Sweden  
Contact: Mr Gunnar Ivarsson  
Job Title: Business Area Manager  
T: + 46 660 87000  
F: + 46 660 87160  
E: gunnar.ivarsson@se.hagglunds.com  
W: www.boschrexroth.com  
Hagglunds Drives is a global market leader in hydraulic drive systems, specializing in heavy applications that demand high torque and variable speed.

### Boyne Area Manufacturing (BAM)

1 Altair Drive  
Boyne City  
MI 49712  
USA  
Contact: Mr John Laursen  
Job Title: Director of Sales & Marketing  
T: + 1 231 459 4242  
F: + 1 231 459 4243  
E: jlaursen@boynearea-mfg.com  
W: www.boynearea-mfg.com  
Boyne Area Manufacturing designs and builds bulk material handling equipment for ship, barge, railcar, & trailer loading & stockpiling. Over 40 years experience. We build loading spouts, positioners, gates and valves, diverters, air flow conveyors, wet or dry dust collectors, hopper feeders, and bag filters.

### Brelko Conveyor Products

PO Box 62392  
Marshalltown  
Johannesburg  
Gauteng  
2107  
South Africa  
Contact: Mr Peter Ellis  
Job Title: Sales & Marketing  
Director  
T: +27 11 013 4000  
F: +27 11 013 4150  
E: peter@brelko.com  
W: www.brelko.com  
Development, production and marketing of an exclusive range of products for the bulk materials handling industry backed-up by a comprehensive installation and maintenance service, including 24-hour call out. BRELKO products assist in the control of spillage, carryback and dust, as well as promoting trouble free flow of material at belt conveyor transfer and load points. Other equipment: Air Cannons.

### Bretby Gammatech Ltd.

Unit 4 Station Yard  
Station Road  
Melbourne  
Derbyshire  
DE73 8HJ  
UK  
Contact: Mr Paul Taylor  
Job Title: Managing Director  
T: + 44 1332 694594  
F: + 44 1332 865860  
E: Paul@BretbyGammatech.com  
W: www.bretbygammatech.com

### Bridgestone Industrial Limited

Berliner Ring 89  
Bensheim  
64625  
Germany  
Contact: Mr John Hanson  
T: + 49 6251 690 396  
F: + 49 6251 690 397  
E: hanson.j@bridgestone-industrial.de  
W: www.bridgestoneindustrial.com

### Bridon International Ltd

Balby Carr Bank  
Doncaster  
South Yorkshire  
DN4 5JQ  
UK  
Contact: Ms Jenny Ferguson  
Job Title: Marketing Assistant  
T: + 44 1302 309 265  
F: + 44 1302 382 263  
E: fergusonj@bridon.com  
W: www.bridon.com

### BRUKS AB

Sjögatan 1L  
Örnsköldsvik  
SE-89160  
Sweden  
Contact: Mr Patrik Hammar  
T: + 46 660 29 45 65  
F: + 46 660 29 45 70  
E: phr@bruks.com  
W: http://www.bruks.com/

### BRUKS Rockwood Incorporation

5975 Shiloh Road  
Suite 109  
Alpharetta  
GA  
30005  
USA  
Contact: Mr Ken Upchurch  
Job Title: Vice President of Sales & Marketing  
T: + 1 770 849 0100 x109  
E: kuh@bruks.com  
W: www.bruks.com  
Machines and complete plants for processing, storing and handling bulk materials in Bulk Terminals - including Tubulator conveyors, various storage solutions and ship loaders as core products. BRUKS supplies complete stockyard equipment and systems which range from the smallest semi-automated systems to the largest fully automated systems including open storage and closed or covered storage configurations.

### Bucket Mart Inc.

PO Box 1240  
Marion  
Illinois  
62959  
USA  
Contact: Mr Jack Johnson  
Job Title: President/CEO  
T: + 1 813 390 8626  
F: + 1 813 908 9474  
E: salesbucketmart@aol.com  
W: www.bucketmart.net

**BULK ID**

Oude Kassei 16  
Waregem B-8791  
Belgium  
Contact: Mr Xavier Goarnisson  
Job Title: Senior Sales Engineer  
T: + 32 479 40 49 75  
F: + 32 56 75 62 13  
E: xavier.goarnisson@bulkid.be  
W: www.bulkid.be

**Bulk Cargo Handling BVBA**

Nijverheidskaai 28  
Bus 9  
Brussels 1080  
Belgium  
Contact: Mr Nicola Samyn  
Job Title: CEO  
T: + 32 477 44 98 81  
E: bch.belgium@gmail.com

**Bulk Logistic Landmark**

Bedeschi (leading supplier of machinery and services for bulk material handling and minerals industries), Liebherr (experienced world-class crane manufacturers) and Logmarin Advisors (specialized in shipping and maritime logistics) have formed a strategic business alliance profiting from the individual strengths and networks of each of the three partners, together generating value-added solutions and providing the most complete range of logistical services, creative advice and cargo handling equipment linking shipping with industry.  
Contacts:  
Bedeschi: Pietro De Michieli  
Liebherr: Alexander Bonbizin  
Logmarin: Mario Terenzio  
E: info@bulklogisticlandmark.com  
W: www.bulklogisticlandmark.com

**Buttimer Bulk Engineering**

Carrigeen Industrial Estate  
Cahir  
Co. Tipperary  
Republic of Ireland  
Contact: Mr Joseph Cummins  
Job Title: Business Development  
T: + 353 52 744 1377  
E: info@buttimerbulk.com  
W: www.buttimerbulk.com  
Buttimer Bulk Engineering are experts in the mechanical handling of dry bulk materials - including coal, grain, minerals and others - and offer consultancy, design, procurement, installation, bespoke fabrication and project management of complete turnkey solutions for ports, mines and industrial facilities.

**BV Beco**

De Limiet 18  
Vianen  
Utrecht 4131 - NR  
The Netherlands  
Contact: Mr Henk van Vuren  
Job Title: Managing Director  
T: + 31 347 323 100  
F: + 31 347 377 780  
E: h.vanvuren@beco-vianen.nl  
W: www.becograbs.com  
One of the world's leading specialists in grabs for the bulk market. For more than 20 years BV Beco has been providing high-end, ready-to-run technological solutions. We have a big scale of products: Grabs - Wheelloaders, excavator and demolition equipment - Tipping Trailers -

Hooklift carriers - Harbour- and industrial trailers.

**C. Christophel GmbH**

Taschenmacherstr. 31-33  
Lübeck SH 23556  
Germany  
Contact: Mr Matthias Dammer  
Job Title: Sales  
T: + 49 43 66 88 48 20  
F: + 49 43 66 88 88 75  
E: mail@christophel.com  
W: www.christophel.com

**Cable Arm Inc**

3452 W Jefferson Avenue  
Trenton  
Michigan  
48183 2939  
USA  
Contact: Mr Ray Bergeron  
Job Title: President  
T: + 1 734 676 6108  
F: + 1 734 676 1345  
E: info@cablearm.com  
W: www.cablearm.com  
As well as offering environmental dredging expertise, Cable Arm manufactures a range of equipment for bulk handling. Its buckets incorporate special features for moving nearly any granular material. Utilizing a patented level-cut bite, its buckets are faster and more efficient in bulk handling, eliminating extra cleanup equipment.

**Cachapuz Bilanciai Group**

Parque Industrial de Sobreposta  
Apartado 2012  
Braga 4701-952  
Portugal  
Contact: Mr Nuno Matos  
Job Title: International Business Developer  
T: + 351 253 603 480  
F: + 351 253 603 485  
E: info@cachapuz.com  
W: www.cachapuz.com

**Calim Grab Industry**

Piri Reis Cad  
Çınar San.  
Sitesi No:46 Maltepe  
İstanbul 81540  
Turkey  
Contact: Mr Murat Calim  
T: + 90 533 226 4923  
F: + 90 216 399 79 71  
E: info@calimkepc.com  
W: www.calimkepc.com or www.calimkepc.com  
Calim Grab Industry, established in 1970, specializes in manufacturing grabs for international seagoing cargo handling grabs. Over 2.000 grabs have been delivered worldwide to date. High-standard technology and reliable products are the result of our respect for the requirements of the market in combination with incremental improvement and implementation of experience gained throughout decades. CALIM GRABS will continue to be a reliable name in the machine industry.

**Cambelt International Corp**

2820 West. 1100 South  
Salt Lake City  
Utah 84104  
USA  
Contact: Mr Dave Hansen  
Job Title: VP, Sales  
T: + 1 801 972 5511 ext 205  
F: + 1 801 972 5522  
E: info@cambelt.com  
W: www.cambelt.com

**Capotex**

Colombia 1  
Majadahonda  
Madrid  
28220  
Spain  
Contact: Ms Eva  
T: + 34 91 634 71 92  
F: + 34 91 636 21 15  
E: sales@capotex.com  
W: www.capotex.com

**Carbonser, S. A. DE C. V.**

Guillermo Gonzalez Camarena  
No. 1200 Piso 7  
Centro Ciudad Santa Fe  
DF 01210  
Mexico  
Contact: Ing. Thomas Cortes Petersen  
Job Title: Director  
T: + 52 55 5246 7360  
F: + 52 55 5246 7391  
E: tcortes@techint.com.mx  
W: www.techint.com.mx  
Carbonser is a company owned by Techint Group for the construction and operation of the 6 million tpa Petacalco Coal Terminal in the Pacific shore of Mexico. The installation includes two CSU manufactured by Techint Technology and is able to unload cape size vessels up to 150,000dwt.

**Cargotec Sweden AB, Marine Selfunloaders**

PO Box 914  
Enköping SE-745 25  
Sweden  
Contact: Mr Johan Ericson  
T: + 46 171 232 00  
F: + 46 171 232 99  
E: susales.enk@cargotec.com  
W: www.cargotec.com  
Cargotec offers dry bulk handling systems for ship operators worldwide. Through the MacGregor brand, we provide complete self-unloading/loading systems for dry bulk carriers, integrated transloading solutions and bulk handling systems for offshore supply vessels - all designed to ensure efficient, flexible and environmentally-friendly operation. The systems are tailor-made for each customer's particular requirements. Virtually any dry bulk material can be handled.

**Carlsen**

Van Polanenweg 2  
Krimpen aan de IJssel  
2921 LT  
The Netherlands  
Contact: Mr Bastiaan Snoek  
T: + 31 180 440 720  
E: bs@carsengroup.com  
W: www.carsengroup.com

**Carsurin**

Askrindo Building 5th Floor  
Jl Angkasa Blok B-9 Kav 8  
Kemayoran  
Jakarta 10610  
Indonesia  
Contact: Mr David G. Barnes  
Job Title: Group Head Sales & Marketing & Corporate Strategy  
T: + 62 61 654 0425  
F: + 62 21 654 0418  
E: coal.sales@carsurin.com  
W: www.carsurin.com  
Established in 1968, CARSURIN is Indonesia's largest private, independent inspection company servicing the energy industrie and mining (coal and minerals), as

well as the marine, cargo, and agriculture industries to minimize risks. With over 700 employees in 20 branch offices and laboratories throughout the Indonesian archipelago, CARSURIN services both domestic and international clients. We are the ONLY Indonesian company that have independently secured to be a part of the International Federation of Inspection Agencies based in London and the sole Lloyd's Agent in Indonesia.

**Caterpillar Inc**

100 NE Adams Street  
Peoria  
IL  
616-6335  
USA  
Contact: Mrs Sharon Holling  
Job Title: PR  
T: + 1 309 675 8995  
F: + 1 309 675 4757  
E: Holling\_Sharon\_L@Cat.com  
W: www.cat.com  
Offers five models of wheeled material handlers and six models of tracked material handlers. The diesel powered, hydraulic machines feature efficient Caterpillar engines, powerful hydraulics, fast cycle times and great mobility and versatility. Capacities range from a few tons to more than 20 tons

**Caterpillar SARL**

Route de Frontenex 76  
Geneva 1207  
Switzerland  
Contact: Mr Philippe Kunz  
T: + 41 22 849 44 44  
E: kunz\_philippe@cat.com  
W: www.cat.com  
With 2012 sales and revenues of \$65.875 billion, Caterpillar is the world's leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines and diesel-electric locomotives. The company also is a leading services provider through Caterpillar Financial Services, Caterpillar Remanufacturing Services and Progress Rail Services. Other Equipment: Articulated Trucks, Compact Track Loaders, Hydraulic Excavators, Mini-Excavators, Skid Steer Loaders, Telehandlers, Track Type Loaders, Track Type Tractors, Wheel Dozers, Wheel Loaders, Wheel Material Handlers, Work Tools. Fleet Management Solutions.

**Cavotec SA**

Via S. Balestra 27  
Lugano CH-6900  
Switzerland  
Contact: Mr Michael Scheepers  
Job Title: Director, Investor Relations & PR  
T: + 41 91 911 4010  
F: + 41 91 922 54 00  
E: michael.scheepers@cavotec.com  
W: www.cavotec.com  
Other Equipment: Electrical Equipment. Cavotec is a global engineering group that enables industries worldwide to improve productivity, safety and sustainability. Cavotec delivers power transmission, distribution and control technologies that form the link between fixed installations, in for example airports, ports and mines, and

mobile equipment such as aircraft, ships, mining equipment and cranes.

**CDM Systems, Inc**

430 Main Street  
Elk River MN 55330  
USA  
Contact: Mr Steve W Parker  
T: + 1 763 428 9700  
F: + 1 763 428 9701  
E: steve@cdmsys.com  
W: www.cdmsys.com  
Over 30 years experience offering a comprehensive range of bulk conveying systems, components and engineering/design services. Provide conveying and bulk handling solutions for materials from Ash through to Zinc, including marine applications as well as those in hostile, severe or high-temperature environments.

**Certex UK**

Unit C1, Harworth Industrial Estate  
Bryans Close  
Harworth  
Doncaster DN11 8RY  
UK  
Contact: Mr. John Briggs  
Job Title: Sales Director  
T: + 44 845 230 7475  
F: + 44 845 230 7476  
E: sales@certex.co.uk  
W: www.certex.co.uk  
Certex provides a complete solution for Wire Rope and lifting products from product supply, repair and maintenance, inspection and test, contract hire, training, certification management through to complete management systems. Certex has locations throughout the UK and Europe.

**CFS Handling srl.**

Head Office  
Via Sigalina a Mattina, 12/14  
Montichiari  
BS 25018  
Italy  
Contact: Mr Italo Civettini  
Job Title: CEO  
T: + 39 0309 64199  
F: + 39 0302 072026  
E: civettini@cfshandling.it  
W: www.cfshandling.it  
CFS International Engineering Handling srl works in design and manufacturing of equipment for handling across a range of sectors including, coal, cement, steel mills, demolition, ores, urban solid waste, paper etc. The company's product range includes mechanical, hydraulic and electro-hydraulic buckets as well as hydraulic and electro-hydraulic grabs to suit customer's specific needs.

**Changsha Kaiyan Instruments Co. Ltd**

172 Kaiyuan Road  
Changsha Economic & Technological Development Zone  
Changsha 410100  
China  
Contact: Ms Susan Wang  
T: + 86 731 4012074 / + 86-731-84021617  
F: + 86 731 4012074  
E: susanky@chs5e.com  
W: www.kcic.net

**China Huadian Engineering Co., Ltd.(CHEC)**

South Gate, No 91  
North Road



Xi San Huan  
Beijing  
100044  
China  
Contact: Mr Zheng Liu  
Job Title: Director of Int. Mktg,  
Material Handling Division  
T: + 86 10 51 966647  
F: + 86 10 68 710553  
E: chec@chec.com.cn  
W: www.chec.com.cn  
China Huadian Engineering Co.,  
Ltd. is one company in China  
integrating the consultant works,  
design and engineering works,  
equipment supply and service  
works both for the machinery and  
bulk material handling system.

### China Sonangol International (S) Pte Ltd

9 Temasek Boulevard #42-01  
Suntec Tower 2  
Singapore  
038989  
Singapore  
Contact: Mr Eugene Tan  
T: + 65 6808 1880  
F: + 65 6808 1881  
E: sg@chinasonangol.com  
W: www.chinasonangol.com

### CHL Equipment Ltd (incorp. Verstegen Grabs UK)

24 Solihull Road  
Shirley  
Solihull  
West Midlands  
B90 3HD  
UK  
Contact: Mr John Hinder  
Job Title: General Manager  
T: + 44 121 733 8100  
F: + 44 121 733 2796  
E: sales@chlequipment.com  
W: www.chlequipment.com

### Cimbria Bulk Equipment



Drejervej 10  
Sunds  
DK- 7451  
Denmark  
Contact: Mr Lars Noergaard  
Job Title: Managing Director  
T: + 45 72 42 24 00  
F: + 45 72 42 24 99  
E: cbe@cimbria.com  
W: www.cimbria.com  
Develops and markets a line of  
loading chutes and screw  
conveyors within dust-free bulk  
handling. Supplies solutions for all  
types of dry bulk materials and for  
all loading tasks - ship loading,  
warehousing, road and rail.  
Chutes are supplied with or  
without integrated filter and made  
of modularly-structured  
components, all kept in stock.

### Claudius Peters Technologies GmbH

Schanzenstrasse 40  
Buxtehude D-21614  
Germany  
Contact: Mr Matthias Raabe  
Job Title: Head of Sales, Projects  
& Marketing  
T: + 49 4161 706 349  
F: + 49 4161 706 270  
E: mail@bmhclaudiuspeters.com  
W: www.claudiuspeters.com  
Product lines include grinding  
systems, storage and mixing

silos, pneumatic conveying  
systems, ash removal systems,  
self-unloading vessels, packing  
and palletising systems,  
pulverised coal injection systems  
for blast furnaces.

### Claudius Peters Technologies S.A.S

34 Avenue de Suisse  
BP 269  
Illzach  
Cedex  
F-68316  
France  
Contact: Mr Jean Christophe  
Fassel  
Job Title: Sales Manager  
T: + 33 389 313 301  
F: + 33 389 619 525  
E: technologiessa@  
claudiuspeters.com  
W: www.claudiuspeters.com  
Claudius Peters Technologies  
SAS is a company of Langley  
Holdings. Specialised in  
Stockyards and Belt Conveying  
systems we develop all kind of  
projects with stackers, reclaimers,  
including side stackers, tripper,  
shuttle type stackers; bridge,  
portal or side reclaimers; linear or  
circular, open or covered.

### Cleveland Cascades Ltd

Unit 22 Dukesway  
Teesside Industrial Estate  
Thornaby  
Stockton on Tees  
TS17 9LT  
UK  
Contact: Mr Ian Barnard  
Job Title: Managing Director  
T: + 44 1642 753260  
F: + 44 1642 753270  
E: enquiries@  
clevelandcascades.co.uk  
W: www.clevelandcascades.co.uk  
Designs and constructs the  
Cleveland Cascade bulk loading  
chute for shiploading, silo filling,  
truck and railcar loading and for  
conveyor transfer points. The  
chute minimises dust emissions  
and reduces product degradation  
and segregation.

### Clough Limited

6th Floor  
251 St Georges Terrace  
Perth  
Western Australia  
6000  
Australia  
Contact: Mr Max Bergomi  
Job Title: Executive General  
Manager - Business Acquisition  
T: + 61 8 92819281  
F: + 61 8 94816699  
E: clough@clough.com.au  
W: www.clough.com.au  
A service provider of Project  
Management, Engineering and  
Construction Contracting services  
in the oil and gas (onshore and  
offshore), petrochemicals, mining  
and minerals processing  
industries, infrastructure (including  
power and harbour works) and  
manufacturing sectors.

### CNBM International Engineering Co., Ltd.

19th Floor, Building 4  
Interwest Business Center  
NO.9 Shouti South Road  
Beijing 100044  
China  
Contact: Mr Wang Lin  
Job Title: Bulk Handling Division  
Manager

T: + 86 10 68796130  
F: + 86 10 68796029  
E: wanglin@cmbie.com  
W: www.cnbengineering.com

### CNK INTERNATIONAL LIMITED

No.29 Building  
North Gongren Xincun  
Jinan City  
China  
Contact: Mr Kevin  
T: + 86 531 6880 0516  
F: + 86 531 6880 0516  
E: sales@cnkcorporation.com  
W: www.cnkcorporation.com

### Coal & Mineral Technologies (SABS)

1 Dr Lategan Road  
Groenkloof  
Pretoria  
Gauteng 0001  
South Africa  
Contact: Mr Heinrich Williams  
Job Title: General Manager  
T: + 27 12 428 6328  
F: + 27 12 428 7795  
E: heinrich.williams@sabs.co.za  
W: www.sabs.co.za

### COBRA Europe SA

12 rue Henry Guy  
BP 40081  
LUXEUIL les Bains Cedex  
70300  
France  
Contact: Mr E Mansour  
Job Title: President  
T: + 33 671 58 72 56  
F: + 33 384 40 44 92  
E: emphone@cobra-cs.com  
W: www.cobra-cs.com  
The COBRA group is specialized  
in the manufacturing and  
distribution of conveyor  
components for the material  
handling industry. COBRA group  
combines five businesses:  
Conveyor belts (Depreux,  
Transco, Indi), Components for  
conveyor (Go Smart) and  
Vulcanising presses (Mossier).  
Headquartered in France with the  
following sales subsidiaries:  
Russia and Central Asia  
(Kazakhstan, Ouzbekistan,  
Tajikistan): COBRA EURASIA Tel:  
73 84 25 85 598, Email:  
cobraeurasia@bk.ru North and  
Central America: COBRA  
AMERICA Tel: 1423 968 9700,  
Email: bambi@cobraamerica.com  
Australia & New Zealand: COBRA  
SOUTH PACIFIC Tel: +61 2 4722  
5633, Email:  
info@cobrasp.com.au

### Coeclerici Logistics S.p.A.



Piazza A. Diaz, 7  
Milan  
20123  
Italy  
Contact: Mr Andrea Clavarino  
Job Title: CEO of Coeclerici  
Logistics Spa  
T: + 39 02 6246 9451  
F: + 39 02 6246 9444  
E: newprojects@coeclerici.com  
W: www.coeclerici.com  
Additional equipment: Offshore  
transloading operations One of  
the best known and most reputed  
companies in the field of offshore  
transloading operations. This  
achievement is based on the  
dedication and commitment of the  
company towards its clients as

well as being an integral part of  
the production chain with a view  
to long term relationships.

### Cofely Experts BV

Computerweg 21  
PO Box 34  
Amsterdam  
1000 AA  
The Netherlands  
Contact: Ms Urske Kuijpers  
T: + 31 88 484 90 00  
F: + 31 88 484 93 00  
E: urske.kuijpers@cofely-  
gdfsuez.nl  
W: www.cofely-gdfsuez.nl

### Coles Associates

PO Box 5096  
Dalkeith  
Western Australia  
6009  
Australia  
Contact: Mr Richard Coles  
Job Title: Manager Business  
Development  
T: + 61 8 9389 8484  
F: + 61 8 9386 5700  
E: rcoles@colesassociates.com.au  
W: www.shiploader.com.au  
Specialising in acquisition,  
divestment and relocation and of  
pre-owned mining and  
infrastructure equipment  
worldwide.

### Comercial Tauro S.A.

Merced 380 Of. 71  
Santiago  
Metropolitana  
8320310  
Chile  
Contact: Mr Matias Leyton  
Job Title: General Manager  
T: + 56 2 23621177  
F: + 56 2 23621177  
E: mleyton@vibrafloor-latam.com  
W: www.vibrafloor-latam.com

### Conductix -Wampfler Australia

14 England St  
Dandenong  
VIC  
3175  
Australia  
Contact: Mr Mark Howlett  
Job Title: Managing Director  
T: + 61 3 9706 8844  
F: + 61 3 9794 9298  
E: sales-australia@conductix.com  
W: www.conductix.com  
Conductix-Wampfler is a  
manufacturer and supplier of  
Power and Data Transfer  
equipment including conductor  
bar, festoon, cable and hose  
reels, Kabelschlepp cable chain  
and flexible cable, slip ring  
assemblies, radio controls, Kiepe  
conveyor belt monitoring  
equipment, UEE high voltage  
connectors and buffers.

### Conductix-Wampfler AG



Rheinstrasse 27 + 33  
Weil am Rhein  
79576  
Germany  
Contact:  
T: + 49 7621 662 0  
F: + 49 7621 662 144  
E: info.de@conductix.com  
W: www.conductix.com  
Conductix-Wampfler's core  
competency is in the  
development, production,  
consulting, and installation of  
tailor made, engineered solutions

like festoon systems, conductor  
rails, cable chains, slip ring  
assemblies or spring and  
motorized cable reels that provide  
energy supply and data  
transmission for moving  
machinery. Other  
equipment/services: Energy &  
Data Transmission Systems

### Conductix-Wampfler Americas

10102 F Street  
Omaha  
Nebraska NE 68127  
USA  
Contact: Mr Mark Zuroske  
Job Title: Market Development  
Manager, Americas  
T: + 1 402 952 9300 ext 225  
F: + 1 402 339 9627  
E: mark.zuroske@conductix.com  
W: www.conductix.us  
Leading global supplier of  
motorized cable reels, cable  
festoon systems, energy chains,  
conductor bar, and slip rings to  
the bulk materials handling and  
mining industries. We specialize  
in reliable, customized  
electrification systems for the  
most demanding applications.  
ISO9001:2008 certified.

### Continental Construction (Memphis)

5646 Shelby Oaks Drive  
Memphis  
Tennessee 38134  
USA  
Contact: Mr Brian Morphis  
Job Title: Marketing  
T: + 1 901 382 4070  
F: + 1 901 388 2534  
E: mail@continentalconst.com  
W: www.continentalconst.com  
Continental Construction  
Company, Inc. is a general  
contractor specializing in slip form  
concrete construction, pile driving,  
structural steel erection, millwright  
work, marine construction, heavy  
concrete foundations, industrial  
buildings, and material handling  
systems.

### Continental Conveyor & Equipment Co Inc

PO Box 400  
438 Industrial Drive  
Winfield  
Alabama 35594  
USA  
Contact: Mr Mike Roberts  
Job Title: Group  
Manager/Engineered Systems  
T: + 1 205 487 6492  
F: + 1 205 487 4233  
E: info@continentalconveyor.com  
W: www.continentalconveyor.com  
The company's High Angle  
Conveyor (HAC) system employs  
standard conveyor components  
and belts to utilise a simple but  
unique 'sandwich belt' approach  
to steep and even vertical  
conveyor elevations.

### CONTINENTAL MATADOR RUBBER, s.r.o.

Terezie Vansovej 1054  
Puchov 020 01  
Slovakia  
Contact: Mr Pavol Martinko  
T: + 421 42 461 3365  
F: + 421 42 461 3365  
E: pavol.martinko@matador.sk  
W: www.matador.sk  
One of the biggest companies in  
the chemical and rubber industry  
in the Slovak Republic. Up to 85  
% of its production of tyres and

conveyor belts is exported. Producer and supplier of textile and steel cord conveyor belts for the mining and construction industries worldwide.

### ContiTech

#### Transportbandsysteme GmbH

Breslauer Strasse 14  
Northeim  
D-37154  
Germany

Contact: Ms Marion Braun  
Job Title: Assistant to General Manager  
T: + 49 5551 702 207  
F: + 49 5551 702 504

E: transportbandsysteme@contitech.de

W: www.contitech.de/  
conveyorbelts

ContiTech Conveyor Belt Group is a leading development partner, manufacturer and system supplier of steel-cable and textile-ply conveyor belts, service materials and special products. In addition, ContiTech provides a worldwide installation and maintenance service.

### Control Systems Technology Pty Ltd

PO Box 329  
Revesby North  
Revesby  
NSW  
2212  
Australia

Contact: Mr Leonard Ian Burrell  
T: + 612 8708 0200  
F: + 612 8708 0280  
E: iburrell@controlsystems.com.au  
W: www.controlsystems.com.au/  
CST design and manufacturer high accuracy belt scale systems designed to provide the customers specified accuracy "in conveyor". CST say "Different Scales for Different Conveyors to achieve the Same Accuracy". Since 1984, CST has remained committed to high integrity, shunning short term commercial game for long term customer satisfaction.

