DC: DRY CARGO international

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FEATURES

- Asian Coal Trades
- South Africa
- Great Lakes
- Grab Manufacturers
- Stackers, Reclaimers & Stockyards

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www.swirectmbl.com
Bulklogistics@swirectmbl.com

PUBLISHERS
Jason Chinnock
jason@dc-int.com
Andrew Hucker-Brown
andrew@dc-int.com

EDITORIAL
Louise Dodds-Ely Editor
louise@dc-int.com
Jay Venter Deputy Editor
editorial@dc-int.com
Samantha Smith Directories
directories@dc-int.com
Stephanie Hodgkins Office Manager
accounts@dc-int.com

SALES
Lourens van Emmenis Sales Director
sales@dc-int.com
Matthew Currin Senior Sales Executive
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**
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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

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
Website: www.dc-int.com
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APRIL 2014 issue

featuring...

Grain and soya provide a boost

Import demand for commodities looks set to benefit from a number of positive influences in the twelve months ahead. Consequently global seaborne dry bulk trade can be expected to show a sizeable increase. Higher volumes of minerals, other industrial cargoes and agricultural products are foreseeable.

Better prospects for international economic activity were reflected in the latest European Commission predictions, published a few weeks ago. In the world as a whole, GDP is forecast to grow by an average 3.6% in 2014, compared with last year's slow 2.9%, accelerating to 3.9% next year. But within this overall average, China is expected to see a slowing trend, a view reinforced by some recent indicators.

Grain

Favourable influences have become more prominent in the grain (including soya) trades. In the soya segment, US Dept of Agriculture calculations point to global trade rising by 15mt (million tonnes) or 10% in the current 2013/14 marketing year ending September, reaching 164mt, as shown by table 1. Higher imports into China, up by 15% to 69mt, are likely to be a big element of growth.

World trade in wheat and coarse grains is also likely to increase, almost as rapidly. International Grains Council figures suggest a 25mt or 9% rise in crop year 2013/14 ending June, to 291mt. Larger imports into China are the biggest part of this growth as well, predicted to double to 19mt. Even as the economy slows, Chinese usage of agricultural products is strengthening.

Iron ore

Among positive contributions to steel industry raw materials trade this year, additional iron ore imports into Europe could be visible, resulting from the economic revival now under way. After two years of declining steel production in the European Union, domestic demand for steel seems to be picking up and a modest increase is envisaged during the current year.

Higher iron ore purchases by several key buyers are reflected in forecasts just published by Australia's Bureau of Resources and Energy Economics. Global iron ore trade (including land movements, but mainly seaborne) in 2014 is estimated at 1315mt, a 90mt (7%) increase. Extra volumes into South Korea and other countries could be accompanied by strong growth in China.

Coal

Steel production advances are likely to have advantages for coking coal trade this year, while steam coal import demand looks set to see further expansion. Asian importers are the principal focus, especially India and China, but positive trends in a wide range of other areas are also prominent.

One possible exception to this picture is a reduction in Europe's steam coal imports. These imports appear to have diminished last year despite remaining buoyant in the United Kingdom, with weakness especially notable in Spain and Italy. Although it is not yet clear whether another decrease will be seen in 2014, longer-term prospects are distinctly unfavourable, given the EU policy decision to promote cleaner energy use and close coal-fired power stations.

Minor bulks

Steel products trade comprises a large part of the 'minor bulks' segment, and continued growth may be achievable this year. After rising by an estimated 10mt or 3% last year, to about 290mt, a similar 2–3% rate of increase could emerge in 2014. Larger imports into the EU market are envisaged, and possibly into the US market as well, where demand is improving.

Bulk carrier fleet

Amid decelerating expansion in the entire world bulk carrier fleet, the Panamax (65–99,999dwt) size group is still growing rapidly. As shown by table 2, this fleet's deadweight capacity growth exceeded 9% in 2013, and a further 7% is expected to be added this year. However, both newbuilding deliveries and scrapping are difficult to predict accurately.