### CPS Projects (Pty) Ltd

PO Box 47261  
Greyville  
KZN  
4023  
South Africa

Contact: Mr Banzi Majola  
Job Title: Managing Director  
T: + 27 31 466 4396  
F: + 27 31 466 4399  
E: banzi@cpsprojects.co.za  
Port related services offered by CPS Projects as ff: -Maintenance Contracts (including labour supply)  
-Electrical and automation services  
-Structural repairs, equipment overhauls and upgrades  
-Ad-hoc repairs (accident damage and component failure)  
-Supply of Spare Parts  
-Erection and Commissioning of new equipment

### CST Covers



CST Industries  
9701 Renner Boulevard - Suite 150  
Lenexa  
Kansas  
66219  
USA

Contact: Mr Tony Thill  
Job Title: Corporate Vice President  
T: + 1 913 748 4559  
F: + 1 913 621 2145  
E: thill@cstindustries.com  
W: www.cstcovers.com  
Founded in 1964 the company designs, manufactures and erects architectural and environmental enclosures. These are primarily clear-span domes and related space frames fabricated mostly from aluminium. Structures are used for covering tankage and bulk storage facilities of all types and shapes.

### CST Storage

9701 Renner Blvd, Suite 150  
Lenexa  
KS  
66110-2907  
USA

Contact: Mr David Wheat  
Job Title: Director  
T: + 1 913 621 3700  
F: + 1 913 621 2145  
E: sales@cst-storage.com  
W: www.cstindustries.com  
Formerly Columbian TecTank, the world's largest manufacturer of factory-coated bolted and welded tanks for dry bulk storage, as well as integrated and stand-alone Weaver reclaimers. Flat-bottomed tanks and hopper bottom silos with capacities up to 13,200 cubic meters. ISO Certified.

### Cullen Grummitt & Roe

126 Wickham Street  
Fortitude Valley  
Queensland  
QLD 4006  
Australia

Contact: Mr Marco Necchi  
T: + 61 7 3252 8400 / +61 39 533 3208  
F: + 61 7 3252 5775  
E: cgrqld@cgrgroup.com  
W: www.cgrgroup.com  
Civil and structural engineering consultants with experience in coal facilities and port and harbour engineering with offices in Brisbane, London and Buenos Aires. Coal industry projects include conveyor structures, workshops, ROM structures, reclaim tunnels, bin structures, roads, retaining structures, equipment foundations.

### Dalian Huarui Heavy Industry Group Co. Ltd

No169 Bayi Road  
Dalian  
Liaoning  
China  
Contact: Mr Lixiang Shi  
Job Title: CEO  
T: + 86 411 86852392  
F: + 86 411 86852398  
E: congzy@dhdicw.com  
W: www.dhdicw.com.cn

### dbis

9 Station Road  
Adwick-le-Street  
Doncaster  
South Yorkshire  
DN6 7BB  
UK

Contact: Mr David Trueman  
Job Title: Sales Director  
T: + 44 1302 330 888  
F: + 44 1302 724 731  
E: david.trueman@dbis.biz  
W: www.dbis.biz

### DCC Grabs

Markerkant 14-30  
Almere  
Flevoland  
1314AS  
The Netherlands  
Contact: Mr Rudy van Leeuwen  
Job Title: Director  
T: + 31 73 - 640 41 11  
F: + 31 36 529 85 94  
E: Info@dcc-grabs.nl  
W: www.dcc-grabs.nl

### DCL, Incorporated

PO Box 125  
Charlevoix  
MI  
49720  
USA

Contact: Mr Kyle Smith  
T: + 1 231 547 5600 Ext 3124  
F: + 1 231 547 3343  
E: sales@dclinc.com  
W: www.dclinc.com  
Provides full dust control loading systems and partial components to the bulk material handling industry and designs custom equipment. A complete Research/Development team is located on site. Single source manufacturing from ship loading systems to valves and dust collectors can be provided.

### De Regt Conveyor Systems

Ijzendijkseweg 5  
Biervliet  
Zeeland  
4521 GX  
The Netherlands  
Contact: Mr Peter De Regt  
Job Title: Director  
T: + 31 115 481238  
F: + 31 115 481234  
E: peter@deregt.com  
W: www.deregt.com  
De Regt is a company specialized in developing, building and installing conveyor systems and structures needed to achieve a partial or total project.

### Dearborn MidWest Conveyor Co.

4220 Shawnee Mission Pkwy  
Suite 301B  
Kansas City  
Kansas  
66205-2513  
USA  
Contact: Mr Sudy L Vohra  
Job Title: Executive Vice President & General Manager  
T: + 1 913 261 2406  
F: + 1 913 261 2470  
E: sudyv@dmwcc.com  
W: www.dmwcc.com  
Products include motorized trippers, telescopic chutes, rotary plow feeders, barge loading and unloading systems, pipe conveyors, air supported conveyors, Silo storage and reclaiming systems. Materials handling systems are furnished for terminals, power plants,

cement plants, fertilizer plants, steel mills and mines.

### DeMarco Industrial Vacuum Corporation

PO Box 1138  
Crystal Lake  
IL  
60039-1138  
USA

Contact: Mr Thomas DeMarco  
Job Title: President  
T: + 1 815 344 2222  
F: + 1 815 344 2223

E: Sales@DeMarcoVacuums.com  
W: www.DeMarcoVacuums.com  
Manufactures a complete line of heavy duty DEMARCO Industrial Vacuum Systems and for all flowable materials, wet or dry, etc. Units are available in portable, stationary, towable, central turnkey installed systems, canister vacuums, and custom engineered systems.

### DemcoTECH Engineering

Modderhouse  
Moddercrest Office Park  
1 High Street  
Modderfontein  
Gauteng  
1645  
South Africa  
Contact: Mr Paul van de Vyver  
Job Title: General Manager  
T: + 27 11 608 4355  
F: + 27 11 608 4251  
E: info@DemcoTECH.com  
W: www.demcotech.com

### DMN-WESTINGHOUSE

Gieterij 3  
PO Box 6  
Noordwijkerhout  
Zuid-Holland  
NL-2210 AA  
The Netherlands  
Contact: Mrs Tonneke Krempel  
Job Title: Manager Marketing Services and PR  
T: + 31 252 361 800  
F: + 31 252 375 934  
E: dmn@dmn-nwh.nl  
W: www.dmnwestinghouse.com  
Other equipment: Rotary Valves, Diverter Valves. Designs and manufactures rotary valves, diverter valves and other components. Optionally pressure shock resistant to 10 bar, flame proof also suitable for handling Si2 powders, ATEX compliant to Directive 94/9/EC. Extensive sales and distribution network, ensures global service and support.

### Dome Corp of North America

5450 East Street  
Saginaw  
Michigan  
48601  
USA  
Contact: Mr Ross Lake  
Job Title: President  
T: + 1 989 777 2050  
F: + 1 517 777 3477  
E: sales@dome-corp-na.com  
W: www.dome-corp-na.com

### Dome Technology

3007 East 49th Street North  
Idaho Falls  
Idaho  
83401  
USA  
Contact: Mr Ashley Sterland  
Job Title: Chief Marketing Officer  
T: + 1 208 529 0833

F: + 1 208 529 0854  
E: ashley.sterland@dometech.com  
W: www.dometech.com  
Other equipment: Engineered tunnels and Drive-through dome silos. Serve the biomass, power, mining, cement, fertilizer, and grain markets. We provide geotechnical analysis and deep foundation solutions. Integrate material handling safety protocols with dome design. Concrete domes are designed to contain volatile products as well as cover products.

### DOMTEC International LLC

4355 N Haroldsen Drive  
Idaho Falls  
Idaho  
83401  
USA  
Contact: Mr Mike Hunter  
Job Title: General Manager  
T: + 1 208 522 5520  
F: + 1 208 522 5344  
E: domtec@domtec.com  
W: www.domtec.com  
World class, high quality concrete dome builder for storage of a multitude of dry bulk materials, including coal. DOMTEC has broad experience with reclaim systems. Projects are delivered around the world on time and within budget.

### Donaldson Filtration Deutschland GmbH

Büssingstraße 1  
Haar  
42781  
Germany  
Contact: Mrs Susanne Fulko  
Job Title: Marketing Manager  
T: + 49 21 29 569 0  
F: + 49 21 29 569 100  
E: IAF-de@donaldson.com  
W: www.DonaldsonToritDCE.com  
Donaldson is a leading worldwide provider of filtration systems that improve people's lives, enhance our Customers' equipment performance, and protect our environment. We are committed to satisfying our Customers' needs for filtration solutions through innovative research and development, application expertise, and global presence.

### Doosan Benelux SA

Drève Richelle 167  
Waterloo  
B-1410  
Belgium  
Contact: Mr George Schmalzried  
Job Title: Public Relations Manager  
T: + 32 2 371 6811  
F: + 32 2 371 6900  
E: george.schmalzried@doosan.com  
W: www.bobcat.eu;  
www.doosanequipment.eu  
World leader in compact loaders. Offers a line of skid-steer and compact-tracked loader models used in shiptrimming, shiphold and railroad box car unloading operations. The compact loaders have rated operating capacities ranging from 343-1600 kg and operating weights from 1.2 - 4.6 tonnes.



### Doppelmayr Transport Technology GmbH

Holzriedstrasse 29  
Wolfrat 6922  
Austria  
Contact: Mrs Stefanie Reis  
T: + 43 5574 604 1206  
F: + 43 5574 604 1209  
E: dtt@doppelmayr.com  
W: www.doppelmayr-mts.com  
Doppelmayr Transport Technology solves all transport issues in the field of bulk materials and unit loads with a range of sophisticated material transport systems - from well-proven material ropeways to innovative long-distance conveyor systems for high capacities.

### Dos Santos International, LLC



531 Roselane Street  
Suite 810  
Marietta  
Georgia 30060

USA  
Contact: Mrs Amy D. Duncan  
Job Title: Marketing Manager  
T: + 1 770 423 9895  
F: + 1 866 473 2252  
E: info@dossantosintl.com  
W: www.dossantosintl.com  
Other Equipment: DSI ExConTec - conveyor analysis software.  
Dos Santos International is the world's foremost authority on high-angle conveying technology. We offer the DSI Snake, the most reliable high-angle and vertical conveying means for your high tonnage, high lift requirements. DSI also offers engineering consulting and provides in house software for load analysis.

### Dosco Overseas Engineering Ltd

Ollerton Road  
Tuxford  
Newark  
Nottinghamshire  
NG22 0PQ  
UK  
Contact: Mr Phillip Adrych  
Job Title: Export Sales

T: + 44 1777 870 621  
F: + 44 1777 871 580  
E: padrych@dosco.co.uk  
W: www.dosco.co.uk  
Manufacture twin roll crushers. The range can process from 100-5000 tph with installed powers of 100kW-500kW. Manufacture economic and environmentally friendly pipe conveyor.

### Doubrava Ges GmbH

Industriestrasse 17-20  
Attnang-Puchheim  
A-4600  
Austria  
Contact: Mr Dietmar Holecizus  
T: + 43 7674 6010  
F: + 43 7674 601499  
E: office@doubrava.at  
W: www.doubrava.at

### Dunlop Conveyor Belting

Oliemolenstraat 2  
PO Box 14  
Drachten  
9200 AA  
The Netherlands  
Contact: Mr Andries Smilda  
Job Title: Sales & Marketing

Director  
T: + 31 512 585 446  
F: + 31 512 585 433  
E: marketing.drachten@dunlopconveyorbelt.com  
W: www.dunlopconveyorbelt.com  
Manufactures a full range of textile, aramid and steelcord conveyor belting systems.

### Duro Felguera - DF



Parque Científico Tecnológico  
C/ Ada Byron 90  
Gijón  
Asturias  
33203  
Spain  
Contact: Mr (Ph. D. Mining Engineer) Angel Pelegry  
Job Title: Sales Director - DF Mining and Handling  
T: + 34 985 199 201  
F: + 34 985 199 059  
E: dfmh@durofelguera.com  
W: www.durofelguera.com

DF Mining & Handling is the DF division specialised in turnkey projects for Mineral Processing and Bulk Material Handling Facilities, mainly Concentration Plant and Loading and Unloading Terminals at Ports. The company assists customers and investors in all phases of a project: feasibility studies, design, detailed engineering, procurement, construction, commissioning and operation and maintenance of the facility and it's recognised on a global scale as a reputable EPC contractor.

### Dust Control Technology



1607 W. Chanute Rd.  
Peoria  
IL  
61615  
USA  
Contact: Ms Laura Stiverson  
Job Title: General Manager  
T: + 1 309 693 8600  
F: + 1 309 693 8605  
E: info@dustboss.com  
W: www.dustboss.com  
The DustBoss dust and odor control system combines an oscillating ducted fan with high pressure mist to create a virtual dust/odor barrier. Proprietary technology delivers superior results, blanketing up to 280,000 square feet with a fine mist of water droplets that are the optimal size for trapping dust particles.

### Dust Solutions Inc.

14300 N.E. 20th Ave.  
D102-185  
Vancouver  
Washington  
98686  
USA  
Contact: Mr David Gilroy  
Job Title: Sales Manager  
T: + 1 360 546 0072  
F: + 1 360 546 0073  
E: d.gilroy@nodust.com  
W: www.nodust.com  
Manufacturers Dry Fog (TM) Dust Suppression Systems for conveyors, truck & rail dumps, hoppers, feeders, crushers, ship loaders/unloaders. Modular systems produces fog droplets that attach to like size airborne dust particles. Functions in below freezing temperatures DustTamer (TM) Windfence Systems for stockpiles.

### E-Crane World Wide

Koekoeklaan 53  
Adegem  
B-9991  
Belgium  
Contact: Mr Bas Tolhuizen  
Job Title: International Sales Manager  
T: + 31 165 320100  
F: + 31 165 320759  
E: bas.tolhuizen@e-crane.com  
W: www.e-crane.com  
Main activity is the sale and support of the E-Crane, a multifunctional crane designed for bulk material handling, storage, process feeding at ports etc.

### E-Crane World Wide / E-Crane International USA

1332 Freese Works Place  
Galion  
Ohio  
44833  
USA  
Contact: Mr Mark W Osborne  
Job Title: President  
T: + 1 419 468 0090  
F: + 1 419 468 0074  
E: mark.osborne@e-crane.com  
W: www.e-crane-usa.com  
E-Crane International USA offers the E-Crane (Equilibrium Crane) in capacities ranging from 5.5 to 39 (metric) tons and outreach ranging from 24.8 to 47.8 metres (82 to 157 feet) for efficient offloading of bulk commodities.

## DB-100: WORLD'S LARGEST. SIMPLY THE BEST.

DIRECT DRIVE. LOW MAINTENANCE. MAXIMUM EFFECTIVENESS.



Cover up to 280,000 sq. ft. with a powerful, dust-trapping mist.

**DUST BOSS**  
WWW.DUSTBOSS.COM

Call for details on our risk-free trial!

+1 309 693-8600 x181 | 800 707-2204 (U.S.)

**Edge**

30 Farlough Road  
Newmills  
Dungannon  
Tyrone  
BT71 4DT  
Northern Ireland  
Contact: Mr Lee Williamson  
Job Title: Sales Manager  
T: + 44 288 774 0525  
F: + 44 288 774 7244  
E: lee@edgeinnovate.com  
W: www.edgeinnovate.com

**EIFFEL Etablissement  
SOMDEL**

80 bis rue Jean Jaurès  
Quievrechain  
F-59920  
France  
Contact: Mr Gérard Pellet  
Job Title: (see ed notes)  
T: + 33 32 714 1516  
F: + 33 32 714 1515  
E: contact.somdel.eiffel@eiffage.com  
W: www.eiffel.fr  
Specialised in the provision of tailor made lifting and handling equipment. The range of products extends from EOT for steel plants, nuclear power plants and gantry cranes to ship loaders, ship unloaders, stackers and reclaimers, conveying systems and turnkey installations.

**Elecon Engineering Company  
Ltd**

Post Box # 6  
Anand Sojitra Road  
Vallabh Vidyanagar  
Gujarat 388 120  
India  
Contact: Mr B J Babaria

Job Title: Vice President  
T: + 91 2692 237016 / 227131  
F: + 91 2692 236457  
E: bjbabaria@mhe.elecon.com  
W: www.elecon.com  
Elecon since established in 1951, apart from Power Transmission Products, provides engineered solutions, manufactures and supplies Bulk Material Handling Plants and Equipments for the core sector industries which includes power, steel, cement, fertilizer, port mechanisation and open cast mines in India and Abroad.

**Elecon Singapore PTE Ltd.**

10, Anson Road  
#24-03  
International Plaza  
Singapore 079903  
Singapore  
Contact: Mr Keyur Parikh  
Job Title: Director - VP  
T: + 65 6227 8258  
F: + 65 6227 8942  
E: keyur@singapore.elecon.com  
W: www.elecon.com

**Elgin Engineering and  
Construction**

Suite 1800  
222 South Riverside Plaza  
Chicago  
Illinois 60606  
USA  
Contact: Mr Bob Williams  
Job Title: Marketing Director  
T: + 1 312 236 8100 ext: 340  
F: + 1 312 726 2872  
E: soros@elginindustries.com  
W: www.elginindustries.com  
An international consulting engineering firm specialising in conceptual development,

planning, feasibility studies, design engineering, project management, construction supervision, rehabilitation and expansion of port facilities.

**EMS-TECH Inc**

699 Dundas Street West  
Belleville  
Ontario  
K8N 4Z2  
Canada  
Contact: Ms Gail Carl  
Job Title: Executive Assistant,  
Sales & Marketing  
T: + 1 613 966 6611  
F: + 1 613 966 6710  
E: sales@ems-tech.net  
W: www.ems-techinc.com  
A multi-task, multi-discipline company specialising in design and supply of dry bulk material handling equipment, both mobile and stationary; including custom designed conveyors, belt elevators, receiving hoppers, storage/load-out systems, environmental controls, shiploaders, stackers and reclaimers, self-unloading ships.

**EMS-TECH Inc.**

Robijnstraat 92  
Alkmaar  
1812RB  
The Netherlands  
Contact: Mr Luke Huitema  
T: + 31 251 291 340  
F: + 31 251 291 344  
E: europe@ems-tech.net  
W: www.ems-techinc.com  
A Multi-task, multi-discipline company specializing in design and supply of dry bulk material handling equipment, both mobile and stationary; including custom designed conveyors, belt

elevators, receiving hoppers, storage/loadout systems, environmental controls, shiploaders, stackers and reclaimers, self-unloading ships.

**EMTICI Engineering Co Ltd**

68 Sarat Bose Road  
Calcutta  
West Bengal  
700025  
India  
Contact: Mr D Sen  
T: + 91 33 24761861  
F: + 91 33 24761831  
E: dsen@calemtici.elecon.com  
W: www.elecon.com

**Enco Engineering Inc**

4410 13th Street  
Wyandotte  
MI 48192  
USA  
Contact: Ms Bobbi Lang  
T: + 1 734 407 2400 x 202  
F: + 1 734 676 3436  
E: enco@encoeng.com  
W: www.encoeng.com  
Provides a broad spectrum of services ranging from conceptual studies through detailed engineering and supply of shiploaders/unloaders and related bulk materials handling equipment.

**Engicon nv**

Broelstraat 20  
Harelbeke  
B-8530  
Belgium  
Contact: Mr Pieter Van Acker  
Job Title: Sales & Marketing  
Director  
T: + 32 56 73 21 21  
F: + 32 56 73 40 40

E: sales@geldof.be  
W: www.geldof.be  
Offers complete solutions in bulk handling systems. Product range includes silos with extraction systems, discharge hoppers, pressure vessels and storage tanks, conveyor belts, screw conveyors, chain conveyors, bucket elevators.

**Enviro Abrasion Resistant  
Engineers Pvt. Ltd**

"ENVIRO HOUSE", Sector-27  
Plot No. F/12  
Near Sambhaji Chowk  
Pradhikaran  
Pune 411044  
India  
Contact: Mr Milind Dixit  
T: + 91 20 27641757  
F: + 91 20 27650316  
E: info@enviroabrasion.com  
W: www.enviro-abrasion.com

**EQUIPO LLC**

Salahudeen Road  
Dubai  
64624  
UAE  
Contact: Mr Mohamad Yasar  
Aboobakar  
Job Title: Operations & Sales  
Manager  
T: + 971 506 408 626  
F: + 971 426 822 17  
E: yasararafat@gmail.com  
W: www.equipo.ae  
We are one of the suppliers of grabs in PG & Indian Subcontinent. All our grabs are radio remote controlled varying from 5 to 12 cbm. Grabs can be supplied on short term and long term rentals.



**Mining  
& Handling**

# Specialists in Mining & Handling

Turnkey projects for mineral processing and bulk material handling facilities, mainly concentration plants and loading/unloading terminals at ports.

With over 150 years' experience, the company boasts over a hundred references in various different countries in Europe, America, Asia and Africa.





**Eriez Europe**

Bedwas House Industrial Estate  
Bedwas  
Caerphilly  
CF83 8YG  
UK

Contact: Ms Sophie Comelli  
Job Title: Marketing Executive  
T: + 44 29 20 868 501  
F: + 44 29 20 851 314  
E: sophie.comelli@eriezeurope.co.uk  
W: www.eriez.com  
Eriez, a world authority in separation technologies is a one-stop solution thanks to its range of magnetic separators, metal detectors, feeders, wet drums and other processing equipment, particularly suited to the mining, aggregate and coal processing sector.

**ESI Eurosilos BV**

Newtonstraat 26-28  
Purmerend  
1446 VR  
The Netherlands  
Contact: Mr Jaap P J Ruijgrok  
Job Title: Managing Director  
T: + 31 299 630 730  
F: + 31 229 630 737  
E: esi@eurosilos.com  
W: www.eurosilos.com  
Other Equipment: Mammoth silo systems. Active in the field of design construction and/or turnkey delivery of large scale enclosed storage systems for coal, FGD-gypsum, limestone,

minerals, basic chemicals and potato starch. Storage capacity of this flat bottom mammoth silo system (Eurosilos) can range from 1,000 up to 100,000 m<sup>3</sup> per unit

**Euromec Srl**

Via Visano  
78/80 Isorella  
Brescia  
25010  
Italy  
Contact: Mr Ricardo Segala  
Job Title: Sales and Marketing  
T: + 39 030 9958 151  
F: + 39 030 995 2223  
E: sales@euromecsrl.info  
W: www.euromecsrl.info  
EUROMEC, born from the merger of companies Eurohydromec and Isomec, has years of experience in the material handling field and the production of products such as lifting equipment, electrohydraulic and mechanical grabs and buckets.

**Euro-Tranco BV**

Spacelab 47 D  
Amersfoort  
3824MR  
The Netherlands  
Contact: Mr Hans Plekkenpol  
T: + 31 33 4567033  
F: + 31 33 4558149  
E: hans@tramco-europe.com  
W: www.tramcoinc.com  
Manufactures chain, screw and bucket conveyors and 'Aerobelt' air-supported belt conveyor systems.

**F E Schulte Strathaus GmbH & Co KG**

Runtestrasse 42  
Werl  
D-59457  
Germany  
Contact: Mr Andre Hanke  
T: + 49 2922 9775 0  
F: + 49 2922 9775 75  
E: ha@schulte-strathaus.de  
W: www.schulte-strathaus.de  
Accessories for Conveyors: Starclean Conveyor Belt Scrapers, Belt Trackers, Spillex transfer point seals, Frifo impact tables and bars.

**F L Smidth A/S**

Vigerslev Alle 77  
Valby  
DK-2500  
Denmark  
Contact: Mrs Camilla Travis  
T: + 45 3618 1000  
F: + 45 3645 4427  
E: ctr@flsmidth.com  
W: www.flsmidth.com  
FL Smidth offers products and solutions to handle any type of bulk material: lumpy, powdery, sticky, wet or dry. We supply process design and equipment for all materials handling applications for the cement industry, pulp & paper, fertiliser and related industries.

**Fairport Engineering**

Market Place  
Adlington  
Lancashire PR7 2QP  
UK  
Contact: Mrs Linda White  
Job Title: Communications Manager  
T: + 44 1257 484000  
F: + 44 1257 483312  
E: info@fairport.co.uk  
W: www.fairport.co.uk  
FEL is the UK market leader in the successful development and delivery of major projects for the coal, quarrying & aggregate and building and concrete product sectors is a company and is continually enhancing its position within the power, alternative fuels and recycling markets.

**FAM Foerderanlagen Magdeburg**

Sudenburger Wuhne 47  
Magdeburg D-39112  
Germany  
Contact: Mr Ulrich Schneider  
Job Title: Director Sales and Marketing  
T: + 49 391 6380 10 101  
F: + 49 391 6380 10 199  
E: sales@fam.de  
W: www.fam.de  
An independent company (head office in Germany; more than 1000 employees worldwide) whose scope of services includes: consulting, project management, scheduling, monitoring of dates, development, project planning, design, fabrication, construction, commissioning, quality

management and supervision, maintenance, modernization, trainings as well as after-sales-services for turnkey bulk materials handling systems.

**Famak SA**

Machinery and Equipment Company  
Fabryczna Street 5  
Kluczbork  
PL 46-200  
Poland  
Contact: Mr Wojciech Staszak  
Job Title: President and CEO  
T: + 48 77 40 70 100  
F: + 48 77 418 15 45  
E: famak@famak.pl  
W: www.famak.pl  
Over 60 years experience as manufacturers of transport-hoisting equipment. Highly qualified technical engineering staff have interdisciplinary knowledge and experience and design-development base, implementing the highest technical level of offered products. Products designed according to individual needs and installed on-site. Full service after installation.

**Fantuzzi Reggiane S.p.a**

Via Cisa Ligure 51/A  
Lentigione di Brescello (RE)  
42040  
Italy  
Contact: Ms Francesca Alfieri  
T: + 39 0522 680 221  
F: + 39 0522 680 426  
E: falfieri@fantuzzi.com  
W: www.fantuzzi.com



## FELD Maschinen-und Industriebau GmbH

Winkelfeld 3  
Oer-Erkenschwick  
D-45739  
Germany  
Contact: Mr Andre Stueckradt  
T: + 49 2368 98890  
F: + 49 2368 9889 27  
E: Andre.Stueckradt@  
Maschinenbau-Feld.de  
W: www.maschinenbau-feld.de  
High standards, qualified and  
creative employees, the right  
technology to meet customers'  
demands. High-Tech for  
preservation of our resources.

## Fenner Dunlop Conveyor Belt Europe

Marfleet  
Hull  
Yorkshire HU9 5RA  
UK  
Contact: Mr Jim Jones  
T: + 44 1482 785450  
F: + 44 1482 785438  
E: jim.jones@fennerdunlop.com  
W: www.fennerdunlop.com  
Fire-resistant, solid-woven  
conveyor belting, with rubber or  
PVC covers, is manufactured to  
all major national safety  
standards. Supplied to all major  
underground materials handling  
and extraction industries and to  
other coal handling operations  
where safety and economy are  
major criteria.

## Fenner plc

Hesslewood Country Office Park  
Hessle  
East Yorks HU13 0PW  
UK  
Contact: Ms. Michelle Madden  
Job Title: Studio Manager  
T: + 44 1482 626 500 / 523  
F: + 44 1482 626522  
E: eprismuk@fenner.com  
W: www.fennerdunlop.com/

## Fiege Crane Services BV

PO Box 235  
Zaandam 1500 EE  
The Netherlands  
Contact: Mr Mark Schinkel  
T: + 31 75 6810 413  
F: + 31 75 6315 996  
E: h.vantil@fiege.com  
W: www.kenz-fiege.com  
Merger of Kenz offshore cranes  
and Fiege harbour cranes.  
Founded in 1836, Fiege designs  
and manufactures a complete  
range of bulk handling cranes  
including the unique and well  
proven Lemniscate floating grab  
cranes with capacities from 16-50  
tonnes, gantry grab unloaders,  
single- and double boom cranes,  
kangaroo cranes.

## Flexco

2525 Wisconsin Avenue  
Downers Grove  
IL  
60515-4200  
USA  
Contact: Ms Jayne Dore  
Job Title: Sales Manager  
T: + 1 630 971 6476  
F: + 1 630 971 1180  
E: jdore@flexco.com  
W: www.flexco.com  
Manufactures conveyor belt  
fasteners, installation tools and  
conveyor belt accessories. A  
broad line of products is marketed  
through a worldwide network of  
distributors under the brand

names of Alligator, Clipper,  
Flexco, Tatch-A-Cleat, Eliminator  
and Flex-lag.

## Flexco Europe GmbH

Leidringer Strasse 40-42  
Rosenfeld  
D-72348  
Germany  
Contact: Mr Walther Sülzle  
Job Title: Managing Director  
T: + 49 7428 94060  
F: + 49 7428 9406260  
E: europe@flexco.com  
W: www.flexco.com  
Mechanical conveyor belt  
fastening systems and  
accessories; belt cleaning  
systems; ceramic lagging;  
maintenance tools.

## Flexicon Corporation

2400 Emrick Blvd  
Bethlehem  
PA  
18020-8006  
USA  
Contact:  
T: + 1 610 814 2400  
F: + 1 610 814 0600  
E: sales@flexicon.com  
W: http://www.flexicon.co.uk/

## Flexoveyor Conveyor

3795 Paris St., Unit D  
Denver  
Colorado  
80239  
USA  
Contact: Mr Bill Priday  
T: + 1 303 375 0200  
F: + 1 303 373 5149  
E: billpriday@conveyind.com  
W: www.flexoveyor.com

## FLSmidth GmbH

Alfred Leiner Strasse 3  
Lanzendorf  
A-2326  
Austria  
Contact: Ms Susanne Stidl  
T: + 43 2235 4751011  
F: + 43 2235 47568  
E: susanne.stidl@flsmidth.com  
W: www.flsmidth.com

## FLSmidth Minerals Pvt. Ltd

FLSmidth House  
34 Egatoor  
Kelambakkam  
Old Mahabalipuram Road  
Chennai  
Tamil Nadu  
603 103  
India  
Contact: Mr Sivalingam  
Santhakumar  
Job Title: Library  
T: + 91 44 47484795  
F: + 91 44 27470301  
E: indiainfo@flsmidth.com  
W: www.flsmidth.com

## FLSmidth Spokane, Inc.



605 E Holland Ave  
Suite 300  
Spokane  
WA  
99218  
USA  
Contact: Mr Dennis Medina  
Job Title: Sales and Marketing  
Manager  
T: + 1 509 467 0770  
F: + 1 509 466 0212  
E: Dennis.medina@flsmidth.com  
W: www.flsmidth.com

FLSmidth has developed a  
worldwide reputation for supplying  
innovative, fully-mobile material  
handling equipment solutions  
including mobile conveyors,  
stackers, loaders and unloaders,  
stockyard systems, and crushing  
and sizing equipment.

## FLSmidth Wadgassen GmbH



Karl-Koch-Strasse 1  
Wadgassen  
Saarland  
66787  
Germany  
Contact: Mr Matthias Schmidt  
Job Title: Sales Director  
T: + 49 6834 470 0  
F: + 49 6834 470 339  
E: wadgassen@flsmidth.com  
W: www.flsmidth.com  
Other equipment: KOCH Pipe  
Conveyor, Drag Chain Conveyor,  
Pneumatic Ship Unloader .  
Custom-made systems; solutions  
jointly developed with clients.  
Certified to ISO 9001. Work  
includes mines, beneficiation,  
ports, power plants, cement  
plants and industrial facilities.

## Frigate Technologies Private Limited

Gr. Floor, No. 9,  
Block 5, Eros Garden  
Charmwood Village  
Surajkund Road  
Faridabad  
Haryana  
121 001  
India  
Contact: Mr Ajay Hooda  
Job Title: Marketing Director  
T: + 91 129 4116470  
F: + 91 11 66173981  
E: office@frigate.in

## Gama Endustri Tesisleri Imalat Ve Montaj AS

Narcissus Street No: 9, 06 520  
Söğütözü  
Ankara  
06540  
Turkey  
Contact: Mr Mehmet Artun  
Job Title: General Manager  
T: + 90 312 248 42 00  
F: + 90 312 4094360  
E: industry@gama.com.tr  
W: www.gama.com.tr  
Other Equipment: Apron feeders,  
Air slides, Scrapers. One of  
Turkey's most prestigious leading  
contracting companies, with  
experience in constructing  
industrial and power plants, dams,  
pipelines, infrastructures and  
similar. Established in 1959, with  
clients worldwide, has completed  
more than 200 significant sized  
projects internationally.

## Gambarotta Gschwendt

Viale Verona 200  
Trento  
38123  
Italy  
Contact: Mr Luca Mastrorocco &  
Christian Jezek  
Job Title: Sales Managers  
T: + 39 0461 920403  
F: + 39 0461 933391  
E: gambarotta@gambarotta.it  
W: www.gambarotta.it  
Manufactures bucket elevators,  
pan conveyors, drag chain  
conveyors, extractors and

feeders, palletised product  
loaders, gate valves, cell feeders,  
flap valves and screw conveyors  
used in petrochemical, cement,  
coal, waste to energy plants and  
for power generation, steel and  
heavy industry applications.

## Ganz Danubius Trading Co Ltd

PO Box 1138  
Budapest  
H1325  
Hungary  
Contact: Mr Karol Bayus  
Job Title: Director  
T: + 36 1 350 5570  
F: + 36 1 329 8041  
E: gdtco@hu.inter.net  
W: www.ganztrading.hu  
Suppliers of mechanical  
shiploaders and unloaders, level  
luffing harbour grab cranes,  
floating grab cranes and other  
bulk handling equipment.

## Garwood Consulting Ltd

Garwood Lodge  
Wentworth  
Ely  
Cambridgeshire  
CB6 3QG  
UK  
Contact: Mr Barry Woodbine  
T: + 44 780 102 4583  
F: + 44 1353 777315  
E: barry@garwoodconsulting.com  
Advice and consultancy on the  
design and implementation of fuel  
intake and storage systems in  
cement, power or CHP plant  
including the use of alternative  
fuels and Biomass plus Ship  
Loading and Discharge systems  
at Port and Terminal.

## General Kinematics Corp.

5050 Rickert Rd.  
Crystal Lake  
IL 60014  
USA  
Contact: Mr Thomas Musschoot  
T: + 1 815 455 3222  
F: + 1 815 455 2285  
E: tmusschoot@  
generalkinematics.com  
W: www.generalkinematics.com  
General Kinematics specializes in  
vibrating and rotary equipment  
and solutions for bulk processing  
of material in the foundry,  
recycling, scrap, mining, minerals,  
food, chemical, and wood  
industries. Each piece of GK  
equipment is custom engineered  
to your specifications to meet  
your process objectives.

## Geométrica de México, S.A. de C.V.

Puerto Vallarta # 801  
Colonia La Fé  
San Nicolás de los Garza  
N.L., 66477  
Mexico  
Contact: Mr Cecilio Zalba  
Job Title: Sales Manager  
T: + 52 81 8882 8300  
F: + 52 81 8882 8301  
E: sales.mexico@geometrica.com  
W: www.geometrica.com/bulk-  
storage  
Specialists in the design,  
fabrication and installation of bulk  
storage domed structures  
requiring large, column-free  
interiors, utilizing low  
maintenance galvanized steel or  
aluminum. Structures can cover  
any shaped area, can span over  
300m, and can be erected even  
over operating stockpiles.

## Geometrica Inc



12300 Dundee Court  
Suite 200  
Cypress  
Texas  
77429  
USA  
Contact: Mr Francisco Castaño  
Job Title: President  
T: + 1 832 220 1200  
F: + 1 832 482 0879  
E: sales@geometrica.com  
W: www.geometrica.com  
Specialists in the design,  
fabrication and installation of bulk  
storage domed structures  
requiring large, column-free  
interiors, utilizing low  
maintenance galvanized steel or  
aluminum. Structures can cover  
any shaped area, can span over  
300m, and can be erected even  
over operating stockpiles.

## Gertech Handling Systems cc

PO Box 4014  
Durbanville  
Cape Town  
Western Cape  
7551  
South Africa  
Contact: Mr Gerrit De Hoog  
T: + 27 21 914 5333  
F: + 27 21 914 5666  
E: gdh@gertech.co.za  
W: www.gertech.co.za

## GF Material Handling System Srl

Via Guido Rossa, 11  
Paderno Dugnano (MI)  
Milan  
20037  
Italy  
Contact: Mr Francesco Tummillo  
Job Title: Managing Director  
T: + 39 0 2 91 08 20 02  
F: + 39 0 2 91 84 31 47  
E: info@gfmhs.it  
W: www.gfmhs.it  
Other Equipment: Pipe  
Conveyors. Please contact us  
with any Handling System  
problems, such as lay-out or  
pollution of your handled product.

## GGT Goldengrain Trading SA

Via Capelli 28  
Lugano  
6900  
Switzerland  
Contact: Ms Cornelia Riep  
Job Title: Manager  
T: + 41 91 971 40 20  
F: + 41 91 971 40 21  
E: criegp@ggt.ch

## Golden West Industries

332 West Railroad Ave  
Price  
UT  
84501  
USA  
Contact: Mr Ellis Pierce  
Job Title: Advertising  
T: + 1 435 637 3211  
F: + 1 435 637 6628  
E: pwnny@gbis.com  
W: www.goldenwest-industries.com  
17 years experience providing  
dust control and anti-freeze  
solutions to the mining and  
material handling industries.

## Goodman Conveyor Company

U.S. Route 178 South  
PO Box 866  
Belton  
South Carolina



# 4<sup>th</sup> Coaltrans Mozambique Networking Forum

26 - 27 November 2013 | Polana Hotel, Maputo, Mozambique



**Coaltrans**  
Conferences

## Hear from

**The Honourable  
Dr. Esperança Bias**  
Minister of Mineral Resources,  
Mozambique

**Eduardo  
Alexandre**  
National Director of Mines,  
**Ministry of Mineral  
Resources**

**I A Khan**  
Adviser,  
**Energy, Planning  
Commission,  
Government of India**

**Dr. Mukhisa Kituyi**  
Secretary General,  
**UNCTAD**

**Sindiso Ngwenya**  
Secretary General,  
**COMESA  
Secretariat**



## Charting new ways forward for Mozambican coal

### Join us in Maputo to:

- Participate in a series of **interactive roundtables** offering **topical discussions** and the chance to share your knowledge and experience
- Assess the way forward for Mozambique's **crucial port and rail developments**
- Take part in an **exclusive roundtable discussion** with **key government figures**, in a rare opportunity to debate key issues with the policy-makers themselves
- Debate how changing in **global buying and pricing dynamics** are shaping prospects for Mozambican coal in the export market
- Participate in a pre-conference **field trip** to see developments at the **Matola Coal Terminal**

*Register by  
11 October  
2013 and  
save €150*

*Simultaneous  
translation will  
be provided*

Gold Sponsor



**COECLERICI**

Bronze Sponsors



**PARTNER  
WITH US**



coaltrans@euromoneyplc.com



+44 20 7779 7222



www.coaltrans.com/mozambique

29627  
USA  
Contact: Mr Carter Matthews  
Job Title: VP Sales & Marketing  
T: + 1 864 338 7793 x 102  
F: + 1 864 338 8732  
E: info@goodmanconveyor.com  
W: www.goodmanconveyor.com  
Provides a wide selection of belt conveyor idlers and components, together with a comprehensive selection of bulk conveyor equipment and components. Belt conveyors available in belt widths 14"-96"; screw conveyors available in diameters 4"-60". Centrifugal and continuous discharge bucket elevators also available.

### Gordinne & Co NV/SA

Belgian Ports Operation  
Leegstraat 1  
Zelzate  
B-9060  
Belgium  
Contact: Mr Patrick Bosschaert  
Job Title: Operation Manager  
T: + 32 9 342 3333  
F: + 32 9 342 3331  
E: patrick.bosschaert@stewartgroupglobal.com  
W: www.gordinne.be

### Guttridge Ltd

Wardentree Park  
Pinchbeck  
Spalding  
Lincolnshire  
PE11 3UU  
UK  
Contact: Mr Peter Lambert  
Job Title: Sales Manager  
T: + 44 1775 765300  
F: + 44 1775 765304  
E: sales@guttridge.co.uk  
W: www.guttridge.co.uk  
Guttridge offer a wide range of bulk handling machinery, ideal for moving ores, granules, powders, sand, cement, salt and fertilizers around process plants. All our machines are manufactured to suit customers' individual requirements.

### Guven Grab and Machine Ltd. Co



Nazim Hikmet Cad 536. sk. No: 9  
Aske Köyü  
Cayirova  
Kocaeli  
41420  
Turkey  
Contact: Mr Engin Demir  
Job Title: Sales & Export Manager  
T: + 90 262 743 8858  
F: + 90 262 743 1141  
E: info@guvengrab.com  
W: www.guvengrab.com  
Established in 1984, with its own manufacturing facilities, Guven Grab and Machine supplies its range of grabs all over the world. These include radio remote control grabs, electro hydraulic clamshell/orange peel grabs, mechanical double wired grabs and mechanical clamshell/orange peel touch down grabs.

### Hans Turck GmbH & Co. KG

Witzlebenstraße 7  
Mülheim an der Ruhr  
D-45472  
Germany  
Contact: Mr Klaus Albers

Job Title: PR Manager  
T: + 49 208 495249  
F: + 49 160 93950359  
E: klaus.albers@turck.com  
W: www.turck.com

### Hansen Industrial Transmissions NV

Leonardo da Vincilaan 1-3  
Edegem  
Antwerpen  
B-2650  
Belgium  
Contact: Ms Lena De Wachter  
Job Title: Marketing Communications Manager  
T: + 32 345 01200  
F: + 32 345 01220  
E: info@hansenindustrialgearboxes.com  
W: www.hansenindustrialgearboxes.com  
Hansen Industrial Transmissions is at the pinnacle in innovation and durable drives for a wide range of industrial applications throughout the world, especially in sectors where low noise levels, minimum weight and high reliability are essential (including cooling towers, material handling, water treatment, etc.)

### Hansen Transmissions Ltd

Nile Street  
Huddersfield  
West Yorkshire  
HD1 3LW  
UK  
Contact: Mr Terry Drayton  
T: + 44 1484 431414  
F: + 44 1484 431426  
E: info.uk@hansentransmissions.com  
W: www.hansentransmissions.net  
Hansen Transmissions design, manufacture, install and service industrial gearing. Our range spans from 80 Nm to 800 KNm (0.12 KW to 12MW) and is available in many configurations and drive packages.

### Hasel Machinery Inc

Cumhuriyet Mh. Nr 15 E5  
Karayolu Uzeri  
Yakacik Kartal  
Istanbul  
81100  
Turkey  
Contact: Mr Osman Nuri Mete  
Job Title: Manager  
T: + 90 216 452 9787  
F: + 90 216 452 9790  
E: osman.mete@hasel.com  
W: www.hasel.com

### Haskoning India Pvt Ltd

13th Floor, Maithili's Signet  
Plot - 39/4, Sector 30A  
Vashi  
Navi Mumbai  
400 705  
India  
Contact: Mr Hareld van den Brink  
Job Title: Director of Business - India  
T: + 91 22 4161 5004  
E: hareld.van.den.brink@rdvhv.com  
W: www.royalhaskoningdhv.com

### Hasler International SA

Z.I. De l'Abbaye  
Pont-Evêque  
38780  
France  
Contact: Mr Michel Jamey  
Job Title: President and Sales Director  
T: + 33 474 161151

F: + 33 474 161155  
E: sales.fr@hasler-int.com  
W: www.hasler-int.com

### HAUGEN System AB

Fersens väg 12  
Malmö  
211 42  
Sweden  
Contact: Mr Karl T. Haugen  
Job Title: Managing Director  
T: + 46 40 30 64 00  
F: + 46 40 30 63 30  
E: karl.haugen@haugensystem.com  
W: www.haugensystem.com

### Heyl & Patterson Inc

PO Box 36  
Pittsburgh  
PA  
15230  
USA  
Contact: Mr Harry Edelman  
Job Title: Executive Vice President  
T: + 1 412 788 9810  
F: + 1 412 788 9822  
E: info@heylandpatterson.com  
W: www.heylandpatterson.com  
Design and manufactures bulk material handling equipment. A complete line of railcar unloading and moving equipment is offered. Additionally offered: barge unloaders, both the grab type and CBU continuous bucket unloader.

### Hitachi Construction Machinery (Europe) NV

Siciliëweg 5  
Amsterdam  
1045 AT  
The Netherlands  
Contact: Ms Ghislaine Jonker  
Job Title: Assistant Manager, Corporate Communication  
T: + 31 20 44 76 711  
F: + 31 20 33 44 045  
E: marketing@hcme.com  
W: www.hcme.com  
Hitachi Construction Machinery (Europe) NV's (HCME) main products are hydraulic crawler and wheeled excavators, crawler cranes, wheel loaders and rigid dump trucks. HCME provides a broad product line-up that has earned an excellent reputation for performance, reliability and safety.

### Horizon Conveyor Equipment

Unit 1, Hayseach Road  
Halesowen  
West Midlands  
B63 3PD  
UK  
Contact: Mr Alan Bowler  
Job Title: Managing Director  
T: + 44 121 550 2218  
F: + 44 121 550 2243  
E: info@horizonconveyors.co.uk  
W: www.horizonconveyors.co.uk  
Manufacturers of Steel, Plastic & Aluminium Idler rollers, Conveyor Belt Scrapers and Conveyor Components & Equipment.

### HOSCH-Fördertechnik Recklinghausen GmbH

Am Stadion 36  
Recklinghausen  
D-45659  
Germany  
Contact: Mr Giancarlo Leombruno  
Job Title: Export Manager  
T: + 49 2361 5898 0  
F: + 49 2361 5898 40  
E: sales@hosch.de  
W: www.hosch.de  
HOSCH has been manufacturing and distributing Sprung Blade

Scrapers and accessories for high precision belt cleaning for more than 30 years. The innovative design principle of its C-series, which is patented world-wide, utilises modular components and guarantees total belt cleaning efficiency for all types of installations.

### Hycontrol Limited

Larchwood House  
Orchard Street  
Redditch  
B98 7DP  
UK  
Contact: Mr Nigel Allen  
Job Title: Marketing  
T: + 44 1527 406800  
F: + 44 1527 406810  
E: nallen@hycontrol.com  
W: www.hycontrol.com

### Hyundai Heavy Industries Co

1000 Bangeojinsunhwan-doro  
Dong-Gu  
Ulsan  
682-792  
South Korea  
Contact: Mr K H Lee  
Job Title: Public Relations Manager  
T: + 82 52 202 2114  
F: + 82 52 202 3470  
E: sbeurope@hhi.co.kr  
W: www.hhi.co.kr

### IBAU HAMBURG

Roedingsmarkt 35  
Hamburg  
20459  
Germany  
Contact: Mr Mario Raemmele  
Job Title: Sales Director  
T: + 49 40 361 309 24  
F: + 49 40 369 019 62  
E: mraemmele@ibauhamburg.de  
W: www.ibauhamburg.de  
IBAU HAMBURG supplies installations and components for the transfer, storage and conveying of dry products, including among others fly ash and coal. Our scope includes the engineering and supply of plant components such as ship loaders and unloaders, as well as storage silos.

### Igus GmbH

Spicher Str. 1a  
Köln  
D-51147  
Germany  
Contact: Mr Theo Diehl  
Job Title: Head of Intl. Cranes & Materialhandling  
T: + 49 2203 9649 0  
F: + 49 2203 9649 222  
E: cranes@igus.de  
W: www.igus-cranes.com  
Products include E-ChainSystems - in operation on Ship to Shore Cranes, RTGs, RMGs, Goliath Cranes, Spreaders, Reach Stacker etc. More than 3.000 port equipment applications are running world-wide with igus® E-ChainSystems.

### IHI Transport Machinery Co., Ltd. (IUK)



8-1 Seiroka Tower  
Akashi Cho  
Chuo-Ku  
Tokyo  
104-0044 MZ  
Japan  
Contact: Mr Shigeyuki Kawashima  
Job Title: Deputy General Manager, Overseas Sales Dept  
T: + 81 3 5550 5375  
F: + 81 3 5550 5366  
E: shigeyuki.kawashima@iuk.co.jp  
W: www.iuk.co.jp  
In addition: Multi-purpose gantry cranes IUK has supplied a lot of coal handling equipment and systems with cutting edge technology for world-wide customers and has had a world leading delivery record of the continuous ship unloaders.

### IMASA

Palacio Valdes 1  
Oviedo (Asturias)  
33002  
Spain  
Contact: Mr Amancio Garcia  
T: + 34 985 22 71 78  
F: + 34 985 22 25 98  
E: amancio.garcia@imasa.com  
W: www.imasa.com

### Imperial Technologies, Inc.

4155 Martindale Rd., NE  
Canton  
OH 44705  
USA  
Contact: Mr Ron Tschantz  
Job Title: VP Gen Sales & Marketing  
T: + 1 330 491 3200  
F: + 1 330 491 3204  
E: rontschantz@imperial-technologies.com  
W: www.imperial-technologies.com  
Imperial Technologies designs and supplies bulk material equipment including our enclosed "environmentally friendly" conveyors under Multi-Fold and Flexi-Cleat belt designs. We also provide conventional trough conveyors, fixed and radial stackers, sidewall conveyors, tripper conveyors, reversing shuttle conveyors, drag conveyors, related bulk materials handling equipment and our coal "variable speed vertical impact breaker" for dry coal processing called the Accelerator to improve raw coal from the mine.

### Incolab Services BV

PO Box 1561  
Oud-Beijerland  
BB  
3260  
The Netherlands  
Contact: Mr Leo Van Tour  
Job Title: Managing Director  
T: + 31 1866 10355  
F: + 31 1866 10552  
E: leo@incolab.com  
W: www.incolab.com  
Incolab Services main target is to serve the solid fuel industry with own office and laboratories. Most of our laboratories are 17025 accredited. Present in Europe, former USSR, North and South America and North and South Africa.



### Inspectorate America Corporation

12000 Aerospace Avenue  
Suite 200  
Houston  
Texas  
77034  
USA  
Contact: Mr Patrick Le Mare  
Job Title: Metals & Minerals Trade Manager  
T: +1 713 944 2000 Ext: 5219  
M: +1 832 833 5252  
F: +1 504 393 5248  
E: client.services@inspectorate.com  
W: www.inspectorate.com

### Inspectorate International Ltd

2 Perry Road  
Witham  
Essex  
CM8 3TU  
UK  
Contact: Mr Julian Sowry  
Job Title: Sales & Mktg Mgr,  
Steel & Energy Products  
T: +44 1376 536849  
F: +44 1376 520819  
E: client.services@inspectorate.com  
W: www.inspectorate.com  
Inspectorate, part of the Bureau  
Veritas Commodity Division, is  
one of the world's leading  
independent inspection  
companies. We provide services  
for a full range of metals &  
minerals commodities including  
draft surveys, weighing and  
sampling. Analysis & testing is  
undertaken through our network  
of key and specialist laboratory  
facilities, accredited to ISO 17025.

### International Bulk Handling Technology BV

PO Box 47  
Mierlo  
5730 AA  
The Netherlands  
Contact: Mr Johan M.A.M. Brands  
Job Title: Technical Manager  
T: +31 492 664 885  
F: +31 492 664 695  
E: info@ibtbulk.nl  
W: www.ibtbulk.nl  
IBT offers over 40 years of  
expertise in the field of complex  
bulk handling systems. Capacity  
up to 6,000tph. Systems include  
high capacity steep incline  
conveyors, pipe conveyors, semi  
mobile large overland conveyors  
etc.

### Intersystems

9575 N 109th Ave  
Omaha  
NE  
68142  
USA  
Contact: Mr Hugo Wenshau  
Job Title: VP Sales, Industrial  
Sampling  
T: +1 214 495 9713  
F: +1 214 495 9741  
E: sampling@intersystems.net  
W: www.intersystems.net  
Intersystems reaches a worldwide  
market and numerous industries  
with expertise in the engineer and  
manufacture of bulk material  
handling and industrial sampling  
systems.

### iSAM AG Gesellschaft fuer angewandte Kybernetik



Alexanderstrasse 46  
Mülheim an der Ruhr  
45472  
Germany  
Contact: Dr Juergen Hellmich  
Job Title: Chief Executive Officer  
T: +49 208 49 585 61  
F: +49 208 49 585 62  
E: info@isam-ag.de  
W: www.isam-ag.de  
iSAM delivers the full range of  
products and services for  
advanced automation of bulk  
material handling and port  
operations. We handle turn-key  
solutions for new automation  
projects as well as the upgrading  
of existing equipment including  
project management, electrical  
engineering and commissioning.

### Isomonte SA

Rua Cristiano Franca Teixeira  
Guimaraes  
265 Bairro  
Cinco  
Contagem MG  
Minas Gerais  
CEP 32010-130  
Brazil  
Contact: Mr Jose Rubem Almeida  
T: +55 31 2128 2600 / 2641  
F: +55 31 3351 4093  
E: jrubem@isomonte.com.br  
W: www.isomonte.com

Specialises in the design and  
construction of turnkey systems  
for materials handling, including  
shiploaders/unloaders, grabs,  
stacker/reclaimers and conveyor  
systems.

### Italgru S.r.l.

Statale Briantea, 4  
Ambivere (BG)  
24030  
Italy  
Contact: Mr Fabrizio Bonfanti  
T: +39 0 35 49 32 411  
F: +39 35 49 32 409  
E: fabrizio.bonfanti@italgru.it  
W: www.italgru.com

### J & B Grabs b.v.

PO Box 176  
De Meern  
Utrecht  
3454 ZK  
The Netherlands  
Contact: Mr Edgar Joustra  
Job Title: Director  
T: +31 3066 21616  
F: +31 3066 63765  
E: info@jb-grijpers.nl  
W: www.jb-grabs.com  
Designs, engineers and  
manufactures mechanical and  
hydraulic grabs for all kinds of  
bulk material.

### Jansen & Heuning

Bulk Handling Systems  
Duinkerkenstraat 11  
Groningen  
9723 BN  
The Netherlands  
Contact:  
T: +31 50 312 64 48

F: +31 50 313 80 18  
E: sales@jh.nl  
W: www.jh.nl

### Jenike & Johanson Inc.

400 Business Park Drive  
Tyngsboro  
MA  
01879  
USA  
Contact: Mr Brian Pittenger  
Job Title: Director Business  
Development  
T: +1 978 649 3300  
F: +1 978 649 3399  
E: mail13@jenike.com  
W: www.jenike.com  
Jenike & Johanson is the world's  
leading company in powder and  
bulk solids handling, processing,  
and storage technology. Over the  
past 55 years, we've tested over  
10,000 unique powders and bulk  
solids and worked on more than  
7,500 projects, giving our team  
the broadest real-world and in-  
depth experience in the industry  
to address a wide variety of bulk  
material handling and engineering  
needs.

### Joy Mining Machinery

West Quay Road  
Sunderland Enterprise Park East  
Sunderland  
Tyne & Wear  
SR5 2TD  
UK  
Contact: Mr Paul Bancroft  
Job Title: Sales & Marketing  
Director  
T: +44 191 516 5353  
F: +44 191 516 5399



E: sales@continental-conveyor.co.uk  
W: www.continental-conveyor.co.uk  
One of Europe's most experienced companies in designing and supplying conveyor systems and components. Part of Joy Mining Machinery Group.