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	29.5	31.4
China	41.3	50.4	52.6	59.3	59.9	69.0
Other Asia	23.1	25.8	27.2	27.4	27.7	29.8
Others	30.3	30.2	31.2	30.5	31.7	33.4
World total	128.9	140.0	145.3	150.1	148.8	163.6
% change from previous year	-3.2	+8.5	+3.8	+3.2	-1.0	+10.0

source: US Dept of Agriculture (10 March 2014) *Oct/Sep marketing years* **forecast*

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

	2009	2010	2011	2012	2013	2014*
Newbuilding deliveries	6.7	14.4	22.2	27.0	20.0	18.0
Scrapping	2.1	0.7	5.2	8.8	4.5	4.0
Losses	0.1	0.0	0.2	0.0	0.0	0.0
Plus/minus adjustments	1.6	0.8	0.3	-0.1	0.1	0.0
World fleet at end of year	120.2	134.7	151.8	169.9	185.5	199.5
% change from previous year-end	+5.4	+12.0	+12.7	+11.9	+9.2	+7.5

source: Clarksons (historical data) & BSA 2014 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

Liebherr cranes handling coal at Krishnapatnam Port in India.

Asia coal trade 2014

Dr Tim Jones, e-coal.com

The first quarter of 2014 has shown some resemblances to that of last year in the Asian coal markets, with a rather unspectacular few weeks being seen so far. The Chinese lunar new year holiday is a regular feature of the quarter in the region, and market players always hope that business will pick up after the usual quiet period during that break. This year did not see much of a pick up after that, but there has been enough activity across the region to keep most of the buyers and sellers busy. India and China continue to be the main growth areas, while the established large markets in Japan, Korea, and Taiwan remain active in the spot tender market. Australia and Indonesia have seen challenges to production, and the Russians are looking to increase exports to the Asian markets.

In the latest developments at the time of writing, the spot

PROMPT SPOT PRICES FOR THERMAL COAL 2013

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

Location	8 Mar 13	1 Mar 13	% change
South Africa	84.85	85.50	–0.76
Colombia	88.60	88.00	0.68
Venezuela	84.40	83.90	0.60
Russia Baltic	86.50	86.70	–0.23
Poland	86.50	86.70	–0.23
Newcastle	93.00	93.30	–0.32
Queensland	93.75	94.10	0.37
China	97.25	97.50	–0.26
Russia East	97.05	97.25	–0.21
Banjarmasin	82.00	82.15	–0.18
Mahakam	83.55	83.85	–0.36

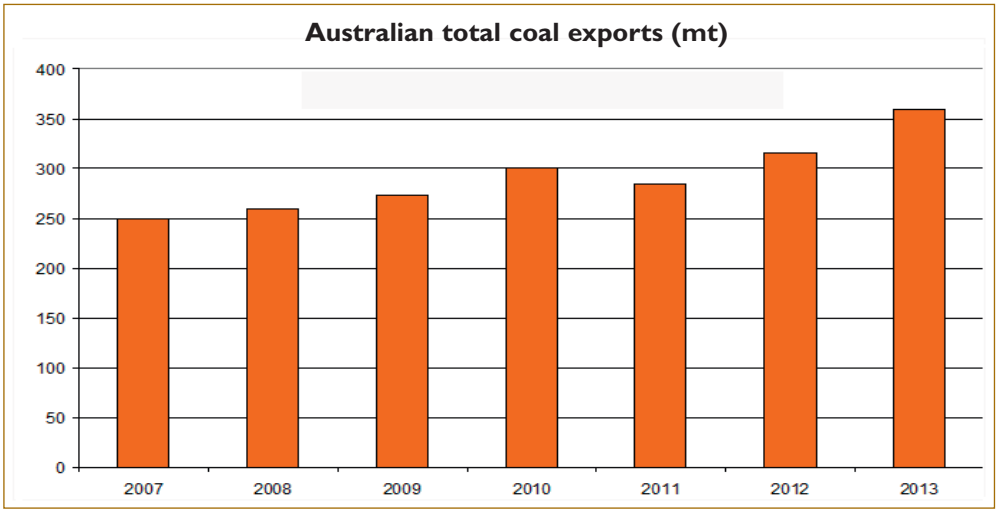
Prices are FOB vessel except Banjarmasin and Mahakam River which are FOB barge Source: e-coal.com