#### JSC Tehnoros

Gzhatskaya st, 21, liter A  
Saint-Petersburg  
195220  
Russia  
Contact: Mr Maxim Akhmetov  
Job Title: Marketing  
T: + 7 812 718 82 28 (429)  
F: + 7 812 718 82 28  
E: akhmetov@tehnoros.ru  
W: www.tehnoros.ru

#### KABELSCHLEPP GmbH

Daimlerstr. 2  
Wenden-Gerlingen  
D-57482  
Germany  
Contact: Mr Frank Springer  
T: + 49 2762 4003 0  
F: + 49 2762 4003 220  
E: info@kabelschlepp.de  
W: www.kabelschlepp.de  
Founded in 1954, KABELSCHLEPP is known today as one of the world leaders where cable carriers, guideway protection and conveyor systems are concerned. Products are today being used by numerous well-known machine builders in Germany and abroad.

#### Kalenborn Kalprotect GmbH & Co. KG

Asbacher Str 50  
Vettelschoss  
D-53560  
Germany  
Contact: Mr Ingo Kipnik  
Job Title: Sales Manager  
T: + 49 26 45 18 121  
F: + 49 26 45 18 212  
E: ingo.kipnik@kalenborn.de  
W: www.kalenborn.de  
Other: Wear-protection solutions. Planning, production, working and worldwide installation of highly wear-resistant linings made of ceramic, metallic and plastic materials for protecting pneumatic and hydraulic pipe systems as well as plant components.

#### Kardesler Grab & Machine

Sultan Orhan Mah  
Hasköy Sanayi Sitesi 11/B Blok  
No:24  
Gebze  
KOCAELI  
41400  
Turkey  
Contact: Mr Huseyin Isikoglu  
Job Title: Export Manager  
T: + 90 262 6445018  
F: + 90 262 6445017  
E: kardesler@kardeslerkepce.com  
W: www.kardeslerkepce.com and www.kardeslergrab.com  
Established in 1985 in Istanbul/Maltepe to produce grabs for sand. Now Kardesler Grab & Machine offers a wide variety of grabs, hoppers and other equipment for a variety of dry

cargoes. Top quality manufacturing at factory based in Kocaeli/Gebze Hasköy Industrial Site for sales and service worldwide.

#### KCT Grab Industry

Agva cad. yeni sanayi sitesi  
No:3-5  
Sile  
Istanbul  
34980  
Turkey  
Contact: Eng Gozde Kocatas  
Job Title: Sales  
T: + 90 216 739 59 68  
F: + 90 216 449 90 12  
E: sales@kctgrab.com  
W: www.kctgrab.com

#### Kinergy Corporation

7310 Grade Lane  
Louisville  
Kentucky  
40219  
USA  
Contact: Mr Bill Ware  
Job Title: Project Manager  
T: + 1 502 366 5685  
F: + 1 502 366 3701  
E: bware@kinergy.com  
W: www.kinergy.com  
Other equipment: Vibrating Feeders and Conveyors; Bin Activators, Storage Pile Dischargers, Rail Car Dischargers and Densifiers, Fluid Bed Dryers and Coolers, Vibrating Spiral Elevators. Kinergy Corporation is a vibratory machine manufacturer designing, engineering and fabricating machines for capacities ranging from pounds

per hour to several thousand tons per hour. Manufacturers of 'Induced Vertical Flow' and 'Induced Conveying' units using vibration.

#### Kingfisher Industrial Ltd

Cradley Business Park  
Overend Road  
Cradley Heath  
West Midlands  
B64 7DW  
UK  
Contact: Ms Anita Chumber  
Job Title: Sales & Marketing Executive  
T: + 44 1384 410777  
F: + 44 1384 410877  
E: achumber@kingfisher-industrial.co.uk  
W: www.kingfisher-industrial.co.uk  
Kingfisher specialise in the protection of process plant and equipment. Offering a complete range of systems to cater for the harshest of operational environments, priding ourselves on offering industry an unbiased solution to the problems encountered when handling or processing bulk solid materials.

#### KIROW ARDELT GmbH

Heegermühler Straße 64  
Eberswalde  
Brandenburg  
16225  
Germany  
Contact: Dr Wolfgang Melzer  
Job Title: Managing Director  
T: + 49 3334 62 2275  
F: + 49 3334 62 2121  
E: Wolfgang.melzer@ardelt.de

W: www.ardelt.de  
Crane manufacturer (designing, fabrication, assembling, commissioning, training and after sales service in one hand for harbour cranes, shipyard cranes, balancer cranes - refurbishment, inspection, repair services for own and third party cranes). Former member of TAKRAF group, now member of KLANUNION (together with KOCKS Crane International and KIROW Leipzig).

#### Kleemann GmbH

Hildenbrandstr.18  
Göppingen-Faurnau  
D-73035  
Germany  
Contact: Mr Mark Hezinger  
Job Title: Marketing  
T: + 49 7161 206 0  
F: + 49 7161 206 100  
E: info@kleemann.info  
W: www.kleemann.info

#### Knight Energy Services Limited

Eccleston Grange  
Prescot Road  
St Helens  
Merseyside  
WA10 3BQ  
UK  
Contact: Ms Vallery Head  
Job Title: Marketing  
T: + 44 1744 733757  
F: + 44 1744 27062  
E: val.head@ahkgroup.com  
W: www.ahkgroup.com

## iSAM AG – integrated automation for bulk material handling



**iSAM AG**  
Gesellschaft  
für angewandte  
Kybernetik



- driverless ship unloaders
- driverless ship loaders
- fully automatic train unloading stations
- 3D laser based ship models
- material transport and flow control systems
- SCADA systems for central control rooms
- storage management and logistic systems

we deliver solutions ...





## Kocks Krane International GmbH

Weserstrasse 64  
Bremen  
D-28757  
Germany  
Contact: Mr Johannes Mosch  
T: + 49 421 6601 311  
F: + 49 421 6601 367  
E: johannes.mosch@kockskrane.de  
W: www.kockskrane.de  
Development, engineering and supply including erection and commissioning of handling equipment as well as related consulting and other services.

## Konecranes (France)

47 bis Boulevard de Gravelle  
B.P. 727  
Le Havre  
Cedex  
76060  
France  
Contact: Mr Gerard Lesueur  
T: + 33 2 35 25 95 14  
F: + 33 2 35 25 95 82  
E: gerard.lesueur@konecranes.com  
W: www.konecranes.com  
Provides complete crane service worldwide for all types and makes of harbour and shipyard cranes. These services include: inspections, maintenance, spare parts, engineered parts, repairs, modernisation/refurbishment, moves/relocations and second hand cranes.

## Konecranes Finland Corporation

**KONECRANES**  
PO Box 662  
(Konekatu 8)  
Hyvinkää  
FIN-05801  
Finland  
Contact: Mr Harri Romppanen  
Job Title: General Manager, Bulk Handling Cranes  
T: + 358 40643 3344  
F: + 358 20 427 2599  
E: harri.romppanen@konecranes.com  
W: www.konecranes.com  
Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals. Regardless of your lifting needs, Konecranes is committed to providing you with lifting equipment and services that increase the value and effectiveness of your business. See more information on www.konecranes.com

## Konecranes Hafentechnik GmbH

Mühlenfeld 20  
Langenhagen  
D-30853  
Germany  
Contact: Mr Dirk Groth  
Job Title: Manager Marketing & Sales Support  
T: + 49 511 7704 418  
F: + 49 511 7704 477  
E: info-hafentechnik@konecranes.com  
W: www.konecranes.de  
Provides a complete crane service worldwide for all types and makes of harbour and shipyard cranes. These services include inspections, maintenance,

spare parts, engineered parts, repairs, modernisation/refurbishment, moves/relocations and second hand cranes.

## KPI-JCI

700 West 21st Street  
Yankton  
South Dakota  
57078  
USA  
Contact: Ms Melinda Schweitzer  
Job Title: Marketing Manager  
T: + 1 605 668 2524  
E: melindaschweitzer@kpjci.com  
W: www.kpjci.com  
KPI-JCI and Astec Mobile Screens, Astec companies (NASDAQ: ASTE), is a worldwide leader in manufacturing equipment for the aggregate, construction, paving and recycling industries. KPI-JCI and Astec Mobile Screens proudly manufacture its products in Yankton, South Dakota, Eugene, Oregon and Sterling, Illinois.

## Kranunion

Spinnereistraße 13  
Leipzig  
04179  
Germany  
Contact: Ms Gabriela Schilk  
T: + 49 3 41 49 53 212  
F: + 49 3 41 49 53 125  
E: juergen.kuehn@kirow.de  
W: www.kranunion.de

## Kröger Greifertechnik GmbH & Co. KG

Steinheide 1-9  
Sonsbeck  
D-47665  
Germany  
Contact: Dr Philipp Diekmann  
Job Title: Managing Director  
T: + 49 2838 3750  
F: + 49 2838 3729  
E: info@kroeger-greifertechnik.de  
W: www.kroeger-greifertechnik.de  
Manufacturer of grabs of all types since the year 1962. Main products - two and four rope grabs, hydraulic grabs, electro hydraulic grabs from 0.5-25m3.

## Laing O'Rourke

973 Fairfield Road  
Private Bag 3  
Moorooka  
Qld  
4105  
Australia  
Contact: Mr Josh Murray  
T: + 61 7 3308 7619  
F: + 61 7 3892 4371  
E: rayton@laingorourke.com.au  
W: www.laingorourke.com.au  
One of the world's most dynamic and innovative privately owned development, construction and specialist companies. Acquired Barclay Mowlem in 2006, thereby providing additional scale, resources and capability. Offers a Total Solution Partner - bringing finance, development, design, construction and maintenance solutions to clients throughout Australia and the Asia Pacific region.

## Larox Flowsys Oy

Marssitie 1  
PO Box 338  
Lappeenranta  
FIN-53101  
Finland  
Contact: Ms Marjatta Kupias

Job Title: VP, Marketing  
T: + 358 201 113 323  
F: + 358 201 113 300  
E: marjatta.kupias@larox.fi  
W: www.larox.fi  
Larox Flowsys is the preferred supplier of flow control solutions including pinch and knife gate valves and peristaltic and PC-pumps. We focus on abrasive, corrosive and other demanding shut-off, control and pumping applications serving different process industries worldwide.

## Larsen & Toubro Limited

Monunt Poonamallee Road  
Manapakkam  
PB No.979  
Chennai  
600089  
India  
Contact: Mr Kumar Vikram  
Job Title: ECC Division  
T: + 91 44 2252 6250  
F: + 91 44 22526993  
E: kvikram@intec.com

## Lassing Dibben Consulting Engineers Ltd

PO Box 472  
149 North Murray Street  
Trenton  
Ontario  
K8V 5R6  
Canada  
Contact: Mr Harold Dibben  
Job Title: Engineering Manager  
T: + 1 613 392 9287  
F: + 1 613 394 4173  
E: info@lassingdibben.com  
W: www.lassingdibben.com  
Award winning consulting engineers, specialising in bulk material handling. Extensive experience around the world means the company can handle all aspects of system design. Projects include shiploading and unloading equipment for coal and coke, stackers, conveyor systems and storage facilities.

## Lawrence Industries, Inc.

10403 Arbor Trail  
Fort Wayne  
Indiana  
46804  
USA  
Contact: Mr Kerry McAtee  
Job Title: Sales Engineer  
T: + 1 260 432 9693  
F: + 1 260 432 6302  
E: kmatee@lawrenceindustriesnow.com  
W: www.lawrenceindustriesnow.com  
Lawrence Industries, Inc. is a fabricator and distributor of TIVAR 88 polymer liners. TIVAR 88 is a low coefficient of friction liner that is used to eliminate sticking, pluggage, ratholing material build-up. TIVAR 88 has excellent wear properties.

## Libran Engineering and Services

C-33, First Floor  
Malviya Nagar  
New Delhi  
110 017  
India  
Contact: Mr Anil Seth  
Job Title: Director  
T: + 91 11 266 71658  
E: libranengineering@gmail.com  
W: www.libranengineering.com

## Liebherr-Hydraulikbagger GmbH

**LIEBHERR**  
Liebherrstrasse 12  
Kirchdorf  
88457  
Germany  
Contact: Mr Thomas Baeuerle  
T: + 49 7354 80 0  
F: + 49 7354 80 7294  
E: info@hb.liebherr.com  
A member of the Liebherr Group and manufacturer of hydraulic material handlers.

## Liebherr-Werk Nenzing GmbH

**LIEBHERR**  
Dr. Hans Liebherr Str. 1  
Nenzing  
A-6710  
Austria  
Contact: Mr Leopold Berthold  
Job Title: Sales Director  
T: + 43 50809 41725  
F: + 43 50809 41447  
E: mobile.harbour.crane@liebherr.com  
W: www.liebherr.com  
With 7 models available (42 - 208 tonnes capacity), Liebherr offers a wide range of cranes for dedicated coal handling. Due to optimized opening/closing and hoisting speeds, simultaneous functions, increased filling degrees, electronically controlled winch synchronisation etc., outstanding handling figures are being achieved.

## Listenow GmbH & Co.

Dieselstrasse 21  
Rutesheim  
71277  
Germany  
Contact: Mr Carsten Lohr  
T: + 49 7152 50900  
F: + 49 7152 509050  
E: c.lohr@listenow.com  
W: www.listenow.com  
Other equipment: loading equipment, filters.

## Logmarin Advisors Srl



Via Ilva, 2/9  
Genova  
16128  
Italy  
Contact: Mr Mario Terenzio  
Job Title: Managing Director  
T: + 39 010 538 5723  
E: info@logmarin.net  
W: www.logmarin.net  
Logmarin's scope of business is to provide an integrated, comprehensive and tailor-made advisory service for marine terminals and associated handling infrastructures, both off-shore and on-shore. Logmarin individuals and its associates have pioneered dry-bulk shipping logistics off-shore, devising and designing innovative floating terminals, self unloading vessels and floating cranes, as well as on-shore terminals.

## LogSys NV

Land Van Waaslaan 5  
Haven 1213  
Kallo  
B-9130  
Belgium  
Contact: Ms Sabine Berckmans

Job Title: Project Manager Project Manager & Marketing/Sales  
T: + 32 3 755 89 62  
E: sberckmans@logsys.eu  
W: www.logsys.eu  
LogSys has developed LGS.Stevedore, a browser based Terminal Operating System aimed at dry bulk terminals. It provides you with the opportunity to manage all aspects of your terminal including products, tariffs, orders, stock, gate traffic, invoicing, management information and reporting, a customer portal, ...

## Loibl Allen-Sherman-Hoff GmbH



Arberstrasse 40  
Straubing  
D-94315  
Germany  
Contact: Mr Jules Fricke  
Job Title: Managing Director  
T: + 49 9421 9256 0  
F: + 49 9421 925625  
E: jules.fricke@loibl.biz  
W: www.loibl.biz  
Core business is the process engineering of bulk goods. With a highly specialized team, an environmentally conscious approach and reliability in our way of planning and managing, and through the application of state-of-the-art manufacturing engineering methods, we will live up to our reputation, meet the requirements of materials and technology, and guarantee the highest quality possible.

## Lycopodium

153 Leichardt St  
Spring Hill  
QLD  
4171  
Australia  
Contact: Mr Mark Osborne  
Job Title: Engineer  
T: + 41 6 3244 0070  
E: mark.osborne@lycopodium.com.au

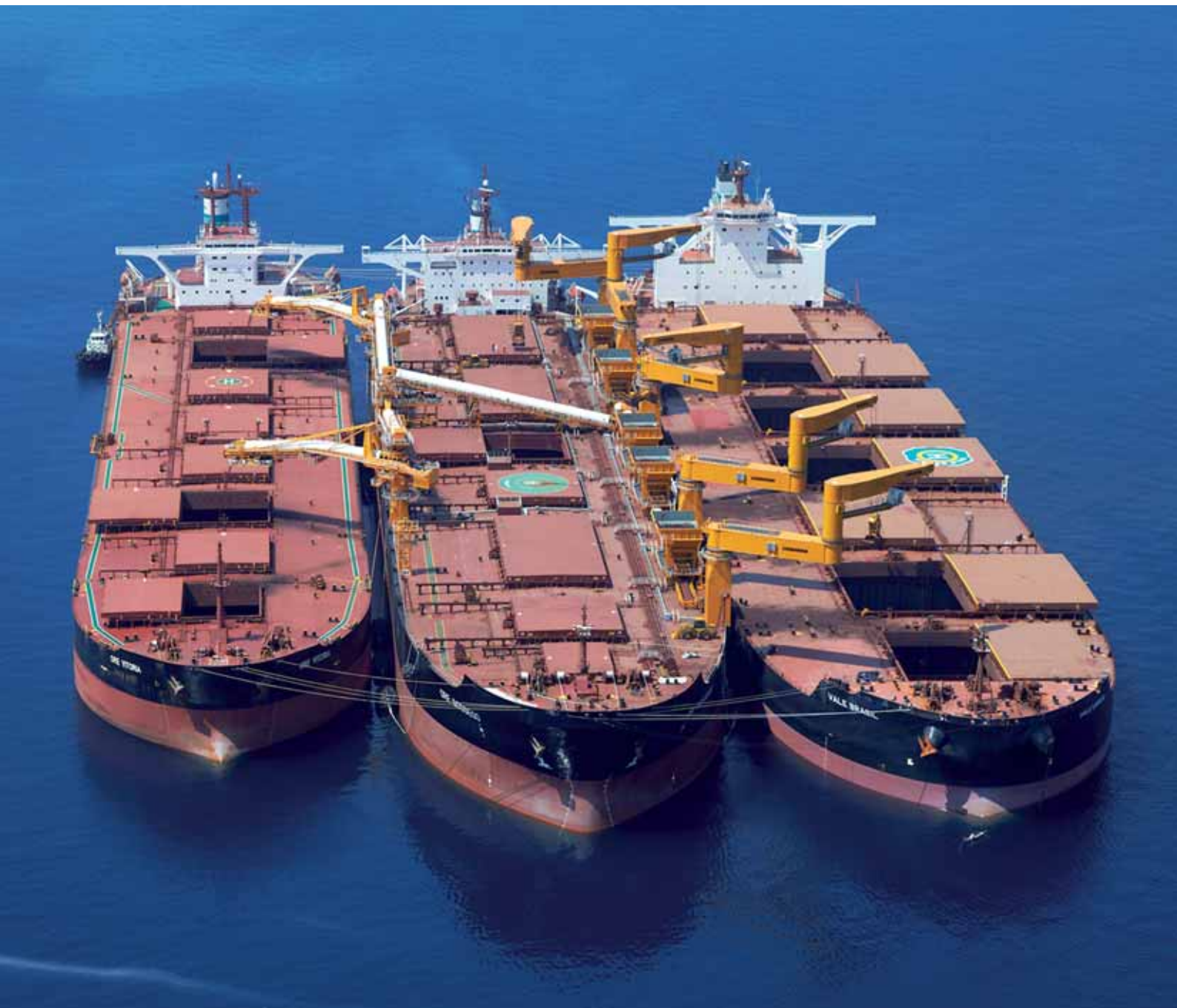
## Macawber Engineering, Inc

1829 Clydesdale Street  
Maryville  
TN  
37801-3796  
USA  
Contact: Mr John Bell  
Job Title: Process Automation  
T: + 1 800 433 2213  
F: + 1 865 984 5286  
E: macawber@macawber.com  
W: www.macawberengineering.com

## MacGregor SWE AB

Sjögatan 4G  
Örnsköldsvik  
SE-891 85  
Sweden  
Contact: Mr Anders Berencsy  
Job Title: Sales Manager  
T: + 46 660 294000  
F: + 46 660 12455  
E: Anders.Berencsy@cargotec.com  
W: www.macgregor-group.com

# Experience the progress.



## **Liebherr-Werk Nenzing GmbH**

Dr. Hans Liebherr Str. 1  
6710 Nenzing / Austria  
Tel.: +43 50809 41-280  
[ship.port.crane@liebherr.com](mailto:ship.port.crane@liebherr.com)  
[facebook.com/LiebherrMaritime](https://facebook.com/LiebherrMaritime)  
[www.liebherr.com](http://www.liebherr.com)

# **LIEBHERR**

**The Group**



**MANTSINEN  
CLAMSHELL BUCKETS**

Purpose-built for heavy duty  
hydraulic cranes

Capacity range  
from 1,5 to 14 m<sup>3</sup>

**MANTSINEN 70**

up to 500 t/h

**MANTSINEN 90**

up to 600 t/h

**MANTSINEN 120**

up to 800 t/h

**MANTSINEN 160**

up to 1000 t/h

**MANTSINEN 200**

up to 1200 t/h

**MANTSINEN HybriLift®**

Increases Energy Efficiency  
by up to

**35%**

MANTSINEN HybriLift® lifts your efficiency to next level with hydraulic precision

**OUR HYBRID EVOLUTION IN ACTION**



**More load, less energy**

[www.mantsinen.com](http://www.mantsinen.com)



**Mack Manufacturing Inc**

PO Box 1559  
7205 Bellingrath Road  
Theodore  
Alabama  
36582  
USA  
Contact: Mr Matthew A. Davidson  
Job Title: Vice President -  
Marketing  
T: +1 251 653 9999  
F: +1 251 653 1365  
E: sales@MackMfg.com  
W: www.mackmfg.com  
Manufactures all types of grabs  
and grapples, both wire rope and  
hydraulically operated, as well as  
radio-controlled and diesel  
operated systems.

**Mactenn Systems Ltd.**

One Bull Lane  
Acton  
Sudbury  
Suffolk  
CO10 0BD  
UK  
Contact: Mr Lee Suckling  
Job Title: Director, Sales &  
Application Engineering  
T: + 44 1787 882 422  
F: + 44 1787 882 433  
E: sales@mactenn.com  
W: www.mactenn.com  
Sales and manufacturing of  
dense-phase pneumatic  
conveying systems. Worldwide  
reputation for successfully  
handling bulk materials in low  
velocities. 30,000 systems  
operating throughout the world in  
all process industries. Customer  
benefits include process cost

savings and increased process  
reliability.

**Mantsinen Group Ltd Oy**

Valikankaantie 3  
Ylämylly  
FIN-80400  
Finland  
Contact: Ms Mia Mantsinen  
Job Title: Sales and Marketing  
Director  
T: + 358 20 755 1230  
F: + 358 13 252 5555  
E: jukka.hamalainen@  
mantsinen.com  
W: www.mantsinen.com  
Mantsinen Group manufactures  
highly efficient and precise  
hydraulic harbour cranes for bulk  
and general cargo operations.  
Mantsinen cranes can be tailored  
to best suit each application.  
Mantsinen HybriLift® energy  
saving system and wide range of  
attachments makes the cranes  
economical, efficient and  
universal tools for stevedoring  
companies and harbour  
operators.  
Other equipment/expertise: Wood  
handling Log stackers,  
subcontracting.

**Martin Engineering**

One Martin Place  
Neponset  
Illinois  
IL 61345  
USA  
Contact: Ms Elizabeth Allen  
Job Title: Senior Global Marketing  
Analyst  
T: + 1 309 852 2384 ext.277  
F: + 1 800 814 1533  
E: info@martin-eng.com  
W: www.martin-eng.com  
Established in 1944, Martin  
Engineering is the leading  
international developer,  
manufacturer and supplier of  
innovations to make the handling  
of bulk materials cleaner, safer  
and more productive. Martin  
offers technologies that boost  
flow, reduce dust and spillage,  
extend component life and reduce  
downtime, resulting in improved  
operating environments and  
profitability.

**Martin Engineering GmbH**

In der Rehbach 14  
Walluf  
D-65396  
Germany  
Contact: Mr Joachim Preiß  
Job Title: Marketing Manager  
T: + 49 61 23 978 221  
F: + 49 61 23 75 5 33  
E: julius.mueller@martin-eng.de

W: www.martin-eng.de

**Maschinen und Mühlenbau  
Erhard Muhr GmbH**

Grafenstraße 27  
Brannenburg  
D-83098  
Germany  
Contact: Mr Roland Muhr  
Job Title: Managing Director  
T: + 49 8034 9072 26  
F: + 49 8034 9072 526  
E: info@muhr.com  
W: www.muhr.com  
MUHR offers a wide range of high  
quality Bulk Loading Systems (for  
open and closed, dust-free  
loading), Loading Spout  
Positioners, Pneumatical Docking  
Devices and even Railcar  
Dumping Systems for economical  
unloading of trains with open  
railcars.

**Mentor Dynamics**

170 Penrod Court  
Glen Burnie  
Maryland  
21061  
USA  
Contact: Mr Don Watts  
Job Title: President  
T: + 1 410 760 6349  
F: + 1 410 760 8284  
E: don.watts@  
MentorDynamics.com  
W: www.mentordynamics.com  
Leading supplier of cargo hold  
liners for self unloaders, barges,  
and other bulk material storage &  
handling equipment. Products  
include Dyna-Flo high  
performance plastic liners and  
ceramic wear liners.

**Merrick Industries**

10 Arthur Drive  
Lynn Haven  
FL  
32444  
USA  
Contact: Mr Ron Selbe  
Job Title: Sales Manager  
T: + 1 850 265 3611  
F: + 1 850 265 9768  
E: info@merrick-inc.com  
W: www.merrick-inc.com  
Merrick Industries is a leader in  
continuous weighing and feeding  
solutions, since 1908. Merrick  
designs, manufactures, and  
supports all of our products at our  
Lynn Haven, Florida plant for the  
Coal, Cement, Mining, Chemicals,  
Lime, Gypsum, Steel and  
Aggregates industries.

**Metso Minerals Industries,  
Inc.**

Bulk Materials Handling  
4000 Town Center Boulevard  
Suite 400  
Canonsburg  
PA  
15317  
USA  
Contact: Mr Tom Lippencott  
Job Title: VP Mining Capital  
Sales, USA & Canada  
T: + 1 412 269 5137  
F: + 1 412 269 5212  
E: Tom.Lippencott@metso.com  
W: www.metso.com  
Products include  
stacker/reclaimers; railcar  
dumpers/wagon tipplers; grab,  
continuous and balance  
unloaders; barge/ship loaders;  
barge and train positioning  
systems; mechanical ash  
handling systems; coal

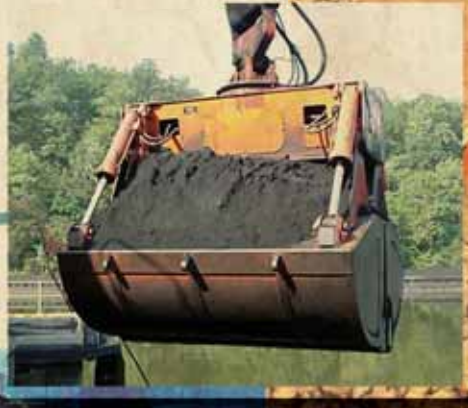
# Mack

## Manufacturing Grapples & Buckets

### "Quality First"

### Since 1942

[www.mackmfg.com](http://www.mackmfg.com)



7205 Bellingrath Road, P.O. Box 1559, Theodore, Alabama 36590, USA  
Fax: +1-251-653-1365

Email: [sales@mackmfg.com](mailto:sales@mackmfg.com)

Telephone: +1-251-653-9999  
Website: [www.MackMfg.com](http://www.MackMfg.com)



# 33rd Coaltrans berlin

world coal conference 2013

20-22 October 2013

Estrel Hotel & Convention Center, Berlin, Germany

1400+  
DELEGATES  
60+  
COUNTRIES

Lead Sponsor

Carbo One



Platinum Sponsors

**ICHORCOAL**  
distributed by HMS Bergbau AG

**Xcoal**  
ENERGY & RESOURCES

**MECHEL**  
Mechel Carbon

Gold Sponsors

**CC** COECLERICI

**argus**  
argusmedia.com

**GVK**

**BULKTRADING SA**

**SGS**

**Port of Amsterdam**



**SWIRE CTM BULK LOGISTICS**

**TRENACO**

Silver Sponsors

**PD Co**  
Lublin Coal Project

**PLATTS**  
McGRAW HILL FINANCIAL

**QUEBEC STEVEDORING GROUP**  
**PORT OF QUÉBEC**

**oldendorff** **EO**

Bronze Sponsors

**airberlin**  
MOBILITY PARTNER

**CLYDE&Co**

**FCC**

**FLAME S.A.**  
CONVENTIONAL & ALTERNATIVE FUELS

**FORESIGHT ENERGY**

**fortbridge**

**MAREX SPECTRON**

**SSY**

**Standard Coal**

**UNICOAL AG**

**United Bulk Terminals**



Like us on Facebook

[www.facebook.com/coaltrans](http://www.facebook.com/coaltrans)



Join our Linked In group

**Coaltrans Conferences Community**



Follow us on Twitter

**@CoaltransEvents**

**COALTRANS CONFERENCES**

Bringing the global coal community together since 1981



**Coaltrans**  
Conferences



preparation equipment; apron feeders and overland conveyor systems.

#### Midwest Industrial Supply Inc

PO Box 8431  
Canton  
Ohio  
OH 44711  
USA  
Contact: Ms Beth Stewart  
Job Title: Marketing  
T: + 1 330 456 3121  
F: + 1 330 456 3247  
E: julie.mamula@midwestind.com  
W: www.midwestind.com  
Provide a complete line of dust control, erosion control, soil stabilization lubricants, anti-icing and de-icing products that are developed by the company staff of chemists and backed by a complete range of services, equipment, expertise and technical support since 1975.

#### Midwest International Standard Products, Inc.

105 Stover Road/ PO Box 438  
Charlevoix  
MI  
49720  
USA  
Contact: Mr Walter Pair  
Job Title: Director of Operations  
T: + 1 231 547 4000  
F: + 1 231 547 9453  
E: sales@midwestinternational.com  
W: www.midwestmagic.com  
Founded in 1967, the company focuses on dust free loading and stockpiling of dry bulk with products including The Paragon Series and the Heavy Duty Mining Series. The Chokefeeder® dust free shiploading systems are used

by governments and industries in over 50 countries.

#### Mitsui Miike Machinery Co., Ltd.

Nihonbashi-Muromachi 2-1-1  
Chuo-ku  
Tokyo  
103-0022  
Japan  
Contact: Mr Hachiro Naito  
Job Title: General Manager, Material Handling Machinery  
T: + 81 3 3270 2001  
F: + 81 3 3245 0203  
E: soumu@mitsuimiike.co.jp  
W: www.mitsuimiike.co.jp

#### Moffatt & Nichol

Fifth Floor  
35 Great St Helen's  
London  
EC3A 6HB  
UK  
Contact: Mrs Eva Serrao  
Job Title: Office Manager  
T: + 44 203 2061062  
F: + 44 203 2061061  
E: eserrao@moffattnichol.com  
W: www.moffattnichol.com

#### Mole•Master Services Corporation™

27815 State Route 7  
Marietta  
Ohio  
45750  
USA  
Contact: Mr David Laing  
Job Title: General Manager  
T: + 1 740 374 6726  
F: + 1 740 374 5908  
E: contactus@molemaster.com  
W: www.molemaster.com  
In addition: Silo cleaning services

and equipment. Silo, bin, bunker, transport and process vessel cleaning, clearing and unlogging services and equipment.

#### Motherwell Automation

10 Sangiorgio Court  
Osborne Park  
West Perth  
WA  
6017  
Australia  
Contact: Mr Chris Watson  
Job Title: Marketing Manager  
T: + 61 8 9212 4444  
F: + 61 8 9212 4479  
E: ttownsend@motherwell.net.au  
W: www.motherwell.net.au

#### Motridal SpA

Via Pietro Bubba 17  
Piacenza  
Piacenza  
29122  
Italy  
Contact: Mr Giampietro Calvi  
Job Title: Sales Manager  
T: + 39 0523 59 66 11  
F: + 39 0523 59 01 28  
E: motridal@motridal.com  
W: www.motridal.com  
Specialist, with over 50 years experience, in heavy-duty, high-capacity machines, intended for operating under severe conditions in cement factory, steel works, power plant, aluminium smelter... Product line includes screw, chain, belt and pipe conveyors, bucket elevators, stackers. Worldwide operation.

#### MRS Greifer GmbH

Talweg 15-17  
Helmstadt-Bargen D-74921  
Germany  
Contact: Mrs Karin Greulich  
Job Title: Export Manager  
T: + 49 7263 912 915  
F: + 49 7263 912 912  
E: export@mrs-greifer.de  
W: www.mrs-greifer.de  
Approaching more than 40 years experience in producing all types of grabs. The company's product range includes mechanical grabs, radio-controlled, hydraulic and electro-hydraulic grabs. MRS has an excellent after-sales and repair service, provides spare parts from stock and supplies parts for a long period after delivery.

#### NAVCO (National Air Vibrator Co)

PO Box 40563  
Houston  
TX 77240-0563  
USA  
Contact: Mr Ann Hutchinson  
T: + 1 832 467 3636  
F: + 1 832 467 3800  
E: ben@navco.us  
W: www.navco.us

#### Negrini Srl

via E. Torricelli n.4  
Castelfranco Emilia  
Modena  
41013  
Italy  
Contact: Mr Rossetti Alessandro  
T: + 39 059 923110  
F: + 39 059 920378  
E: info@negrini.org  
W: www.negrini.org

#### Nemag BV



Deltastraat 15  
PO Box 110  
Zierikzee  
4300 AC  
The Netherlands  
Contact: Mr Riny Stoutjesdijk  
Job Title: Sales Manager  
T: + 31 111 418 900  
F: + 31 111 416 154  
E: sales@nemag.com  
W: www.nemag.com  
Specialized in the sales, engineering and construction of rope operated grabs for large scale dry bulk handling. The company has a vast record of worldwide deliveries and is recognized as one of the leading grab manufacturers worldwide. Other equipment: NEMAG Quick Release Links and Rope Pear Sockets.

#### NERAK GmbH Fördertechnik

Brigitta 5  
Hambühren  
D-29313  
Germany  
Contact: Mr Edgar Bleeker  
Job Title: Marketing  
T: + 49 50 84 944 0  
F: + 49 50 84 944 222  
E: bleeker@nerak.de  
W: www.nerak.com  
NERAK Continuous Bucket Conveyors are designed for combined horizontal and vertical conveying. Each bucket is securely attached to adjacent buckets and located between two steel reinforced rubber block. The



assembly with no moving parts is capable of high conveying rates.

### Neuero Industrietechnik GmbH

Neurostrasse 1  
Melle  
D-49324  
Germany  
Contact: Eng Andreas Haeuser  
Job Title: Sales & Project Manager  
T: + 49 5422 9503 26  
F: + 49 5422 9503 50  
E: ha@neuero.de  
W: www.neuero.com  
NEUERO designs and manufactures a wide range of pneumatic and mechanical ship/barge unloaders, ship/barge loaders and pneumatic conveyors, with high capacities and gentle handling of materials.

### NILOS GmbH & Co KG

Reisholzstrasse 15  
PO Box 970  
Hilden  
40709  
Germany  
Contact: Mr Jens Hamacher  
Job Title: Export Manager  
T: + 49 2103 9510  
F: + 49 2103 951 209  
E: jens.hamacher@nilos.de  
W: www.nilos.com  
Conveyor belt equipment ranges from simple small tools to vulcanising presses up to the planning, construction and commissioning of complete conveyor belt repair workshops. Range of products include hot and cold repair material, along with basic overhauling, reconditioning, maintenance and assemblies.

### NKK Corporation

1-2 Marunouchi  
1-Chome  
Chiyoda-ku  
Tokyo 100  
Japan  
Contact: Mr Koichoro Shima  
Job Title: General Manager,  
Structure Sales Department  
T: + 81 3 3212 7111  
F: + 81 3 3214 8400  
W: www.nkk.co.jp

### NKM Noell Special Cranes GmbH



Postbus 638  
Hoofddorp  
2130AP  
The Netherlands  
Contact: Mr Enno Kramer  
Job Title: Director Product Unit  
Offshore Cranes  
T: + 31 20 655 0030  
F: + 31 20 655 0040  
E: enno.kramer@nkmnoell.com  
W: www.nkmnoellspecialcranes.com  
Company is specialized in special cranes. For the bulk industry the knowledge is concentrated on floating linniscate cranes and terminals.

### NM Heilig BV

Newtonstraat 17  
Heerhugowaard  
1704 SB  
The Netherlands  
Contact: G.S. Dwaarswaard  
Job Title: Head of sales  
department  
T: + 31 72 571 6688

F: + 31 72 571 6020  
E: info@heiligbv.com  
W: www.heiligbv.com  
Heilig Holding is a company group based in Europe specialized in manufacturing bulk handling and recycling systems.  
• Custom design and engineering  
• High quality manufacturing facilities  
• Experienced Assembly and service staff  
We are 35 years on the market, privately owned family company with over 250 employees.

### Nordströms Konstruktionsbyrå

Storgatan 58  
Umeå  
SE-903 30  
Sweden  
Contact: Mr Peter Vedin  
Job Title: Marketing  
T: + 46 90 1136 4500  
F: + 46 90 1330 69  
E: arletun@nordstroems.se  
W: www.nordstroems.se

### Nordstrong Equipment Ltd

400 Ambassador Drive  
Mississauga  
Ontario  
L5T 2J3  
Canada  
Contact: Mr Bill Van Duyn  
Job Title: Sales Manager  
T: + 1 289 562 6402  
F: + 1 289 562 6445  
E: wmvanduy@nordstrongequipment.com  
W: www.nordstrongequipment.com  
Product range: screw conveyors/feeders; belt conveyors/feeders; pipe conveyors; flexible wall conveyors; drag conveyors; apron conveyors/feeders; bucket elevators; idlers. Every endeavour will be made to provide clients with an efficient and honest assessment of their needs.

### North American Crushing & Screening, LLC

322 Lafayette Street  
New Orleans  
Louisiana  
LA 70130  
USA  
Contact: Mr Gilbert Wright  
T: + 1 504 866 0014  
F: + 1 504 866 0016  
E: gwright@nacsllc.com  
W: www.nacsllc.com  
Contract processing services (crushing and screening) for all types of heavy bulk cargo. Also reconditions soft commodities offering solutions for distressed cargo. Processing and reconditioning equipment is designed for mobile operations and can be relocated to almost any site.

### NSL ENGINEERING PTE LTD

25 Rawson Street  
Haberfield  
Sydney  
NSW  
2045  
Australia  
Contact: Mr Cameron Hay  
Job Title: Sales & Marketing  
Manager  
T: + 61 297 972054  
F: + 65 626 11300  
E: cameron@ramspreaders.com  
W: http://www.ramspreaders.com/

### Orthos Projects Ltd.

Fernie Road  
Market Harborough  
Leicestershire LE16 7PH  
UK  
Contact: Mr Nick Hall  
Job Title: Director  
T: + 44 1858 462806  
F: + 44 1858 464403  
E: nick.hall@orthosprojects.com  
W: www.eandfsservices.com;  
www.orthosprojects.com  
Since 1977 Orthos Projects have designed, manufactured and installed bulk solids raw materials handling plant to the highest specification. Best qualified to serve the Port, Bulk Handling, Quarry, Foundry, Recycling and related industries, Special purpose machine design, conveyor systems to ISO 9001 (2008).

### ORTS GmbH Maschinenfabrik



Schwartauer Strasse 99  
Sereetz  
D-23611  
Germany  
Contact: Herr Sigvard Orts  
T: + 49 451 398850  
F: + 49 451 392374  
E: sigvard.orts-jun@orts-gmbh.de  
W: www.orts-greifer.de  
We offer the whole range of grabs: electro-hydraulic, radio controlled diesel-hydraulic, mechanical rope (single-rope, two-rope and four-rope). All clamshell-designs and special constructions. For bulk, metal scrap, dredging, salvage. Repairs (also grabs from other makers) and spare parts. Crane-equipment for electro-hydraulic grabs. Lifting beams (max. load 150t) and flat- frames, cargo turners.

### PAGE MACRAE ENGINEERING

61 Aerodrome Road  
Mount Maunganui  
Bay of Plenty 3116  
New Zealand  
Contact: Mr Bruce Ennis  
Job Title: Cargo Handling  
Equipment Manager  
T: + 64 7 575 5079 Ext 810  
F: + 64 7 574 8594  
E: bruce@page-macrae.co.nz  
W: www.page-macrae.co.nz  
With over 50 years of engineering experience, Page Macrae Engineering is regarded as Australasia's leading manufacturer of ship cargo handling equipment. The company's bulk handling expertise covers the complete concept, design, build and commission process. The company has a reputation for delivering high quality equipment that is robust, low maintenance and highly productive, regardless of conditions and loads.

### Parker Plant Ltd

Viaduct Works  
Canon Street  
Leicester  
Leicestershire LE4 6GH  
UK  
Contact: Mr Richard Fothergill

Job Title: Marketing Manager  
T: + 44 116 266 5999  
F: + 44 116 261 0812  
E: sales@parkerplant.com  
W: www.parkerplant.com  
Manufactures a complete range of conveyor systems and components.

### PEBCO®

PO Box 7506  
225 North 4th Street (42001)  
Paducah  
KY  
42002-7506  
USA  
Contact: Mr David Finke  
Job Title: Sales and Marketing  
T: + 1 270 442 1996  
F: + 1 270 442 5214  
E: sales@pebco.com  
W: www.pebco.com  
PEBCO® is acknowledged throughout the world in the field of moving, controlling and loading dry bulk materials. Resources and responsibilities include customized gates and valves, mass flow feeders, dustless loading spouts, telescopic chutes, PEBCO® Cascade® chutes and truck, ship, railcar and barge loadouts.

### Peterson Agricare & Bulk Logistics BV

Boompjes 270  
Rotterdam  
3011 XZ  
The Netherlands  
Contact: Mr Arno Maehlmann  
T: + 31 10 282 3333  
F: + 31 10 282 3282  
E: info@peterson.nl  
W: www.peterson.nl

### Pfister Waagen Bilanciai GmbH

Linker Kreuthweg 9  
Affing-Mühlhausen  
D-86444  
Germany  
Contact: Ms Susanne Geller-Dürr  
Job Title: Marketing and Sales  
Manager  
T: + 49 82 07 9 58 99 28  
F: + 49 82 07 9 58 99 29  
E: marketing@pfisterwaagen.de  
W: www.pfisterwaagen.de  
Founded in 1894 as a manufacturer of mechanical weighbridges. Suppliers of innovative, high quality, fully electronic weighing systems, incorporated in data networks, capturing and processing weighing data in cost-efficient control systems. Specialized in truck weighbridges, railway scales, weighing software.

### PHB Weserhütte, S.A.

Parque Científico y Tecnológico de Gijón  
C/Luis Moya Blanco 82  
Gijón  
Asturias  
33203  
Spain  
Contact: Dr Jose Ramón Prado  
Job Title: Technical Commercial  
Director  
T: + 34 985 13 41 71  
F: + 34 985 13 42 22  
E: joseramon.prado@pwh.es  
W: www.pwh.es  
Efficient port systems, handling all types of bulk solids such as coal, iron ore, bauxite, fertilizers, clinker, cement and general cargo, with different solutions for

maritime or river ports. Design of circular or longitudinal stockyards combining a wide range of reclaimers and different types of stackers.

### PHOENIX Conveyor Belt Systems GmbH

Hannoversche Strasse 88  
Hamburg  
21079  
Germany  
Contact: Mr Bernd Kuesel  
T: + 49 40 7667 2205  
F: + 49 40 7667 2773  
E: info@phoenix-cbs.com  
W: www.phoenix-conveyor-belts.com  
With 110 years experience, the world leader for high performance heavy-duty conveyor belts, serving the worldwide bulk handling industry. The programme includes textile and steel cord conveyor belts for underground and surface applications.

### PINTSCH BUBENZER GmbH



Friedrichshüttenstraße 1  
Kirchen-Webach  
RLP  
57548  
Germany  
T: + 49 2741 94880  
F: + 49 27 41 948844  
E: info@pintschbubenzler.de  
W: www.pintschbubenzler.de  
PINTSCH BUBENZER is focused on the design, production and service of high quality braking systems for both static and dynamic applications which involve the precise control of small to very large amounts of kinetic energy. The challenge is to control that energy in the most efficient, cost-effective way.

### PIV Drives GmbH - a Brevini Power Transmission Co.



Justus-von-Liebig-Straße 3  
Bad Homburg  
D-61352  
Germany  
Contact: Mr Bernard Rensinghoff  
Job Title: Marketing Manager  
T: + 49 6172 102 648  
F: + 49 6172 102 380  
E: bernard.rensinghoff@brevini.com  
W: www.piv-drives.com or www.brevini.com  
PIV Drives, a company of Brevini Power Transmission, has over 80 years experience in providing quality power transmission solutions for every industry sector. PIV Drives developed modular concepts for its comprehensive product range, providing the flexibility to deliver high-quality optimised solutions, both standard and bespoke, quickly and at competitive cost.

### Plantragg Developments

4 Wold View  
Caistor  
Lincoln  
Lincolnshire LN7 6UU  
UK

Contact: Mr Bob Harrison  
Job Title: Director  
T: + 44 1472 852 498 or + 44 7973 832 741  
F: + 44 1472 852 498  
E: ptag.dev@talktalk.net  
W: www.plantragg.co.uk  
Manufacturers of proven ship friendly vibration equipment to release 'hung cargo' from ships' hold frames and ribs. Successfully being used by major steel companies operating their own terminals paving the way for some major and dramatic cargo discharge savings to other stevedoring operated terminals. Other equipment: Vibrorig Hydraulic Cargo release equipment.

### PLM Cranes B.V.



Sluisweg 21-25  
Heijningen 4794 SW  
The Netherlands  
Contact: Mr Pieter Pulleman  
Job Title: Managing Director  
T: + 31 167 528510  
F: + 31 167 524444  
E: info@plmcranes.com  
W: www.plmcranes.com  
We build hydraulic and electric cranes from 50 to 2000 tm with a transhipment capacity up to approx. 2000 ton/hour. We are specialized in shipboard cranes, mobile cranes and harbour cranes for dredging, transshipping, hoisting and pile-driving.

### Polymer Industries - Ultrapoly Division

2404 Center Street  
Tacoma WA 98409-7638  
USA  
Contact: Mr Bryan Olin  
T: + 1 253 272 1217  
F: + 1 253 272 1457  
E: bryan.olin@polymerindustries.com  
W: www.polymerindustries.com  
Tough, self-lubricating Ultra Poly Ultra High Molecular Weight polyethylene provides durable protection for metal surfaces and eliminates noise associated with metal-on-metal contact. And its slick, nonstick properties assure unimpeded flow of materials, even under wet, sticky or freezing conditions.

### Portasilo Ltd

New Lane  
Huntington  
York YO3 9PR  
UK  
Contact: Mr Steve Stannard  
Job Title: Proposals Manager  
T: + 44 1904 624 872  
F: + 44 1904 611 760  
E: bulk@portasilo.co.uk  
W: www.portasilo.co.uk  
Designs, manufactures and installs bulk handling equipment for the storage and handling of powdered and granular materials. Equipment supplied includes silos, hoppers, mechanical conveyors, lean phase and dense phase pneumatic conveying systems. Full turn key solutions can be offered.

### Port-Trade ApS

Karetmagervej 9  
Fredericia  
DK 7000

Denmark  
Contact: Mr Peter J Muller  
Job Title: Sales Manager  
T: + 45 7628 0102  
F: + 45 7628 0103  
E: peter.muller@port-trade.com  
W: www.port-trade.com

### Powerscreen International

200 Coalisland Road  
Dungannon  
Co Tyrone  
BT71 4DR  
UK  
Contact: Mrs Michelle Killen  
Job Title: Marketing  
T: + 44 288 77 18500  
F: + 44 288 77 47231  
E: sales@powerscreen.com  
W: www.powerscreen.com  
Manufacture a complete range of mobile screening equipment. This is made up of 30+ products sold across a range of dry screening, washing and recycling applications, from aggregate screening to sand extraction; from screening of construction and demolition waste to skip waste and compost.

### Precia-Molen Nederland BV

Fransse Akker 1  
Breda 4824 AL  
The Netherlands  
Contact: Mrs Monique Kuijter-Heessels  
Job Title: Communication & Marketing  
T: + 31 76 524 2513  
F: + 31 76 522 8039  
E: monique.heessels@preciamolen.nl  
W: www.preciamolen.nl  
At the forefront of the industry, has provided weighing solutions for more than 145 years and established a worldwide reputation for quality and reliability. The large product range consists of weighbridges; bulk, belt, bagging, platform and aircraft weighing check-in scales; load cells, indicators, controllers and truck dumpers.

### Primasonics International Limited

North Lakes Business Park  
Flusco  
Penrith  
Cumbria CA11 0JG  
UK  
Contact: Mr Donald Cameron  
Job Title: Managing Director  
T: + 44 17684 80372  
F: + 44 17684 80374  
E: sound@primasonics.com  
W: www.primasonics.com; www.quattrosonics.com  
Primasonics Audiosonic Acoustic Cleaners are air operated devices which produce high energy, low frequency sound waves and will significantly aid material flow and eliminate particulate build up wherever soot, dust, powders or granular materials are processed, generated, stored or transported.

### Procon Engineering Limited

Vestry Estate  
Offord Road  
Sevenoaks  
Kent TN14 5EL  
UK  
Contact: Mr Joe Naylor  
Job Title: Sales Manager - Beltweighers  
T: + 44 1732 781 300  
F: + 44 1732 781 311  
E: joe.naylor@proconeng.com

W: www.proconeng.com  
Continuous digital belt weighing and weigh feeding systems - capacities - 12,000 max tph, 9 m/s speed, 400-2400 belt widths. Batch weighing, Loss in weight, and Level weighing.

### PT Bukaka Teknik Utama

Jl. Raya Bekasi Narogong Km 19,5  
Cileungsi Bogor  
Jakarta 16820  
Indonesia  
Contact: Mr Achmad Kalla  
Job Title: Director  
T: + 62 21 823 1146  
F: + 62 21 823 2323  
E: bcdv@bukaka.com  
W: www.bukaka.com

### PT Jakarta Prima Cranes

Wisma JPC  
Jl. Mampang Prapatan Raya No. 20  
Jakarta 12760  
Indonesia  
Contact:  
Job Title: Marketing Manager  
T: + 6221 799 2772  
F: + 6221 799 2442  
E: edy-sianturi@jpc.co.id  
W: www.jpc.co.id

### PT Pamapersada Nusantara

Jln. Rawagelam I No. 9  
Kawasan Industri Pulogadung  
Jakarta 13930  
Indonesia  
Contact: Mr. Sudiarso Prasetyo  
Job Title: President Director  
T: + 62 21 460 2015 Ext 211  
F: + 62 21 460 1916  
E: busdev@pamapersada.com  
W: www.pamapersada.com

### PT SpanSet Indonesia

Kawasan Industri dan  
Pergudangan Marunda Center  
Blok F No. 20, Jl. Marunda Center  
Desa Segara Makmur -  
Tarumajaya  
Bekasi  
Jawa Barat 17211  
Indonesia  
Contact: Mr Mario Harben  
Job Title: Business Development Manager  
T: + 62 21 650 9556  
F: + 62 21 650 9566  
E: sales@spanset.co.id  
W: www.spanset.co.id  
PT SpanSet Indonesia as one of the authorized distributor for Bridon, Kiswire, Usha Martin and Verop is the member of Association of Wire Rope Fabricators (AWRF). We always provide the highest quality product and services in wire rope applications.

### PT Thiess Contractors Indonesia

Ratu Prabu 2 Ratu Prabu 2  
Jl. TB. Simatupang Kav. 18  
Jakarta 12560  
Indonesia  
Contact: Mr. Matahara  
Job Title: Business Development Manager  
T: + 62 21 2754 9999  
F: + 62 21 2754 9800  
E: thiess@thiess.co.id  
W: www.thiess.co.id

### PT. Bando Indonesia

Wisma Hayam Wuruk, 6th floor,  
Suite 600  
Jln. Hayam Wuruk No. 8  
Jakarta 10120  
Indonesia  
Contact: Mr Budi Widjaya

Job Title: Mining Division  
T: + 62 21 3517590  
F: + 62 21 3517591  
E: vbelt.div@bandoindonesia.com  
W: www.bandoindonesia.com  
PT. Bando, established in 1987, is one of the leading automotive and industrial power transmission belt manufacturers in Indonesia. It has one main plant located in Tangerang and its marketing office located in Central Jakarta.

### Quadrant Engineering Plastics Products

2120 Fairmont Avenue  
Reading PA 19612  
USA  
Contact: Mr Brad Siebt  
T: + 1 260 479 4283  
F: + 1 260 478 1074  
E: bradley.seibt@qplas.com  
W: www.systemtivar.com  
Polymer liners for self-unloading ships, hoppers, chutes, bins, railcars, silos. SystemTIVAR Engineering designs, fabricates and installs lining systems worldwide to promote bulk material flow, featuring industry-leading low coefficient of friction and abrasion-resistant TIVAR® family of products.

### Quality Handling Systems Pty Ltd

6 Metters Place  
Wetherill Park  
Sydney NSW 2164  
Australia  
Contact: Mr Peter Taylor  
Job Title: Project Manager  
T: + 61 2 9756 1921  
F: + 61 2 9756 4212  
E: playlor@qhs.com.au  
W: www.qhs.com.au  
Specialists in the design and supply of mechanical sampling systems for bulk materials. The company can also assist in the design and specification of new sampling systems and review existing systems to improve their reliability and accuracy.

### Qube Ports & Bulk

Level 22  
44 Market Street  
Sydney NSW 2000  
Australia  
Contact: Mr Paul White  
T: + 61 2 9005 1100  
F: + 61 2 9005 1101  
E: paul.white@qube.com.au  
W: www.qube.com.au/ports-and-bulk

### R & S S.r.L.

Via del Cmapo Sportivo 40  
Mezzana 48123  
Italy  
Contact: Ms Sara Mandarini  
Job Title: Head of Advertising  
T: + 39 0536618 205  
F: + 39 0544411 099  
E: sara.mandarini@wamgroup.com  
W: www.roncuzzi.com  
Designs and builds green hoppers, belt conveyors and transhipment plant for coal, cereals, mineral.

### RAM Spreaders

6 Selby Place  
Stanley  
Skelmersdale  
Lancashire WN8 8EF  
UK  
Contact: Mr Patrick Draper  
Job Title: PR & Communication  
T: + 44 1695 556355

F: + 44 1695 556356  
E: p.draper@ramspreaders.com  
W: www.ramspreaders.com/  
RAM Spreaders, one of the leading manufacturers and suppliers of container handling equipment for over 40 years have developed their environmental friendly RAM Revolver® for dust free containerized bulk handling solutions in association with specialist container suppliers.

### Rapat Asia

Clark, Philippines  
Angeles  
Pamapaga 061  
Philippines  
Contact: Mr Craig Stall  
Job Title: General Manager  
T: + 1 2182514261  
F: + 1 2184833344  
E: cstall@rapat.com  
W: www.rapat.com

### RBL-REI France



11 Boulevard Brune  
Paris  
Cedex 14  
75682  
France  
Contact: Mr Sébastien Bouhours  
Job Title: Technical Sales Representative  
T: + 33 2 41 21 19 40  
F: + 33 2 41 21 19 59  
E: s.bouhours@rbirei-france.com  
W: www.rbirei-france.com  
Designs, builds and supplies continuous bulk handling belt conveyor systems and associated equipment, stackers up to 10,000 tph, reclaimers up to 15,000 tph and shiploaders up to 3,000 tph.