PROMPT SPOT PRICES FOR THERMAL COAL 2014

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

Location	7 Mar 14	28 Feb 14	% change
South Africa	76.75	76.50	0.33
Colombia	78.50	78.00	0.64
Venezuela	79.00	78.80	0.25
Russia Baltic	80.00	79.00	1.27
Poland	80.20	79.00	1.52
Newcastle	76.30	78.00	–2.18
Queensland	77.00	78.70	–2.16
China	94.75	96.00	–1.30
Russia East	82.00	83.40	–1.68
Banjarmasin	71.90	73.20	–1.78
Mahakam	73.75	75.00	–1.67

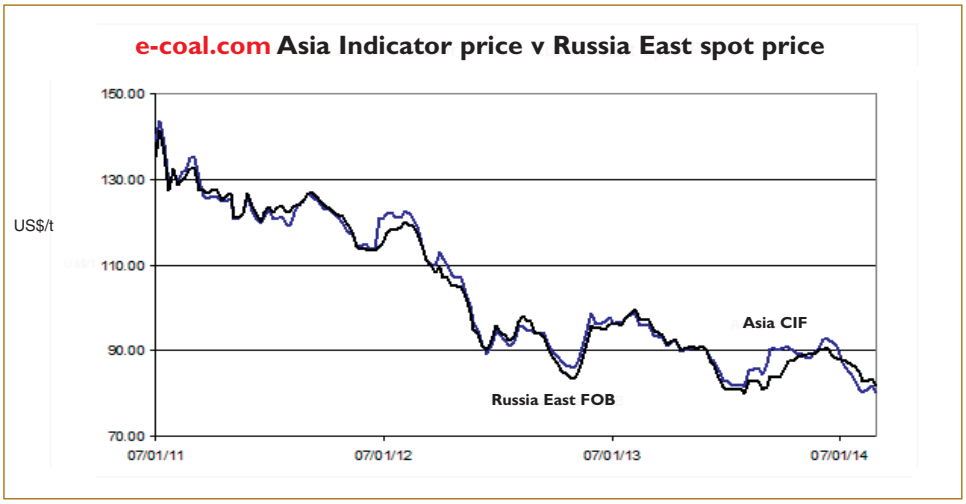
Prices are FOB vessel except Banjarmasin and Mahakam River which are FOB barge Source: e-coal.com