### RC Inspection B.V



Gustoweg 66  
Rotterdam  
NL 3029  
The Netherlands  
Contact: Mr Kees  
Maarschalkerweerd  
T: + 31 10 4250240  
F: + 31 6 20741355  
E: kees.maarschalkerweerd@rc-inspection.com  
W: www.rc-inspection.com/

### RDS Technology

Cirencester Road  
Minchinhampton  
Stroud  
Gloucestershire GL6 9BH  
UK  
Contact: Mr Mark Evans  
Job Title: Business Development Manager  
T: + 44 1453 733300  
F: + 44 1453 733311  
E: info@rdstec.com  
W: www.rdstec.com  
RDS Technology was formed in 1969 and specialises in the design and manufacture of a wide range of instrumentation for off-road vehicles. Products include on-board weighing scales for all types of loader including the new LOADMASTER a100.



**REMA TIP TOP GmbH**

Business Unit Industrie  
Gruber St. 63  
Poing  
Bavaria D-85586  
Germany  
Contact: Mr Lorenz Appel  
T: + 49 8121 707 234  
F: + 49 8121 707 222  
E: info@tip-top.de  
W: www.rema-tip-top.com  
Materials developed and manufactured by REMA TIP TOP are installed and maintained by its service facilities around the world. It provides a full range of conveyor belt repair and splicing products, corrosion and wear protection products, modern vulcanising materials/methods and full laboratory testing and technical assistance.

**RHC Heavy Handling Machinery Limited**

Heuweg 4  
Ulm  
Donau D-89079  
Germany  
Contact: Mr Alexander Hofmann  
Job Title: Director Europe & Middle East  
T: +49 179 491 9193  
F: +49 731 453 86  
E: info@rhcheavymachinery.com  
W: http://rhcheavymachinery.com/

**Risun Technologies**

357 West 6160 South  
Murray  
Utah 84107  
USA  
Contact: Mr Bill Whitney  
Job Title: Vice President,  
Business Development

T: + 1 801 305 4241  
F: + 1 801 281 8787  
E: andyw@risuntech.com  
W: www.risuntech.com

**River Consulting**

445 Hutchinson Ave  
Suite 740  
Columbus  
OH 43235  
USA  
Contact: Ms Carli Kessler  
Job Title: Marketing Assistant  
T: + 1 614 890 3456  
F: + 1 614 890 1883  
E: ksmith@riverconsulting.com  
W: www.riverconsulting.com  
River delivers EPCM material handling experience, including project management, design/supply of conveying systems, and engineering. With 5 offices and 28 years of experience, we provide proven solutions including blending, conveying, silo and stacking tubes, automation and controls, and marine structures.

**Roberts & Schaefer Company**

222 South Riverside Plaza  
Chicago  
Illinois  
60606-3986  
USA  
Contact: Mr Ike Miller  
Job Title: Business Development  
Mgr  
T: + 1 312 236 7292  
F: + 1 312 726 2872  
E: rs@elginindustries.com  
W: www.r-s.com

**RockTree Logistics Pte. Ltd.**

3 Church Street

#24-01/02  
Samsung Hub  
Singapore  
049483  
Singapore  
Contact: Mr Daniele Pratolongo  
T: + 65 6622 65 10  
F: + 65 6622 65 11  
E: info@rocktree.sg  
W: www.rocktree.sg  
RockTree Logistics Pte. Ltd.  
Designs customised logistics that manage the complete transshipment aspect of your supply chain for all dry bulk commodities. Our goal is to get your dry bulk moving on schedule, saving you time and money in the process.

**Ronin GMS**

No 1 Nobel Avenue  
Modderfontein  
Johannesburg  
Gauteng  
1645  
South Africa  
Contact: Mr Ferdinand Meyer  
Job Title: Sales and Marketing  
Manager  
T: + 27 11 608 3666  
F: + 27 11 608 4679  
E: ferdi@roningms.com  
W: www.roningms.com  
Ronin GMS provide bulk inventory management systems and moment in time audits for balancing real-time stock positions to stock positions on book. Our systems can be used in Silo's, warehouses and open air stock yards. Enrolling business partners worldwide.

**Royal Haskoning DHV**

George Hintzenweg 85  
Rotterdam 3068 AX  
The Netherlands  
Contact: Ms Berte Simons  
Job Title: Director Advisory Group  
T: + 31 10 2865 398  
F: + 31 10 443 3688  
E: info@rotterdam.royalhaskoning.com  
W: www.royalhaskoning.com  
Studies on marketing/distribution/feasibility/management handling/storage/environmental impact. Design, procurement, tender evaluation, contract aware, on-site supervision. Has carried out projects in over 70 countries.

**Rubb Buildings Ltd**

Dukesway  
Team Valley Trading Estate  
Gateshead  
Tyne & Wear NE11 0QE  
UK  
Contact: Ms Clare Wilson  
Job Title: Marketing Director  
T: + 44 191 482 2211  
F: + 44 191 482 2516  
E: info@rubb.co.uk  
W: www.rubb.co.uk  
Designs, manufactures and installs relocatable flat storage buildings. Structures are made from a frame consisting of hot dip galvanised steel and PVC impregnated polyester outer membrane. Structures can be supplied worldwide complete turnkey solutions to any bulk storage problem can be offered.

**RULMECA HOLDING S.P.A.**

Via A Toscanini 1  
Almé  
Bergamo 24011  
Italy  
Contact: Mr Carsten Spanggaard  
Job Title: Group Sales Director  
T: + 39 035 430 0111  
F: + 39 035 545 700  
E: rulmeca@rulmeca.it  
W: www.rulmeca.com  
Specialises in the production of rollers, motorized pulleys and components. Rulmeca Group means: wide distribution networks; close relationships with customers and complete service; manufacturing flexibility; continuously expanding and evolving product range; constant improvement in technical, design and sales service; global market reach and a network of skilled agents.

**SABS - Mining & Minerals**

PO Box 413  
Richards Bay  
KwaZulu Natal, 3900  
South Africa  
Contact: Ms Audrey Ndlovu  
Job Title: Operations Manager  
T: + 27 35 797 7209  
F: + 27 35 797 7212  
E: ndlovua@sabs.co.za  
Provides a holistic range of sampling, analytical and product certification services to the solid-fuel and mineral industries. In addition to its core values of Accredited Quality (ISO 17025), integrity, accuracy and speed, also offered is a very competitive

pricing structure resulting in product samples for analysis being received from around the world.

**Salzgitter Maschinenbau AG/PEINER Grabs**

Windmühlenbergstrasse 20-22  
Salzgitter  
D-38259  
Germany  
Contact: Mr Arnulf Köhnemann  
T: + 49 5341 302 613  
F: + 49 5341 302 424 or 606  
E: arnulf.koehnemann@smag.de  
W: www.smag.de  
Manufacturer and supplier of a complete range of grabs, i.e., (electro-hydraulic) motor grabs, single-rope grabs, two- and four-rope grabs, hydraulic grabs as well as rotators (slewing units) and special grabs for all kinds of bulk materials for various applications and purposes.

**Sammi**

Via Tuderte, 388  
Nami Scalo  
Terni 05036  
Italy  
Contact: Mr Daniele Bellezza  
Job Title: Engineer  
T: + 39 0744 733832  
F: + 39 335 5313331  
E: danielle.bellezza@sammi.it  
W: www.sammi.it  
In addition: Lime kilns equipment, Ceramic casting equipment  
Sammi is a leading company in design, supply and installation of industrial plant, able to resolve customer's needs with a wide range of application, such as:  
· Complete industrial plants · Bulk handling equipment · Off-shore conveyor systems · Lime kilns · Machine for the ceramic sector  
In January 2012, acquired majority shareholder of PLANIA Ingegneria (Architectonic Engineering Planning); a company of professional civil, industrial engineers and architects, completing the competences already present at Sammi.

**Sampling Associates International**

PO Box 338  
Newport News  
Virginia 23607-0338  
USA  
Contact: Mr Paul Reagan  
Job Title: President  
T: + 1 757 928 0484 ext 100  
F: + 1 757 928 0482  
E: preagan@samplingassociates.com  
W: www.samplingassociates.com

**SAMSON Materials Handling Ltd**

Gemini House  
Cambridgeshire Business Park  
1 Bartholomew's Walk  
Ely, Cambridgeshire  
CB7 4EA  
UK  
Contact: Mr Andy Blythe  
Job Title: Managing Director  
T: + 44 1353 665001  
F: + 44 1353 666734  
E: sales@samson-mh.com  
W: www.samson-mh.com  
The equipment portfolio includes an extensive range of Mobile



BINS



BUNKERS



STOCKPILES

**DRY BULK Inventory Management Solutions**

*Mitigating your risk and balancing your dry bulk stock to book value has never been this easy!*

Ronin is a dynamic and constantly evolving bulk commodity inventory management solution provider. Our proprietary ART software and dry bulk storage specific ART, ART+, Artemis and AIMS laser architectures were developed over a decade and today Ronin is one of the most trusted risk mitigation and supply verification solution providers in South Africa. Be it bin, bunker, warehouse or open to air stock pile; we place the control over you inventory right at your fingertips. For further information please contact us at +27 (0) 11 608 3666 or e-mail at office@roningms.com.

**INTERESTED IN SELLING OUR PROPRIETARY SOLUTIONS?**  
Contact us today to find out if we have agencies available in your area.

**www.roningms.com**

Stackers (Stormajor®) and Shiploaders, Link Conveyors, Eco Hoppers plus the Samson® Material Feeders for bulk materials reception. The SAMSON mobile concept offers an economical alternative to conventional fixed installations and represents a unique approach to the bulk cargo handling in ports and terminals requiring a high degree of mobility and flexibility.

### Sandvik Mining



Materials Handling GmbH & Co KG  
Vordemberger Strasse 12  
Leoben A-8700  
Austria

Contact: Dr. -Ing. Stefan Holz  
Job Title: Vice President Sales Projects & Systems  
T: + 43 3842 2077 550  
F: + 43 3842 2077 501  
E: stefan.holz@sandvik.com  
W: www.sandvik.mining.com  
Sandvik has the long term experience to design and install virtually any kind of bulk materials handling system. From continuous opencast mining systems to integrated stacking and reclaiming systems for mines, terminals, power plants and port facilities, we offer total solutions and turnkey installations and services. Other equipment: Continuous Mining Equipment e.g. bucket wheel excavators, belt wagons, spreaders, transport crawlers, fully-, semi-mobile and stationary crushing plants, mine- and overland conveyors.

### Sandvik Mining and Construction (China) Co., Ltd.

No.986, Baota Rd  
Jiading District  
Shanghai 201821  
China  
Contact: Mr Zhang Jianyuan  
Job Title: Vice President, Surface Mining  
T: + 86 21 6916 6050  
F: + 86 21 6916 6025  
E: jianyuan.zhang@sandvik.com  
W: www.sandvik.com  
Continuous open pit mining systems, including bucket wheel excavators, belt wagons, spreaders, transport Crawlers.

### Scantech International



PO Box 1485  
Springwood  
Queensland 4127  
Australia  
Contact: Mr Henry Kurth  
T: + 61 7 3710 8406  
F: + 61 7 3710 8499  
E: sales@scantech.com.au  
W: www.scantech.com.au  
World leader in process control solutions for conveyed bulk materials. On-belt analysers with proven technologies. Reliable, accurate and dependable ash, moisture and elemental measurement minute by minute. Control quality through blending or monitor specification compliance. Over 1,000 installations.

### Schade Lagertechnik GmbH



Dorstener Strasse 360  
Herne D-44653  
Germany  
Contact: Mr Karl-Heinz Fiegenbaum  
Job Title: Managing Director  
T: + 49 2325 58740  
F: + 49 2325 587474  
E: sales@schade-lagertechnik.com  
W: www.schade-lagertechnik.com  
SCHADE Lagertechnik GmbH is a leading supplier for stockyard technology including longitudinal and circular stockyards, blending beds, tripper cars, bridge- and portal-type stackers and reclaimers as well as wagon unloading systems. Founded in 1879, the company has been part of the Aumund Group since 2001.

### Schenck Process UK Limited

Carolina Court  
Lakeside  
Doncaster  
South Yorkshire DN4 5RA  
UK  
Contact: Mr Paul Markwell  
Job Title: Marketing Manager  
T: + 44 1302 321 313  
F: + 44 1302 554 400  
E: enquiries@schenckprocess.co.uk  
W: www.schenckprocess.co.uk  
Schenck Process is an expert in the weighing, conveying and handling of coal. Using a range of equipment including train loading and unloading systems, mechanical conveyors and weighing technologies the movement of the material can be accurately monitored and recorded.

### Schenck Process UK Ltd T/A Redler

Redler House  
Dudbridge  
Stroud  
Gloucestershire GL5 3EY  
UK  
Contact: Mr Gordon Gardiner  
Job Title: Senior Proposals Engineer - Power Division  
T: + 44 1453 763 611  
F: + 44 1453 762 602  
E: power@redler.com  
W: www.redler.com  
Other equipment: Coal feeders. Truck unloaders with capacities up to 500 tph, en masse conveyor systems handling most minerals up to 300 tph, chain and bucket elevators up to 300 tph and belt conveyors up to 200 tph. Power Station Coal Feeders up to 200 tph.

### Scorpio Engineering Pvt. Ltd

Scorpio House  
132 Wheeler Road  
Cox Town  
Bangalore 560 005  
India  
Contact: Mr Jacob P.  
Job Title: VP - Marketing & Application  
T: + 91 99801 625 39  
F: + 91 80 2548119  
E: jacob@scorpioengg.com  
W: www.scorpioengg.com  
In addition: fly ash conveying, liner container filling & discharging equipment. The company is a 25-year-old manufacturing organisation in the areas listed and the capacities of the equipment are custom specified and built. The average range is

from 100 tph to 1000 tph.

### Sea Transport Corporation

PO Box 1043  
Southport QLD 4215  
Australia  
Contact: Mr Ross Ballantyne  
T: + 61 7 5529 5777  
F: + 61 7 5529 5177  
E: ross@seatransport.com  
W: www.seatransport.com  
Sea Transport Corporation group of companies own, operate and construct commercial vessels. We offer specialist marine design and consulting services with extensive commercial experience through our team of Naval Architects, Consultants, Surveyors and Project Managers.

### Seabulk Systems Inc



Suite 150  
10271 Shellbridge Way  
Richmond  
British Columbia V6X 2W8  
Canada  
Contact: Mr Sidney Sridhar  
Job Title: President  
T: + 1 604 273 1378  
F: + 1 604 273 1358  
E: sbs@seabulk.com  
W: www.seabulk.com  
Involved in 'design and build' projects in the marine bulk transportation industry. Ports, self unloaders and transhipper developed by Seabulk have improved bulk transportation logistics significantly.

### Selpeco Resources Inc.

14150 NE 20th Street  
F1, PMB342  
Bellevue WA  
98007  
USA  
Contact: Mr S E (Steve) Laccinole  
Job Title: President  
T: + 1 425 952 4463  
F: + 1 425 822 1235  
E: selpeco@selpeco.com  
W: www.selpeco.com  
Selpeco is a project, program and construction management company for all types of bulk material handling projects. The company has particular skill at development of material handling terminals, cost analyses, project plans and creating teams of companies to design and build turnkey material handling facilities.

### Sempertrans France Belting Technology SAS

Sempertrans Marketing  
10 rue des charretiers  
Argenteuil Cedex  
95104  
France  
Contact: Ms. Catherine Flichy  
T: + 33 1 30 25 72 00  
F: + 33 2 39 80 46 16  
E: contact@sempertrans-france.com  
W: www.sempetrans.com  
SEMPERTRANS has been developing, manufacturing and installing conveyor belts for more than 50 years. Its knowhow, its experience and the quality of its products make SEMPETRANS one of the world's leading companies in its field.

### SENNEBOGEN

#### Maschinenfabrik GmbH



Hebelstrasse 30  
Straubing  
D-94315  
Germany  
Contact: Mr Bernhard Kraus  
T: + 49 9421 540143  
F: + 49 9421 43882  
E: marketing@sennebogen.de  
W: www.sennebogen.com  
Sennebogen offers a wide range of all kinds of materials handling machines, HD rope excavators/cranes, crawler cranes, telescopic cranes and base carriers.

### Sensor Technology Ltd

Apollo Park  
Ironstone Lane  
Wroxton  
Banbury  
Oxon OX15 6AY  
UK  
Contact: Mr Mark Ingham  
Job Title: Sales Manager  
T: + 44 1869 238400  
F: + 44 1869 238401  
E: info@sensors.co.uk  
W: www.sensors.co.uk  
Manufacturers of TORQSENSE and LOADSENSE Sensors and Transducers. The TorqSense and LoadSense range of sensors offer accurate, affordable, market leading products across the whole range of industrial applications.

### Sentry Equipment Corporation

966 Blue Ribbon Circle North  
Oconomowoc  
Wisconsin 53066  
USA  
Contact: Ms Doris Hoeft  
Job Title: Marketing Director  
T: + 1 262 567 7256 x 157  
F: + 1 262 567 4523  
E: dorish@sentry-equip.com  
W: www.sentry-equip.com  
Sentry Equipment manufactures liquid, gas, slurry and bulk solids samplers - delivering representative samples from a variety of applications. Products include sample coolers, needle and cylinder panels, liquid and bulk solids samplers, and steam and water sample conditioning systems and components.

### SEW-EURODRIVE GmbH & Co KG

P O Box 3023  
Bruchsal D-76652  
Germany  
Contact: Mr Manfred Müller  
T: + 49 7251 75 0  
F: + 49 7251 75 1970  
E: sew@sew-eurodrive.de  
W: www.sew-eurodrive.com  
Complete drive packages: Helical gear units, Bevel-helical gear units, motors, couplings, swing bases, brakes, geared motors. Planetary gear units, frequency inverters Torque range: 100 ... 1 Mio Nm.

### SGS (Nederland) BV

Malledijk 18  
Spijkenisse  
AE 3200  
The Netherlands  
Contact: Mr Rolf Wiltling  
T: + 31 181 69 3260  
F: + 31 181 69 3581  
E: rolf.wiltling@sgs.com

W: www.sgs.nl

### SGS Australia Pty Ltd

Unit 16  
33 Maddox Street  
Alexandria NSW 2015  
Australia  
Contact: Mr Stephen Hemsworth  
Job Title: National Business Manager  
T: + 61 2 8594 0400  
F: + 61 2 8594 0419  
E: stephen.hemsworth@sgs.com  
W: www.au.sgs.com  
SGS is the world's leading inspection, verification, testing and certification company. SGS also designs and supplies mechanical sampling systems for a wide range of bulk materials. SGS has more than 30 years experience in this field with equipment in operation throughout the world.

### SGS Minerals Services

185 Concession Street  
PO Box 4300  
Lakefield  
ON K0L 2H0  
Canada  
Contact: Ms Jean Richardson  
Job Title: Global Director Marketing  
T: + 1 705 652 2000  
F: + 1 705 652 6365  
E: minerals@sgs.com  
W: www.sgs.com/coa  
Knowing your coal quality and representatively sampling are essential to eliminate penalties and maximize profits. SGS' technical expertise provides unrivalled experience and value throughout the coal value chain to eliminate operation risk.

### SGS Minerals Services

1 Place Des Alps  
PO Box 2152  
Geneva CH 1211  
Switzerland  
Contact: Mr Richard Lihou  
T: + 41 22 739 9111  
F: + 41 22 739 9815  
E: richard.lihou@sgs.com  
W: www.sgs.com  
The SGS Group is the global leader and innovator in verification, inspection, testing and certification services. Founded in 1878, SGS is recognised as the global benchmark for the highest standards of expertise and integrity. With over 30,000 employees, the Company operates a network of offices and laboratories in over 140 countries around the world.

### Shanghai Global Machinery Co., Ltd (SGMC)

No.1449 Baishi Road  
Qingpu District  
Shanghai 201711  
China  
Contact: Mr Luo Tao  
T: + 86 21 398 21126  
F: + 86 21 398 21130  
E: luo@sgmc.com.cn  
W: www.sgmc.co

### Shanghai Janus Grab Co., Ltd.

Room 518-519  
VMO 37#  
2049 Pujin Road  
Shanghai 201114  
China  
Contact: Mr Pracy Jia  
Job Title: Marketing Manager



T: + 86 21 6885 5558  
F: + 86 21 6885 5559  
E: janus@janusgrab.com/  
W: <http://www.janusgrab.com/>  
A leading and innovative grab specialist in China and Asia market, design and manufacture various kinds of grabs for more than 20 years. We are the best link between ship and shore!

### Shanghai Qifan Co., Ltd.

25F, Baoding Mansion  
Xujiahui Road  
Shanghai  
200025  
China  
Contact: Mr Eric Liu  
T: + 86 21 51029257  
F: + 86 21 51062358  
E: [ericshyp@163.com](mailto:ericshyp@163.com)  
W: <http://www.qifangrab.com.cn/>

### Shanghai Yo-Pi Port Machinery Co. LTD

Room 603, No 3 Lane 298  
East Wenshui Road  
Shanghai  
PR  
China  
Contact: Miss Avril  
T: + 86 21 5522 28176  
F: + 86 21 5522 8739  
E: [grab@shyp-pm.com](mailto:grab@shyp-pm.com)  
W: [www.shyp-pm.com/](http://www.shyp-pm.com/)

### Shanghai Zhenhua Port Machinery Co (ZPMC) Ltd

3470 Pudong Nan Lu  
Shanghai  
PR  
200125  
China  
Contact: Mr Chen Kai  
Job Title: General Manager  
T: + 86 21 5839 6666  
F: + 86 21 5839 9555  
E: [mail@zpmc.com](mailto:mail@zpmc.com)  
W: [www.zpmc.com](http://www.zpmc.com)  
World-famous manufacturer of cranes and large steel structures. Products include quayside container cranes, gantry cranes, shiploader/unloaders, bucketwheel stackers and reclaimers, portal and floating cranes, engineering vessels and big steel bridge structures etc.

### Shanthi International

21, Center Point  
Indira Gandhi Road  
Jamnagar  
Gujarat  
361008  
India  
Contact: Mr Sanjay Masuria  
Job Title: Director - Marketing - International  
T: + 91 288 255 6671 / +91 288 2555 867  
F: + 91 288 255 4254  
E: [sanjay@servoday.in](mailto:sanjay@servoday.in)  
W: [www.servoday.com](http://www.servoday.com)

### Shaw Almx Canada

PO Box 430  
Parry Sound  
Ontario  
P2A 2X4  
Canada  
Contact: Ms Pamela Mc George  
Job Title: Sales Manager  
T: + 1 705 746 5884 / +1 9053317177  
F: + 1 705 746 9484  
E: [Pamela\\_mcgeorge@almex.com](mailto:Pamela_mcgeorge@almex.com)  
W: [www.almex.com](http://www.almex.com)

### SIBRE - Siegerland Bremsen GmbH



Auf der Stücke 1-5  
Haiger  
Hessen D-35708  
Germany  
Contact: Mr Lutz Kramaschki  
T: + 49 2773 9400 0  
F: + 49 2773 9400 20  
E: [info@sibre.de](mailto:info@sibre.de)  
W: [www.sibre.de](http://www.sibre.de)  
SIBRE-Siegerland Bremsen manufactures industrial brakes (drum-, disc-, caliper- and storm brakes) and drive components (e.g. drum couplings) and offer an optimum combination of innovative high quality products, easy usage and minimized life-cycle costs, by employing latest manufacturing and quality assurance technologies.

### SIDERAR / TERNIUM

Centro de Informacion  
Ave. Cordoba 320, Piso 4  
Ciudad Autonoma de Buenos Aires  
Buenos Aires C1054AAP  
Argentina  
Contact: Mr Ariel Fabrè  
Job Title: Engineer  
T: + 54 11 4018 6538  
F: + 54 11 4018 1005  
E: [BAIAFA@techint.net](mailto:BAIAFA@techint.net)  
W: [www.siderar.com](http://www.siderar.com)  
Engineering Manufacturer Steel Plants, group of companies.

### Siebtechnik GmbH

Platanenallee 46  
Mülheim an der Ruhr D-45478  
Germany  
Contact: Mr G Liefke  
T: + 49 208 580 100  
F: + 49 208 580 1300  
E: [sales@siebtechnik.com](mailto:sales@siebtechnik.com)  
W: [www.siebtechnik.com](http://www.siebtechnik.com)  
Wormscreen, pusher-type and vibratory centrifuges, centrifuges for granular products; decanters for continuous separation of solids from liquids; laboratory centrifugal, size-reduction machines, especially vibratory mills for grinding to ultimate fineness, machines and plants for taking and preparing samples. Horizontal, elliptical and circular motion screening machines, jigs.

### Siemens AG

Frauenauracherstrasse 80  
Erlangen 91050  
Germany  
Contact: Mr Hans Hertogh  
Job Title: Marketing Manager  
T: + 31 70 33 33 066  
F: + 31 70 33 33 534  
E: [cranes.i@siemens.com](mailto:cranes.i@siemens.com)  
W: [www.siemens.com/cranes](http://www.siemens.com/cranes)

### Siemens AG

Universitätsallee 16  
Bremen 28359  
Germany  
Contact: Mr Hans-Peter Techau  
Job Title: Sales Manager  
T: + 49 421 364 2452  
F: + 49 421 364 2828  
E: [hans-peter.techau@siemens.com](mailto:hans-peter.techau@siemens.com)

### Siemens Nederland NV

PO Box 16068  
The Hague  
2500 BB  
The Netherlands  
Contact: Mr Hans Hertogh  
T: + 31 70 33 33 066  
F: + 31 70 33 33 534  
E: [hans.hertogh@siemens.com](mailto:hans.hertogh@siemens.com)  
W: [www.siemens.com](http://www.siemens.com)

### SIG Società Italiana Gomma Spa

Via Colombo 144  
Gorla Minore  
Varese  
21055  
Italy  
Contact: Mr Gerardo Frizzati  
T: + 39 0331 365135  
F: + 39 0331 365215  
E: [sig@sig.it](mailto:sig@sig.it)  
W: [www.sig.it](http://www.sig.it)

### Simplicity Projects Pvt Ltd

17 Community Centre  
Maya Puri, Phase 1  
New Delhi  
110064  
India  
Contact: Mr R K Makhija  
Job Title: President  
T: + 91 11 2811 5093  
F: + 91 11 2811 6744  
E: [sppl@simplicityprojects.com](mailto:sppl@simplicityprojects.com)  
W: [www.simplicityprojects.com](http://www.simplicityprojects.com)

### Siwertell - a Cargotec brand

PO Box 566  
Gunnarstorp  
Bjöv  
SE-267 25  
Sweden  
Contact: Mr Juha Huovilainen  
Job Title: Sales Director, Bulk Handling  
T: + 46 42 85800  
F: + 46 42 85899  
E: [blksales@cargotec.com](mailto:blksales@cargotec.com)  
W: [www.siwertell.com](http://www.siwertell.com)  
For dry bulk handling, Cargotec offers high-capacity, efficient and environment-friendly systems under their brand name Siwertell. Products include ship loaders, ship unloaders, bulk terminal systems, horizontal and vertical screw conveyors and storage systems. Deliveries are uniquely tailor-made to suit each customer's specific requirements.

### SMB International GmbH



Friedrich List Str 3-5  
Hamburg  
21079  
Germany  
Contact: Mr Andreas Heckel  
Job Title: Managing Director  
T: + 49 41 06 12388 0  
F: + 49 41 06 12388 19  
E: [heckel@smb-group.de](mailto:heckel@smb-group.de)  
W: [www.smb-shiploading.com](http://www.smb-shiploading.com)  
SMB meets the demanding material-related requirements of conveying bulk and bagged goods. The company designs and manufactures high-performance conveying solutions designed for trouble-free long-term operation. Projects all over the world convince fertilizer producers, port operators and industrial specialists of the quality of German engineering.

### Smiley Monroe Ltd

23 Ferguson Drive  
Knockmore Hill Industrial Park  
Lisburn  
Co. Antrim  
Northern Ireland BT28 2EX  
UK  
Contact: Mr Tim Monroe  
Job Title: Marketing Manager  
T: + 44 28 9267 3777  
F: + 44 28 9266 3666  
E: [sales@smileymonroe.com](mailto:sales@smileymonroe.com)  
W: [www.smileymonroe.com](http://www.smileymonroe.com)  
Exporting worldwide - experts in the design, manufacture and service of conveyor belts, screening media and conveyor spillage control & dust encapsulation systems for bulk materials handling. Industries served range from quarrying, mining and cement plants to ports, steelworks and power stations.

### SMM-UM Sociedade de Montagens Metalomecânicas SA

Quinta da Fonte  
Edifício D. João I  
Paço de Arcos 2770-203  
Portugal  
Contact: Ms Ines Goncalves  
T: + 351 21 4697600 / 607  
F: + 351 21 4697612  
E: [ines.goncalves@smm.com.pt](mailto:ines.goncalves@smm.com.pt)  
W: [www.smm.com.pt](http://www.smm.com.pt)

### Sobemai by IRI nv

Bogaardestraat 168M  
Maldegem  
Oost-Vlaanderen B-9990  
Belgium  
Contact: Mr Kilian de Lille  
Job Title: Sales Dept  
T: + 32 50 711801  
F: + 32 50 710402  
E: [sales@sobemai.com](mailto:sales@sobemai.com)  
W: [www.sobemai.com](http://www.sobemai.com)  
Manufacturer of equilibrated cranes, selling to the international market.

### Solitec Engineering Ltd

Unit 8  
Gilchrist Thomas Industrial Estate  
Blaenavon  
Gwent NP4 9RL  
UK  
Contact: Mr David Woodland  
Job Title: General Manager  
T: + 44 1495 790623  
F: + 44 1495 790666  
E: [sales@solitec.co.uk](mailto:sales@solitec.co.uk)  
W: [www.solitec.co.uk](http://www.solitec.co.uk)  
Design and manufacture bulk materials handling equipment to food, pharmaceutical, cement, petrochemical and other industries. Product range, typically, consists of screw conveyors, bucket elevators, mixers (various), IBC systems and silo discharge aids. Part of the ROTOLOK Group of companies.

### Sotecma Inc Process Engineers

3126 Bernard-Pilon  
Suite 200  
Saint-Mathieu-de-Beloeil  
Quebec J3G 4S5  
Canada  
Contact: Ms Odette Lecompte  
Job Title: Administrative Assistant  
T: + 1 450 464 4426  
F: + 1 450 464 4534  
E: [olecompte@sotecma.com](mailto:olecompte@sotecma.com)  
W: [www.sotecma.com](http://www.sotecma.com)

Canadian company offering turnkey engineering and construction services in bulk handling and flat storage solutions at low cost. The type of structure used is a highly versatile alternative to conventional constructions. The storage shed can be dismantled and be relocated. For more details visit [www.sotecma.com](http://www.sotecma.com).

### Specialised Handling & Eng (Pty) Ltd

PO Box 125  
Featherbrooke Estate  
Mogale  
Gauteng 1746  
South Africa  
Contact: Mr Derek Albertson  
Job Title: Managing Director  
T: + 27 11 662 1649  
F: + 27 11 662 1049  
E: [she@she.co.za](mailto:she@she.co.za)  
Custom designs bulk materials handling stacking and reclaiming machinery and systems. Specialist suppliers of rail wagon tippers and positioners. Patented circular stockpiling system stacks and reclaims multiple grades of materials.

### STAG AG

Industriestrasse 11  
Maiefeld 7304  
Switzerland  
Contact: Mr Thomas Zanettin  
Job Title: Sales/Marketing  
T: + 41 81 3035800 / 53  
F: + 41 81 3035899  
E: [office@stag.net](mailto:office@stag.net)  
W: [www.stag.net](http://www.stag.net)  
STAG bulk material technology for mechanical and pneumatic conveying technology as well as ensilage technology. We are also the ideal partner as a general company for complex assignments for nearly all bulk materials in plant construction.

### Stas BV

Kathodeweg 4  
Hoom 1627 LK  
The Netherlands  
Contact: Mr Rob ver Doren  
Job Title: Managing Director  
T: + 31 229 282 940  
F: + 31 229 233 177  
E: [info@stasgroup.eu](mailto:info@stasgroup.eu)  
W: [www.stas-nl.com](http://www.stas-nl.com)  
Stas is a manufacturer (production) of transport rollers, drive and tension drums and import bearings and bearing blocks.

### Stewart Inspection and Analysis (Pty) Ltd

PO Box 267  
Brakpan 1541  
South Africa  
Contact: Mrs Carol Le Cordeur  
T: + 27 11 740 0621  
F: + 27 11 740 0626  
E: [clecordeur@stewartgroupglobal.com](mailto:clecordeur@stewartgroupglobal.com)  
W: [www.stewartgroupglobal.com](http://www.stewartgroupglobal.com)

### Stock Equipment Company

16490 Chillicothe Road  
Chagrin Falls  
Ohio 44023-4398  
USA  
Contact: Mr Simon Shipp  
Job Title: Business Development  
T: + 1 800 289 7326 ext: 217  
F: + 1 440 543 5944  
E: [simon.shipp@stockequipment.com](mailto:simon.shipp@stockequipment.com)

W: [www.stockequipment.com](http://www.stockequipment.com)  
Other equipment: High capacity hopper and belt feeder reclaim. Stock Equipment and the Schenck Process Group are global specialists in the weighing, screening, feeding and conveying of bulk materials. Systems include railcar unloading, stockpile stackers, plant transfer and high capacity volumetric and gravimetric material reclaiming and feeding systems

### Stokman BV

Brasem 18  
Raamsdonksveer  
AB 4941 SE  
The Netherlands  
Contact: Mr Jan Stokman  
Job Title: General Manager  
T: + 31 162 516040  
F: + 31 162 517590  
E: [stokmanbv@stokmanbv.com](mailto:stokmanbv@stokmanbv.com)  
W: [www.stokmanbv.com](http://www.stokmanbv.com)

### Strudes Inc

1440 Sainte Catherine St  
Suite 905  
Montreal  
Quebec  
Canada  
Contact: Mr Henry Nowodworski  
Job Title: President  
T: + 1 514 731 6951 x 123  
F: + 1 514 737 4146  
E: [nowodworski@strudes.ca](mailto:nowodworski@strudes.ca)  
W: [www.strudes.ca](http://www.strudes.ca)  
Strudes Inc. is an engineering consulting company, founded in Montreal in 1984. We specialize in design for heavy industry. We provide full range of engineering services including preliminary and

final design, contract evaluation and administration, environmental studies, schedule development, etc.

### Sucofindo

Laboratory Strategic Business Unit  
Graha Sucofindo 2nd Floor  
Jl Raya Pasar Minggu Kav.34  
Jakarta 12780  
Indonesia  
Contact: Mr Diding Sudira  
Job Title: Manager  
T: + 62 21 798 6567  
F: + 62 21 798 6878  
E: [diding@sucufindo.co.id](mailto:diding@sucufindo.co.id)  
W: [www.sucufindo.co.id](http://www.sucufindo.co.id)

### Sumitomo Heavy Industries

Material Handling Systems Co., Ltd.  
ThinkPark Tower  
1-1 Osaka 2-chome  
Shinagawa-ku  
Tokyo  
141-6025  
Japan  
Contact: Mr Akihide Ito  
Job Title: Acting General Manager, International Sales  
T: + 81 3 6737 2643  
F: + 81 3 6866 5181  
E: [Aki\\_Itou@shi.co.jp](mailto:Aki_Itou@shi.co.jp)  
W: [www.shi.co.jp](http://www.shi.co.jp)  
SES has produced a very wide range of materials handling equipment for many years and perseveres in its efforts to improve the efficiency of their leading continuous ship unloading range of machines.

### Superior Industries, Inc.



315 East State Highway 28  
PO Box 684  
Morris  
Minnesota  
56267  
USA  
Contact: Mr Jeff Steiner  
Job Title: Sales Manager  
T: + 1 320 589 2406  
F: + 1 320 585 5644  
E: [info@superior-ind.com](mailto:info@superior-ind.com)  
W: [www.superior-ind.com](http://www.superior-ind.com)  
Superior Industries is the only North American based company to manufacture a complete line of conveying equipment like telescoping radial stackers, mobile shiploaders, truck unloaders and fixed conveyor systems; plus conveyor related components like idlers, pulleys, scrapers and other accessories.

### Svendborg Brakes A/S

Jernbanevej 9  
Vejsstrup 5882  
Denmark  
Contact: Ms Yvonne Küttemann  
Job Title: Marketing Manager  
T: + 45 63 255 255  
F: + 45 62 281 058  
E: [sb@svendborg-brakes.com](mailto:sb@svendborg-brakes.com)  
W: [www.svendborg-brakes.com](http://www.svendborg-brakes.com)  
Svendborg Brakes creates high growth for both customers and ourselves by innovating, testing and delivering world class braking solutions. We are value driven and customer focused, and we continuously strive for superior

and unmatched quality in design, products, testing, certification and services. This makes us Global Leading Experts and the preferred and trusted provider in the field of intelligent braking solutions.

### Swire CTM Bulk Logistics



C Transport Maritime SAM  
Gildo Pastor Centre  
7 Rue du Gabian  
Monaco  
MC 98000  
Monaco  
Contact: Captain Giorgio Vallega  
Job Title: Operation/Commercial Manager  
T: + 377 9798 5981  
F: + 377 9798 2306  
E: [gvallega@ctmmc.com](mailto:gvallega@ctmmc.com)  
W: [www.swirectmbl.com](http://www.swirectmbl.com)  
Sums up the experience, know-how and networks of its parent companies in the dry bulk and logistics field, providing a full range of integrated services from the supplier to the end users, including specialised barge services, transshipment, river, coastal and ocean transportation by means of conventional bulkcarriers or self-unloading vessels and barge.

### Synergy Engineering Ltd

135 Glacier Street  
Coquitlam  
BC  
V3K 5Z1

Canada  
Contact: Mr Richard Neuman  
Job Title: President  
T: + 1 604 472 2800  
F: + 1 604 464 9399  
E: [office@synergy-eng.com](mailto:office@synergy-eng.com)  
W: <http://www.synergy-eng.com>

### TAIM WESER GmbH

Office Saarouis  
Von- Lettow-Vorbeck Str 6  
Saarlouis  
D-66740  
Germany  
Contact: Mr Frank Hermann  
Job Title: Sales Manager - Bulk Materials Handling  
T: + 49 5731 1508 12  
F: + 49 5731 1508 13  
E: [frank.herrmann@taimweser.com](mailto:frank.herrmann@taimweser.com)  
W: [www.taimweser.com](http://www.taimweser.com)

### TAIM WESER, S.A.

Carretera de Castellón, km 6,3  
Poligono Industrial La Cartuja  
Zaragoza  
50013  
Spain  
Contact: Mr Simon Whalley  
Job Title: Sales Director  
T: + 34 976 500 006  
F: + 34 976 500 028  
E: [info@taimweser.com](mailto:info@taimweser.com)  
W: [www.taimweser.com](http://www.taimweser.com)  
TAIM WESER is a world leading company within the fields of bulk materials handling, lifting equipment, waste treatment plants and renewable energy, with more than 100 years of experience and committed to innovation and technology.



## SWIRE CTM BULK LOGISTICS



## Together Bridging the Gap between Supplier and Industry

### Mission:

To provide reliable customised and cost-effective dry-bulk seaborne supply chain services aimed at bridging the gap between Supplier and Industry

### Services:

- River and coastal specialized feeders
- Self-unloading vessels and barges
- Floating Cranes
- Floating Terminals
- Ship to Ship, Barge to Ship and Ship to Barge operations
- Integrated seaborne logistics "dry-bulk door to door"

Monaco: Ph. +377 9798 5900  
Singapore: Ph. +65 6603 9400  
[www.swirectmbl.com](http://www.swirectmbl.com)  
contacts: [bulklogistics@swirectmbl.com](mailto:bulklogistics@swirectmbl.com)

*your partner for progress*



LOAD, UNLOAD AND  
STOCKPILE  
SHIP, BARGE  
AND RAIL



HIGHEST CAPACITIES ON THE PLANET



INSTANT PORTABLE TRUCK UNLOADING




SIGNIFICANTLY REDUCE VESSEL LOAD TIME

## GO ANYWHERE. DO ANYTHING.

- Highly mobile conveyor designs.
- Functional machines for multiple applications.
- Robust designs withstand demanding work.
- Custom engineered to accommodate job site.

 superiorindustries

 @superiorind

**SUPERIOR**

[www.superior-ind.com](http://www.superior-ind.com)

**TAKRAF GmbH**

Torgauer Str. 336  
Leipzig  
D-04347  
Germany  
Contact: Mr Thomas Eckel  
Job Title: Vice President Sales  
T: + 49 341 2423 605  
F: + 49 341 2423 610  
E: takraf.sales@tenova.com  
W: www.takraf.com  
With more than a century of experience and tradition in the field of open cast mining, bulk materials handling, and port facilities, the company is proud of its worldwide standing. Services offered: planning, design, fabrication, erection and after sales service of machines, systems and complete plants.

**Tebodin Consultants & Engineers**

P.O. Box 16029  
The Hague  
2500 BA  
The Netherlands  
Contact: Mr R J Smits van Oyen  
Job Title: Manager Logistics, Asset Management & Maintenance  
T: + 31 70 348 0249  
F: + 31 70 348 0591  
E: info@tebodoin.com  
W: www.tebodoin.com  
Tebodin is an independent, multidisciplinary firm of consultants and engineers. We offer clients around the world the experience and expertise of more than 3,500 employees. Our extensive office network allows us to offer clients the best of both: integrated engineering and consultancy expertise combined with local knowledge. Clients include major international companies, governments and multilateral financing institutes.

**techNaero aps**

Finlandsgade 29  
Haslev  
DK-4690  
Denmark  
Contact: Mr Anders Larsen  
Job Title: CEO  
T: + 45 56314925  
F: + 45 56314555  
E: sales@techNaero.dk  
W: www.techNaero.dk  
Other equipment: Silo systems

**Telestack Limited**

Omagh  
County Tyrone  
BT79 0NZ  
Northern Ireland  
Contact: Miss Samantha Thompson  
Job Title: Marketing Co-Ordinator  
T: + 44 28 82 25 11 00  
F: + 44 28 82 25 22 11  
E: samantha@telestack.com  
W: www.telestack.com  
Specialist manufacturers of Mobile bulk material handling systems for the Ports/Inland terminals, Mines, Quarries, Steel Mills, Cement Plants and

Powerstation industries globally. The mobile range of equipment offers unrivalled flexibility for the operator, reducing costs in Cap-Ex Investment compared to fixed installations, fuel and labour. Equipment includes; mobile shiploaders/unloaders, mobile stackers, mobile truck unloaders, mobile reclaim hoppers, mobile rail wagon loaders/unloaders and mobile link conveyors. We have supplied and support some of the world largest blue chip companies.

**Tema BV**

PO Box 3220  
Rijswijk  
GE  
2280  
The Netherlands  
Contact: Mr M P van Delden  
T: + 31 70 390 6555  
F: + 31 70 399 3390  
E: mp.vandelden@tema.nl  
W: www.tema.nl  
TEMA / SIEBTECHNIK Centrifuges Coal centrifuges for coarse and fine coal; Sample taking, sample preparation, complete sampling plants and laboratory equipment; Linear- and circular-motion screening machines.

**TEMA Systems Inc.**

7806 Redsky Drive  
Cincinnati  
Ohio  
45249  
USA  
Contact: Mr Mike Mullins  
T: + 1 513 489 7811  
F: + 1 513 489 4817  
E: sales@tema.net  
W: www.tema.net  
Other equipment: Centrifuges/dryers. Manufacture and supply cross-belt sampling systems (up to 3M wide primary cutter) in accordance with ISO standards, screening machines and centrifuges for the coal and other mineral industries. Please visit our web page for additional information.

**TENOVA S.p.A - Tenova Takraf Italy**

Via Albareto, 31  
Genova  
16153  
Italy  
Contact: Mr Pietro Bibolini  
Job Title: Commercial Director  
T: + 39 010 605 4634  
F: + 39 010 605 4710  
E: pietro.bibolini@it.tenovagroup.com  
W: www.tenovagroup.com  
Provides a full range of high capacity bulk materials handling equipment for coal and other minerals and ores. Its range of CSUs and shiploaders are amongst the largest capacity machines operating worldwide.

**Tenova TAKRAF Africa**

58 Emerald Parkway Road  
Greenstone Hill Ext. 21  
Johannesburg  
2047  
South Africa  
Contact: Mr Peter Cheshire or Ms Kay Subramoney  
T: + 27 11 201 2300  
F: + 27 11 455 4547  
E: TMM@za.tenovagroup.com  
W: www.tenovagroup.com  
Profile Statement: Tenova is a



worldwide supplier of advanced technologies, products, and engineering services for the iron & steel and mining industries providing innovative, integrated solutions for complete process areas. Profile Sentence: Tenova: One network, better solutions.

**Terex Fuchs GmbH**

Industrie str. 3  
Bad Schönborn  
76669  
Germany  
Contact: Mrs Bettina Hartlieb  
Job Title: Marketing  
T: + 49 725 384 101  
F: + 49 725 384 212  
E: bettina.hartlieb@fuchs-terex.de  
W: www.terex-fuchs.de  
Loading machines from 19 to 77.5t operating weight and up to 21m reach. Complete solutions honed for your specific purpose.

**Terex Port Solutions**

Forststrasse 16  
Düsseldorf  
D-40597  
Germany  
Contact: Mr Peter Klein  
Job Title: Senior Manager Marketing  
T: + 49 211 7102 3355  
F: + 49 211 7102 3660  
E: info@terexportsolutions.com  
W: www.terexportsolutions.com  
Terex Port Solutions supplies customers in ports with a unique combination of machines, software and services under the Terex and Terex Gottwald brands. Whether it is ship-to-shore cranes, reach stackers or fully automated, integrated handling systems for containers and bulk, Terex Port Solutions provides reliable solutions for rapid, safe, efficient handling of all forms of cargo.

**The ACT Group**

14644 El Molino Street  
Fontana  
CA  
92335  
USA  
Contact: Mr Edward Sunseri  
T: + 1 909 350 4703  
F: + 1 909 350 4982  
E: esunseri@groupactinc.com  
W: www.groupact.com  
Bulk material handling: includes supply and design of conveyor, hoppers, screens, crushers. Must

control: includes dust collection and dust suppression utilizing air, water and chemicals. Engineering services and complete service and installation capabilities are also offered.

**The China Navigation Co. Pte. Ltd**

300 Beach road #27-01  
The Concourse  
Singapore  
199555  
Singapore  
Contact: Mr Richard Sell  
Job Title: Commercial Manager  
T: + 65 6603 9429  
E: Richard.Sell@chinanav.com  
W: www.chinanav.com

**The Grab Specialist b.v.**

Draaibrugweg 1  
Almere  
1332AA  
The Netherlands  
Contact: Mr Emiel Bleyenbergh  
Job Title: Director  
T: + 31 365 32 88 22  
F: + 31 365 49 99 22  
E: info@tgs-grabs.nl  
W: www.tgs-grabs.nl  
We supply all types of bulk handling grabs like clamshells in single line/remote control/electro-hydraulic/2-line and 4-line. Grabs can be supplied in standard design or to clients specification. We stand for good advice, quality, short delivery times and good service.

**The Raring Corporation**

12007 NE 95th St  
Vancouver  
WA 98682  
USA  
Contact: Mr David L Raring  
Job Title: President  
T: + 1 360 892 1659  
F: + 1 360 892 1624  
E: draring@raringcorp.com  
W: www.raringcorp.com

**Thermo Fisher Scientific**

501 - 90th Avenue NW  
Minneapolis  
MN 55433  
USA  
Contact: Ms Paula Frisk  
Job Title: Product Manager/Marketing  
T: + 1 800 445 3503  
F: + 1 763 783 2525  
E: Sales.bulk.us@thermofisher.com  
W: www.thermoscientific.com/

bulkweighing  
Thermo Scientific branded products are a specialty line of industrial in-motion weighing, inspection, monitoring and control equipment. These products, formerly branded as Ramsey, are used for process control, production monitoring and automation in the coal and minerals mining, cement, construction and aggregates industries, among others.

**ThyssenKrupp Canada**

1177-11th Avenue SW  
Suite 500  
Calgary  
Alberta T2R 1K9  
Canada  
Contact: Mr Steve Harrington  
Job Title: Vice President Marketing  
T: + 1 403 209 4431  
F: + 1 403 245 5625  
E: infocanada@thyssenkrupp.com  
W: www.krupp.ca  
Involved for many years in the design and supply of turnkey, environmentally sensitive mining and material handling projects. Product range: conveying systems; crushing systems; stackers; ship loaders and ship unloaders; storage and reclamation design and supply.

**ThyssenKrupp Materials Handling**

71 Nanyuki Road  
Sunninghill  
Johannesburg  
Gauteng  
2191  
South Africa  
Contact: Mr Klaus Peter Müller  
Job Title: Managing Director  
T: + 27 11 236 1243  
F: + 27 11 236 1235  
E: info.tkmh@thyssenkrupp.com  
W: www.thyssenkrupp-materialshandling.co.za  
We offer a comprehensive product portfolio and a close-meshed sales and service network for our customers in the sectors of mining, cement, mineral processing and bulk materials handling. Our customers benefit from our decades of experience and our unique know-how in the fields of research and development, engineering, project management and after-sales service.



## ThyssenKrupp Resource Technologies GmbH



Business Unit Materials Handling  
Ernst-Heckel-Strasse 1  
St Ingbert-Rohrbach  
Saarland  
D-66386  
Germany  
Contact:  
T: + 49 6894 599 0  
F: + 49 6894 599 468

E: Info-mh@thyssenkrupp.com  
W: www.thyssenkrupp-resource-technologies.com  
Beside individual items listed, the company designs and supplies complete material handling plants turnkey to thermal power plants, the fertilizer industry (for handling of urea, phosphates etc), the cement and mining industry as well as complete port handling solutions.

### ThyssenKrupp Robins, Inc.

7730 E. Bellevue Ave  
Suite #404  
Greenwood Village  
Colorado 80111-5820  
USA

Contact: Mr Bill Halley  
Job Title: Mechanical Engineer  
T: + 1 303 770 0808  
F: + 1 303 770 4522  
E: bill.halley@thyssenkrupp.com  
W: www.krupprobins.com

Design and supply turnkey, environmentally sensitive mining and material handling projects. Product range includes: conveying systems; crushing systems; stackers; ship loaders and ship unloaders; storage and reclamation design and supply.

### Tideworks Technology - Europe

Maaswijkweg 7  
Spijkenisse 3203 LG  
The Netherlands  
Contact: Mr Rik Verspeek  
Job Title: Business Manager  
T: + 31 181 668668  
F: + 31 181 668660  
E: info@tideworks.com  
W: www.tideworks.com

### TMEIC

1325 Electric Road  
Roanoke  
Virginia  
24018  
USA  
Contact: Mr Don Samsa  
Job Title: Marketing  
T: + 1 540 283 2000  
F: + 1 540 283 2001  
E: don.samsa@tmeic-ge.com  
W: www.tmeic.com

### TMSA Tecnologia em Movimentação S/A



Bernardino Silveira Pastoriza, 710  
Bairro Sarandi  
Porto Alegre  
RS  
91160-310  
Brazil

Contact: Mr Mathias Elter  
Job Title: CEO  
T: + 55 51 2131 3318  
F: + 55 51 2131 3330  
E: mathias.elter@tmsa.ind.br  
W: www.tmsa.ind.br  
Design, manufacturing, assembling and representation of mechanic, pneumatic and electrohydraulic equipments for handling and processing solid bulk materials (ore, cereals, sugar, flour, etc.), for port terminals or industries and agricultural facilities.

### Tramco, Inc



1020 East 19th Street  
Wichita  
KS 67214  
USA  
Contact: Mr Steve Cloud  
Job Title: President  
T: + 1 316 264 4604  
F: + 1 316 264 7965  
E: sales@tramcoinc.com  
W: www.tramcoinc.com  
Manufactures enclosed belt, drag chain and bucket elevators for industrial markets. The JetBelt conveyor is a belt supported by a cushion of air between the belt and the pan and offers an entirely new level of operating efficiency for dry bulk handling of coal.

### Trans Elektro

Spuieweg 8a  
Waalwijk  
N-Br  
5145NE  
The Netherlands

Contact: Mr Ronald van Egeraat  
Job Title: Business Development  
T: + 31 416 34 00 16  
F: + 31 416 56 07 90  
E: egeraat@transelektro.nl  
W: www.transelektro.com  
BMAir systems provide Clean Cabin Air for all brands of mobile plant. The usage of a BMAir systems means complying to HSE and taking care of plant operatives' health. The wide range of products starts from step-in models up to advanced systems.

### Trans-Global Solutions, Inc

11811 East Freeway  
Suite 630  
Houston  
Texas  
TX 77029  
USA  
Contact: Mr Dan Orsini  
T: + 1 713 453 0341  
F: + 1 713 453 2756  
E: dorsini@tgsgroup.com  
W: www.tgsgroup.com

### Trans-Global Solutions, Inc.

5255 N Twin City Hwy  
Nederland  
TX  
77627  
USA  
Contact: Mr William Scott  
Job Title: Vice President  
T: + 1 409 727 4801  
F: + 1 409 729 1132  
E: wfscott@tgsgroup.com  
W: www.tgsgroup.com

### TRF Limited (TaTa)

11 Station Road  
Burma Mines

Jamshedpur  
Jharkhand  
831 007  
India  
Contact: Mr D.C. Jha  
Job Title: Sr. Divisional Manager (Marketing)  
T: + 91 657 2345728  
F: + 91 657 2271 075  
E: dcjha@sr.trfild.com  
W: www.trfild.com / www.tata.com/trf  
Other equipment: Port crane, Special duty crane, SDL, Steep Inclined Conveyor. A TaTa Group of company producing service to all sectors in bulk material handling & processing system on epc basis.

### Triodetic

10 Didak St  
Arnprior  
Ontario  
K7S 0C3  
Canada  
Contact: Mrs Sue Staniszewski  
Job Title: Sales Manager  
T: + 1 613 623 3434  
F: + 1 613 622 4003  
E: info@triodetic.com  
W: www.triodesic.com  
Designs, manufactures and constructs dome roofs and longitudinal bulk storage enclosures for medium-large clear span applications.

### Triple Point Technology

22 Frith Street  
Mayfield West  
NSW  
2304  
Australia  
Contact: Mr Steve Maxwell

ThyssenKrupp Resource Technologies is the combination of ThyssenKrupp Polysius and ThyssenKrupp Fördertechnik

# MOVING MORE TOGETHER

Our new company ThyssenKrupp Resource Technologies combines the expertise of ThyssenKrupp Polysius and ThyssenKrupp Fördertechnik into one single company. This enables us to provide the mining and cement industries, mineral processing and bulk materials handling sectors with a comprehensive product portfolio and an all-embracing sales and service network.

Our customers benefit from our many years of experience and our unique know-how, particularly in the fields of research and development, engineering, project management and after-sales service.

[www.thyssenkrupp-resource-technologies.com](http://www.thyssenkrupp-resource-technologies.com)

ThyssenKrupp Resource Technologies GmbH  
Business Unit Materials Handling, Ernst - Heckel - Str. 1  
D-66386 St. Ingbert / Germany  
Phone: +49 6894 599-0  
E-Mail: info-mh@thyssenkrupp.com  
[www.thyssenkrupp-resource-technologies.com](http://www.thyssenkrupp-resource-technologies.com)

ThyssenKrupp  
Resource Technologies



ThyssenKrupp



# Ideal Solutions for Port Facilities

- Equipment for solid bulk material handling
- Designed to meet customer's needs
- High quality, excellent durability

- Reliability and short term delivery
- Shiploader retrofit and upgrading
- Dust aspiration systems



**Sugar 3,000 t/h**



**Grain 1,500 t/h**



**Iron Ore - 4,000 t/h**



**Grain/Ore 1,000 t/h wood chips**



**Grain - 1,500 t/h**



**Grain - 2,500 t/h / wood chips**



**Kaolin 1,100 t/h**



**Grain - 1,500 t/h each tower**



**Dust trap - Upgrading**



**TMSA**  
Tecnologia em Movimentação

Porto Alegre/RS - Brazil  
Phone: +55 51 2131-3333  
E-mail: [comercial@tmsa.ind.br](mailto:comercial@tmsa.ind.br)  
Website: [www.tmsa.ind.br](http://www.tmsa.ind.br)





Job Title: Gvice President,  
Mining, APAC Sales  
T: + 61 2 4908 2222  
F: + 61 2 4968 2043  
E: info@tpt.com  
W: www.tpt.com  
Triple Point Technology is the  
leading global provider of  
Commodity Management  
software. Triple Point's  
Commodity XL Metals and Mining  
solution reduces operational,  
logistical, marketing and  
commercial costs by managing  
the tonnage, quality and value of  
coal and mineral supply chains.

### Tsubakimoto Bulk Systems Corporation

4-1  
Terauchi 2-Chome  
Toyonaka  
Osaka  
561-0872  
Japan  
Contact: Mr Y. Horii  
Job Title: Manager, Overseas  
Operations  
T: + 81 6 6862 2329  
F: + 81 6 6862 8516  
E: info@tsubakimoto.com  
W: www.tsubakimoto.com  
Produces bulk handling systems  
equipment, bucket, flow and pan  
conveyors.

### TTS Group ASA



Barstølleveien 26  
Kristiansand  
4606  
Norway  
Contact: Mr. Peter Klasson  
Job Title: Communications &  
Marketing Coordinator  
T: + 47 55 94 74 08  
F: + 47 55 94 74 01  
E: info@tts-marine.no  
W: www.ttsgroup.com  
TTS is a global company that  
develops and supplies equipment  
for the maritime and offshore  
industry, organised in five  
divisions: Marine Cranes, Drilling  
Equipment, Dry Cargo Handling,  
Deck Machinery and Port &  
Material Handling. TTS has 25  
operational units in 12 countries.

### TTS HuaHai Ships Equipment

18th Floor  
3255 Zhou Jia Zui Road  
Shanghai  
200093  
China  
Contact: Mr Lian Zhou Yang  
Job Title: Business Development  
Manager  
T: + 86 21 6539 8257  
F: + 86 21 6539 7400  
E: info@tts-huahai.com

### Ulrich Brehme GmbH

Otto-Hahn-Str. 1  
Hattorf am Harz  
37197  
Germany  
Contact: Mr Bodo Altgeld-  
Wichmann  
Job Title: Marketing Manager  
T: + 49 5584 94210 0  
F: + 49 5584 94210 99  
E: info@brehme-ubo.com  
W: www.brehme-ubo.com



### V D D B (Pty) Ltd

PO Box 16985  
Lyttelton  
Gauteng  
0140  
South Africa  
Contact: Mr Leonard van der  
Dussen  
T: + 27 12 664 2300  
F: + 27 12 644 2902  
E: admin@vddb.co.za  
W: www.vddb.co.za  
Manufactures air-supported belt  
conveyors. Low-pressure air is  
blown in, replacing roller-idlers on  
the carrying side. The  
aeroconveyor is a bulks solid  
conveyor and is suitable for a  
wide range of products. It can be  
totally enclosed protecting the  
product from the environment and  
vice versa.

### Veenstra Machinefabriek B.V.

De Holwert 10  
KC Coevorden  
7741  
The Netherlands  
Contact: Mr Paul Kuiper  
T: + 31 524 599 333  
F: + 31 524 599 330  
E: mach@veenstra-coevorden.nl  
W: www.veenstra-coevorden.nl

### Ventyx

193 Turbot Street  
Brisbane  
Queensland  
4000  
Australia  
Contact: Mr Greg Clark  
Job Title: CEO  
T: + 61 7 3303 3333  
F: + 61 7 3303 3232  
E: info@mincom.com  
W: www.ventyx.com

### Verachttert Nederland B.V.

De Bloemendaal 8  
Hertogenbosch  
North Brabant  
5221  
The Netherlands  
Contact: Mr Robbert Boersma  
Job Title: Sales Manager  
T: + 31 73 640 41 11  
F: + 31 73 641 97 40  
E: info@veraned.nl  
W: www.veraned.nl/en  
Verachttert has developed itself in  
60 years into the market leader of  
Work Tools for all types of

excavators and wheel loaders,  
and offers solutions for the  
specific wishes of the customer.  
Verachttert products represent  
quality and productivity. Other  
equipment: Coal handling  
buckets & funnel buckets

### Verstegen Grippers BV



PO Box 1014  
Nieuwegein  
3430 BA  
The Netherlands  
Contact: Mr Eric Visser  
Job Title: Managing Director  
T: + 31 3060 62222  
F: + 31 3060 60657  
E: info@verstegen.net  
W: www.verstegen.net  
A leading manufacturer,  
specialising in developing,  
designing and constructing all  
kinds and types of grab units. Its  
product range includes  
single/two/four rope grabs and  
hydraulic grabs.

### Vibrafloor



Les Pièces Bourgeoises  
Giury  
71640  
France  
Contact: Mr Jean-Claude Poncet  
Job Title: President  
T: + 33 3 85 44 06 78  
F: + 33 3 85 44 06 79  
E: jc.poncet@vibrafloor.com  
W: www.silexport.com  
Vibrafloor supplies the automatic  
reclaimer VIBRAFLOOR.  
Independent vibrating modules  
laid on slight inclines, typically 8  
to 12°, remove efficiently most  
bulk products, free flowing or  
cohesive, out of ship holds, silos,  
storage platforms, railway cars  
etc.... No personnel, maintenance  
free, totally safe, negligible  
operating cost are major  
advantages.

### Vollert Anlagenbau GmbH

Stadtseestr. 12  
Weinsberg  
74189  
Germany  
Contact: Mr Juergen Schiemer  
Job Title: Vice President

T: + 49 7134 52 232  
F: + 49 7134 52 222  
E: juergen.schiemer@vollert.de  
W: www.vollert.com  
Other equipment: Shunting  
Systems. Vollert shunting  
systems are the ideal solution for  
rail-bound in-plant loading and  
shunting operations handling all  
kinds of materials (bulk cargo,  
liquids etc) - ranging from  
stationary shunting systems to  
free-moving shunting robots with  
diesel or electric drive.

### Volvo Construction Equipment SA

Hunderenveldlaan 10  
Brussels  
B 1082  
Belgium  
Contact: Mr Bill Law  
Job Title: Director of External  
Communications  
T: + 32 2 482 5021  
F: + 32 2 675 1777  
E: bill.law@volvo.com  
W: www.volvo.com  
Other equipment: Articulated  
Haulers. Manufactures a wide  
range of wheeled front end  
loaders and payloaders for heavy  
duty/high capacity loading and  
reloading work.

### Vossloh Kiepe GmbH



Kiepe-Platz 1  
Düsseldorf  
D-40599  
Germany  
Contact: Mr Manfred Grünwald  
Job Title: Head of Sales Industrial  
Components  
T: + 49 211 7497 270  
F: + 49 211 7497 420  
E: m.gruenwald@kiepe-  
elektrik.com  
W: www.kiepe-elektrik.com  
Vossloh Kiepe is a leading  
supplier of pull wire switches, belt  
drift switches and speed  
monitoring devices for the control  
of belt conveyor systems. The  
trade mark KIEPE is worldwide a

synonym for proven products of  
highest quality.

### VSR Industrietechnik GmbH

Am Alten Schacht 6  
Duisburg  
D-47198  
Germany  
Contact: Mr Wolfgang Schlabach  
Job Title: Export Manager  
T: + 49 20 66 99 66 40  
F: + 49 20 66 99 66 62  
E: info@vsr-industrietechnik.de  
W: www.vsr-industrietechnik.de  
Products have been proving  
themselves in the bulk handling  
business for more than 20 years.  
Due to the specially designed and  
patented products, they have  
achieved a name for their high  
effectiveness and dependability.

### Wirtech AG

Zelgstrasse 86  
Uetendorf  
CH-3661  
Switzerland  
Contact: Mr K Buehler  
Job Title: Marketing  
T: + 41 33 346 5050  
F: + 41 33 346 5059  
E: info@wirtech.ch  
W: www.wirtech.ch

### Worley Parsons Canada (Westmar)

400-233 West First Street  
North Vancouver  
BC  
V7M 1B3  
Canada  
Contact: Mr Stanley Cowdell  
Job Title: President  
T: + 1 604 985 6488  
F: + 1 604 985 2581  
E: info@westmar.com  
W: www.westmar.com

### Yernaux-Pasage

Zone Industrielle Beraugard PB  
552  
Brive Cedex  
19107  
France  
Contact: Mr Willy Banc  
Job Title: Marketing Department  
T: + 33 475 66 4600  
F: + 33 555 860 563  
E: willy.banc@preciamolen.fr

	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Enclosed Storage	Railcar Loaders/Unloaders	Engineering Consultants	Other
4B BRAIME Elevator Components																										
A. Friedr. Flender AG																										
A/S Cimbrja																										
ABB AB																										
Abbey Rollers Limited																										
Achenbach GmbH Metalltechnik																										
AE AntiEmission GmbH																										
AE Automation (M) Sdn bhd																										
AFM Industries																										
Agrico Sales, Inc.																										
Akerbergs Maskiner AS																										
Alex Stewart International																										
AMECO SA																										
Anvil Attachments																										
Arlona Engineering																										
ASGCO																										
ASGCO Manufacturing																										
ATIC Services																										
ATIC Services - Asia Pacific																										
Atlas Manufacturing Co. Inc																										
AUMUND Foerdertechnik GmbH																										
Aurecon																										
Aurecon Hatch																										
Ausenco																										
Bedeschi SpA																										
Bekaert NV																										
BELTANA Trading EK																										
Benetech GmbH																										
Benetech, Inc.																										
Beumer Group GmbH & Co KG																										
BGS Holland																										
Binder + Co AG																										
Birrus International Pty Ltd																										
BLUG Credeblug S.L.																										
BMT Transport Solutions GmbH																										
Bogaert Transmission (GEHA)																										
Bosch Rexroth B.V.																										
Bosch Rexroth Mellansel AB																										
Boyer Area Manufacturing (BAM)																										
Brelko Conveyor Products																										
Bretby Gammatech Ltd.																										



	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Enclosed Storage	Stockyard Systems	Railcar Loaders/Unloaders	Engineering Consultants	Other
Bridgestone Industrial Limited	✓												✓												✓	
Bridon International Ltd													✓													
BRUKS AB	✓										✓	✓	✓									✓				
BRUKS Rockwood Incorporation	✓																									
Bucket Mart Inc.																										
BULK .ID																										
Bulk Cargo Handling BVBA																										
Bulk Logistic Landmark																										
Burtimer Bulk Engineering	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓									✓				
BV Beco	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓																
C. Christophel GmbH																										
Cable Arm Inc																										
Cachapuz Bilanciai Group																										
Calim Grab Industry																										
Cambelt International Corp																										
Capotex																										
Carbonser, S.A. DE C.V.																										
Cargotec Sweden AB, Marine Selfunloaders																										
Carlsen	✓																									
Carsurin																										
Caterpillar Inc																										
Caterpillar SARL																										
Cavotec SA																										
CDM Systems, Inc	✓																									
Certex UK	✓																									
CFS Handling srl.																										
Changsha Kaiyan Instruments Co. Ltd																										
China Huadian Engineering Co., Ltd.(CHEC)	✓																									
China Sonangol International (S) Pte																										
CHL Equipment Ltd																										
(incorp.Verstegen Grabs UK)																										
Cimbria Bulk Equipment																										
Claudius Peters Technologies GmbH	✓																									
Claudius Peters Technologies S.A.S																										
Cleveland Cascades Ltd																										
Clough Limited	✓																									
CNBM International Engineering Co., Ltd.																										

	Shiploaders	Grab Loaders	Grab Unloaders	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Enclosed Storage	Stockyard Systems	Railcar Loaders/Unloaders	Engineering Consultants	Other
CNK INTERNATIONAL LIMITED																								
Coal & Mineral Technologies (SABS)																								
COBRA Europe SA																								
Coederici Logistics S.p.A.																								
Cofely Experts BV																								
Coles Associates																								
Comercial Tauro S.A.																								
Conductix-Wampfler Australia																								
Conductix-Wampfler AG																								
Conductix-Wampfler Americas																								
Continental Construction (Memphis)																								
Continental Conveyor & Equipment																								
CONTINENTAL MATADOR RUBBER																								
ContiTech Transportsysteme GmbH																								
Control Systems Technology Pty Ltd																								
CPS Projects (Pty) Ltd																								
CST Covers																								
CST Storage																								
Cullen Grummitt & Roe																								
Dallan Huarui Heavy Industry Group Co. Ltd																								
dbis																								
DCC Grabs																								
DCL, Incorporated																								
De Regt Conveyor Systems																								
Dearborn MidWest Conveyor Co.																								
DeMarco Industrial Vacuum Corp																								
DemcoTECH Engineering																								
DMN-WESTINGHOUSE																								
Dome Corp of North America																								
Dome Technology																								
DOMTEC International LLC																								
Donaldson Filtration Deutschland GmbH																								
Doosan Benelux SA																								
Doppelmayr Transport Technology GmbH																								
Dos Santos International, LLC																								
Dosco Overseas Engineering Ltd																								
Doubrava Ges GmbH																								



	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Enclosed Storage	Railcar Loaders/Unloaders	Engineering Consultants	Other
Dunlop Conveyor Belting																									
Duro Felguera Plantas Industriales, S.A.																									
Dust Control Technology																									
Dust Solutions Inc.																									
E-Crane World Wide																									
E-Crane World Wide / E-Crane International USA																									
Edge																									
EIFFEL Etablissement SOMDEL																									
Elecon Engineering Company Ltd																									
Elecon Singapore PTE Ltd.																									
Elgin Engineering and Construction																									
EMS-TECH Inc																									
EMS-TECH Inc.																									
EMTICI Engineering Co Ltd																									
Enco Engineering Inc																									
Engicon nv																									
Enviro Abrasion Resistant Engineers Pvt. Ltd																									
EngiPO LLC																									
Eriez Europe																									
ESI Eurosil BV																									
Euromec Srl																									
Euro-Tranco BV																									
F E Schulte Strathaus GmbH & Co KG																									
F L Smidth A/S																									
Fairport Engineering																									
FAM Foerderanlagen Magdeburg																									
Famak SA																									
Fantuzzi Reggiane S.p.a																									
FELD Maschinen-und Industriebau GmbH																									
Fenner Dunlop Conveyor Belting Europe																									
Fenner plc																									
Figee Crane Services BV																									
Flexco																									
Flexco Europe GmbH																									
Flexicon Corporation																									
Flexveyor Conveyor																									
FLSmidth GmbH																									
FLSmidth Minerals Pvt. Ltd																									
FLSmidth Spokane, Inc.																									
FLSmidth Wadgassen GmbH																									

	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Enclosed Storage	Railcar Loaders/Unloaders	Engineering Consultants	Other
Frigate Technologies Private Limited	✓	✓	✓		✓				✓												✓			
Gama Endustri Tesisleri Imalat Ve Montaj AS										✓	✓	✓	✓	✓	✓	✓	✓			✓	✓			✓
Gambarotta Gschwendt																								
Ganz Danubius Trading Co Ltd	✓	✓							✓													✓		
Garwood Consulting Ltd	✓								✓												✓			
General Kinematics Corp.																								
Geométrica de México, S.A. de C.V.																								
Geométrica Inc																				✓	✓			
Gertech Handling Systems cc																				✓	✓			
GF Material Handling System Srl	✓								✓		✓	✓	✓	✓	✓	✓	✓	✓						✓
GGT Goldengrain Trading SA																								
Golden West Industries																								
Goodman Conveyor Company																								
Gordinne & Co NV/SA																								
Guttridge Ltd	✓																							
Guven Grab and Machine Ltd. Co																								
Hans Turck GmbH & Co. KG																								
Hansen Industrial Transmissions NV																								
Hansen Transmissions Ltd																								
Hasel Machinery Inc																								
Haskoning India Pvt Ltd																								
Hasler International SA																								
HAUGEN System AB																								
Heyl & Patterson Inc	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Hitachi Construction Machinery (Europe) NV																								
Horizon Conveyor Equipment									✓		✓	✓	✓	✓	✓	✓	✓	✓						
HOSCH-Fördertechnik																								
Recklinghausen GmbH																								
Hycontrol Limited																								
Hyundai Heavy Industries Co	✓																							
IBAU HAMBURG	✓	✓																						
Igus GmbH																								
IHI Transport Machinery Co. Ltd. (IUK)	✓	✓	✓						✓		✓	✓	✓	✓	✓	✓	✓	✓						
IMASA																								
Imperial Technologies, Inc.	✓																							
Incolab Services BV																								
Inspectorate America Corporation																								
Inspectorate International Ltd																								
International Bulk Handling Tech'y BV	✓																							



	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Stockyard Systems	Railcar Loaders/Unloaders	Engineering Consultants	Other
Intersystems																										
iSAM AG Gesellschaft fuer angewandte Kybernetik																										
Isomonte SA																										
Italgro S.r.l.																										
J & B Grabs b.v.																										
Jansen & Heuning																										
Jenike & Johanson Inc.																										
Joy Mining Machinery																										
JSC Tehnoros																										
KABELSCHLEPP GmbH																										
Kalenborn Kalprotect GmbH & Co.																										
Kardesler Grab & Machine																										
KCT Grab Industry																										
Kinergy Corporation																										
Kingfisher Industrial Ltd																										
KIROW ARDELT GmbH																										
Kleemann GmbH																										
Knight Energy Services Limited																										
Kocks Krane International GmbH																										
Konecranes (France)																										
Konecranes Finland Corporation																										
Konecranes Hafentechnik GmbH																										
KPI-JCI																										
Kranunion																										
Kröger Greifertechnik GmbH & Co.																										
Laing O'Rourke																										
Larox Flowsys Oy																										
Larsen & Toubro Limited																										
Lassing Dikken Consulting Engineers																										
Lawrence Industries, Inc.																										
Libran Engineering and Services																										
Liebherr-Hydraulikbagger GmbH																										
Liebherr-Werk Nenzing GmbH																										
Listenow GmbH & Co.																										
Logmarin Advisors Srl																										
LogSys NV																										
Loibl Allen-Sherman-Hoff GmbH																										
Lycopodium																										
Macawber Engineering, Inc																										





	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Enclosed Storage	Railcar Loaders/Unloaders	Engineering Consultants	Other
PINTSCH BUBENZER GmbH																										
PIV Drives GmbH - a Brevini																										
Power Transmission Co.																										
Plantragg Developments																										
PLM Cranes B.V.																										
Polymer Industries - Ultrapoly Division																										
Portasilo Ltd																										
Port-Trade ApS																										
Powerscreen International																										
Precia-Molen Nederland BV																										
Primasonics International Limited																										
Procon Engineering Limited																										
PT Bukaka Teknik Utama																										
PT Jakarta Prima Cranes																										
PT Pamapersada Nusantara																										
PT SpanSet Indonesia																										
PT Thiess Contractors Indonesia																										
PT. Bando Indonesia																										
Quadrant Engineering Plastics																										
Products																										
Quality Handling Systems Pty Ltd																										
Qube Ports & Bulk																										
R & S S.r.L.																										
RAM Spreaders																										
Rapat Asia																										
RBL-REI France																										
RC Inspection B.V																										
RDS Technology																										
REMA TIPTOP GmbH																										
RHC Heavy Handling																										
Machinery Limited																										
Risun Technologies																										
River Consulting																										
Roberts & Schaefer Company																										
RockTree Logistics Pte. Ltd.																										
Ronin GMS																										
Royal Haskoning DHV																										
Rubb Buildings Ltd																										
RULMECA HOLDING S.P.A.																										
SABS - Mining & Minerals																										
Salzgitter Maschinenbau AG/PEINER																										
Grabs																										



# Talk to the Royal HaskoningDHV Dry Bulk Port & Terminal Professionals

## STUDIES

- Master planning
- Feasibility
- Infrastructure
- Logistics
- Environmental Impact
- Due Diligence

## PROJECT SERVICES

- Study, Design and Engineering
- Supplier and Equipment selection
- Tendering and Contracting
- Project and Contract Management
- Construction Management
- Commissioning

## OUR PROFESSIONALS

- Dry Bulk Handling Experts
- Port Planners
- Environmental Experts
- Marine Experts
- Civil, Mechanical and Electrical Engineers

Johan Pruiskens – Director Advisory Group  
johan.pruiskens@rhdhv.com  
+31 62906586 / +31 102865445

[royalhaskoningdhv.com](http://royalhaskoningdhv.com)

# If you're reading this....

...then so, very probably, are your customers!

To find out how you can benefit from advertising in the world's only monthly dry bulk publication contact Jason Chinnock or Andrew Hucker-Brown on Tel: +44 (0)1206 562560 Fax: +44 (0)1206 562566 Email: [info@dc-int.com](mailto:info@dc-int.com)





	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Enclosed Storage	Stockyard Systems	Railcar Loaders/Unloaders	Engineering Consultants	Other
Sammi	✓						✓			✓										✓						✓	
Sampling Associates International							✓			✓																✓	
SAMSON Materials Handling Ltd	✓									✓																✓	
Sandvik Mining	✓									✓																✓	
Sandvik Mining and Construction (China) Co., Ltd.	✓						✓			✓																✓	
Scantech International																										✓	
Schade Lagertechnik GmbH										✓																✓	
Schenck Process UK Limited	✓									✓																✓	
Schenck Process UK Ltd T/A Redler										✓																✓	
Scorpio Engineering Pvt. Ltd	✓						✓			✓																✓	
Sea Transport Corporation										✓																✓	
Seabulk Systems Inc										✓																✓	
Selpeco Resources Inc.	✓						✓			✓																✓	
Semperttrans France Belting Technology SAS	✓																									✓	
SENNEBOGEN Maschinenfabrik GmbH	✓						✓																				
Sensor Technology Ltd																											
Sentry Equipment Corporation																											
SEW-EURODRIVE GmbH & Co KG																											
SGS (Nederland) BV																											
SGS Australia Pty Ltd																											
SGS Minerals Services																											
SGS Minerals Services																											
Shanghai Global Machinery. Co., Ltd (SGMC)																											
Shanghai Janus Grab Co., Ltd.																											
Shanghai Qifan Co., Ltd.	✓																										
Shanghai Yo-Pi Port Machinery Co.																											
Shanghai Zhenhua Port Machinery Co (ZPMC) Ltd	✓						✓			✓																✓	
Shanthi International																											
Shaw Almex Canada																											
SIBRE - Siegerland Bremsen GmbH																											
SIDERAR / TERNIUM	✓																										
Sieberttechnik GmbH																											
Siemens AG																											
Siemens AG	✓																										
Siemens Nederland NV																											
SIG Società Italiana Gomma Spa																											
Simplicity Projects Pvt Ltd	✓																										

	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Stockyard Systems	Railcar Loaders/Unloaders	Engineering Consultants	Other
Siwertell – a Cargotec brand	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓								✓	✓	✓	✓	✓	
SMB International GmbH											✓	✓	✓			✓				✓				✓	✓	
Smiley Monroe Ltd																	✓									
SMM-UM Sociedade de Montagens Metalomecânicas SA																										
Sobemai by IRI nv	✓				✓																					
Solitec Engineering Ltd																										
Sotecma Inc Process Engineers	✓																									
Specialised Handling & Eng (Pty) Ltd	✓																									
STAG AG																										
Stas BV																										
Stewart Inspection and Analysis (Pty) Ltd																										
Stock Equipment Company																										
Stokman BV	✓																									
Strudes Inc																										
Sucofindo																										
Sumitomo Heavy Industries	✓																									
Superior Industries, Inc.	✓																									
Svendborg Brakes A/S	✓																									
Swire CTM Bulk Logistics																										
Synergy Engineering Ltd																										
TAIM WESER GmbH	✓																									
TAIM WESER, S.A.	✓																									
TAKRAF GmbH	✓																									
Tebodin Consultants & Engineers	✓																									
techNaero aps	✓																									
Telestack Limited	✓																									
Tema BV																										
TEMA Systems Inc.																										
TENOVA S.p.A - Tenova Takraf Italy	✓																									
Tenova TAKRAF Africa																										
Terex Fuchs GmbH	✓																									
Terex Port Solutions	✓																									
The ACT Group																										
The China Navigation Co. Pte. Ltd																										
The Grab Specialist b.v.																										
The Raring Corporation																										
Thermo Fisher Scientific																										
ThyssenKrupp Canada	✓																									
ThyssenKrupp Materials Handling	✓																									
ThyssenKrupp Resource Technologies GmbH	✓																									



	Shiploaders	Ship-unloaders	Grab Loaders	Grab Unloaders	Grabs	Continuous Ship Unloaders	Barge Loaders	Barge Unloaders	Self-Unloaders	Belt Conveyors/Loaders	Stackers	Reclaimers	Stacker Reclaimers	Conveyors & Accessories	Hoppers	Crushing	Screening	Blending	Weighing	Sampling & Inspection	Dust Control & Suppression	Drives, Controls & Automation	Enclosed Storage	Stockyard Systems	Railcar Loaders/Unloaders	Engineering Consultants	Other
ThyssenKrupp Robins, Inc.	✓																										
Tideworks Technology - Europe																											
TMEIC																											
TMSA Tecnologia em Movimentação																											
Tranco, Inc																											
Trans Elektro																											
Trans-Global Solutions, Inc																											
Trans-Global Solutions, Inc.																											
TRF Limited (TaTa)																											
Triodetic																											
Triple Point Technology																											
Tsubakimoto Bulk Systems Corporation																											
TTS Group ASA																											
TTS HuaHai Ships Equipment																											
Ulrich Brehme GmbH																											
V D B (Pty) Ltd																											
Veenstra Machinefabriek B.V.																											
Ventyx																											
Verachtert Nederland B.V.																											
Verstegen Grijpers BV																											
Vibrafloor																											
Vollert Anlagenbau GmbH																											
Volvo Construction Equipment SA																											
Vossloh Kiepe GmbH																											
VSR Industrietechnik GmbH																											
Wirtech AG																											
Worley Parsons Canada (Westmar)																											
Yernaux-Pasage																											



# HAVE ENGINE - WILL TRAVEL

## Diesel-Hydraulic Grapple Model DHSG

Our new Hydraulic Grapple with its self-contained diesel engine gives you the freedom to use on any crane. It connects easily and is operated by radio remote control to offer you the ultimate in flexibility.

- Engine models up to 150HP
- Air or water cooled engines to match your environment
- Removable bottom hatch for easy engine access and maintenance
- High-strength, wear-resistant alloy steel tines
- 50 Gallon Fuel Tank will run over a continuous 12 Hour Shift
- Environmental food grade hydraulic fluid option



**Available Now for  
Rent or Purchase.**



Log on to [INFO.anvilattachments.com/diesel](http://INFO.anvilattachments.com/diesel) for videos and more information or contact us today at 225-654-8222.





One Source

# Performance delivered

## Groundbreaking Solutions.

FLSmidth's stockyard equipment is designed and manufactured to satisfy the requirements of high capacity plants, with stockpile volumes of up to 1 million m<sup>3</sup> at rates up to 10,000 t/h. Based on innovative modular design, FLSmidth systems ensure efficient material handling at low investment and operating cost, combining a wide variety of proven components for tailor-made solution according to customer's specifications.

FLSmidth BulkExpert™ allows an optimized and unmanned operation of dry bulk equipment.

FLSmidth stockyard equipment provides state-of-the-art systems for efficient material handling.

## For further information please contact us at:

FLSmidth Material Handling

Phone: +49 (0) 6834 470-0

E-Mail: [wadgassen@flsmidth.com](mailto:wadgassen@flsmidth.com)

[www.flsmidth.com](http://www.flsmidth.com)