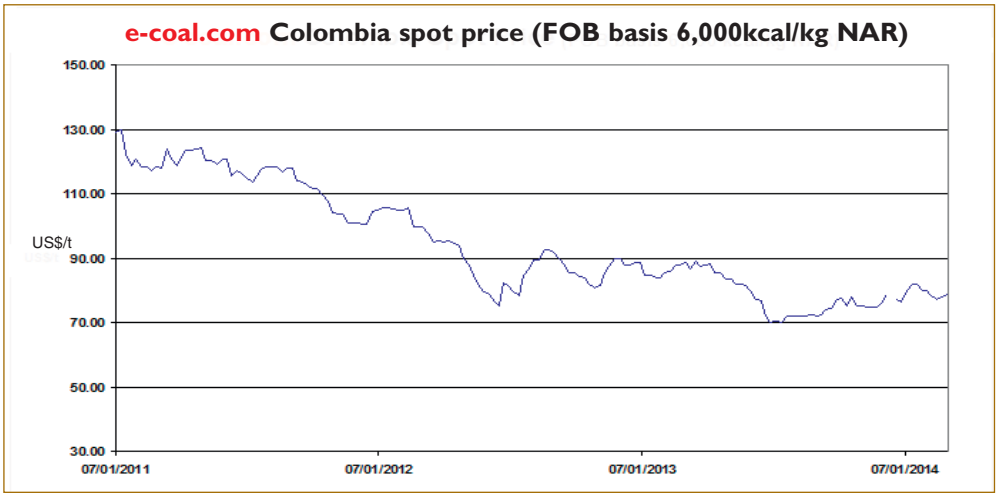


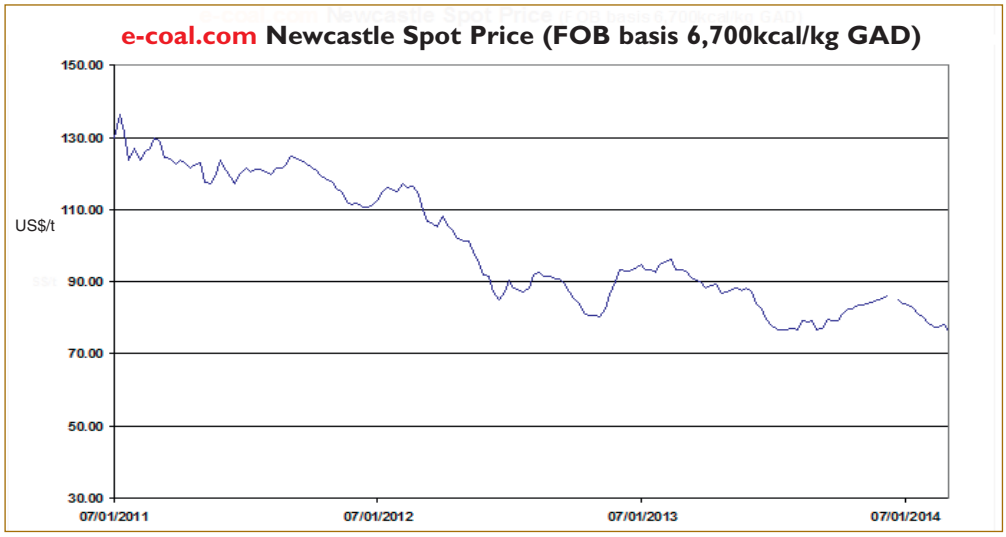
market for coking coal around the world has not seen much more activity since the start of the year, and prices have continued to soften. Demand in regions outside China and India has not been strong, so the coking coal exporters have been unable to forge better deals elsewhere. The Asian thermal coal spot market has seen some more interest in certain coal types during March, with Indonesian shippers and traders reporting some new deals for sub-bituminous coal. The interest is said to be from India, as well as enquiries from Korea and China. Port congestion has worsened in Queensland as adverse weather affected that part of Australia. This is mainly impacting on the shipments of hard coking coal from the Bowen Basin, with thermal coal less affected. Vessel queues continue to lengthen at the time of writing after port shutdowns due to cyclone activity.

As Coal India Limited struggles to meet previously set production targets in order to meet growing demand for coal in the country, there has been a threat of strike action. The latest analyses suggest up to 6mt (million tonnes) of coal could be taken out of the supply chain as a result. It seems unlikely that this shortfall could be made up by additional imports of coal during the rest of 2014, so economic development would be affected by a further constraint on energy availability. Although spot market interest has been subdued so far this year, the latest statistics indicate that India's coal imports reached a new record in January. Total tonnage reached 35.9mt in the first month of 2014 which was an increase of 17.5% compared to the same month in 2013. Coking coal comprised 5.7mt of the total.

In the spot tender and tender markets recently, Formosa Plastics Group has been seeking 1.05mt of coal for delivery during the second quarter of this year. Meanwhile, Taipower has issued a tender seeking 375kt of sub-bituminous coal. The Asian thermal coal spot market has softened in early March after a brief recovery in late February. Australian shippers at Newcastle saw the price drop by 2.18% over a one week period. Indonesian spot prices, as well as those in the Russian Pacific markets also softened. Much of this decrease has been attributed to China's reduction of the domestic price for Shenhua thermal coal. India's problems with producing enough coal are continuing, with targets being missed during February. Demand for imported coal continues to be firm there. In other parts of Asia there has been firmer demand for coal from north America over the past year, as shown in the latest Canadian port data. There was a flurry of activity in the derivatives market at the end of February, with some new records set in terms of volume of trades. The Chinese imposition of a domestic price decrease is causing concern about another potential bout of defaults on







deals already done in that market at firmer prices. Indeed, it is puzzling why trade has continued with some buyers and traders who have a record of such defaults over the past few years.

In early March, Japan's Joban Joint Power was reported to have purchased Australian low sulphur thermal coal following its tender seeking eight Panamax cargoes. Although the tender is believed to have not been fully satisfied, up to six cargoes are said to have been sold for about US$80/t FOB (free on board) basis 6,322kcal/kg GAR (gross air dried). Delivery is required during April to December. The five Korean Gencos also issued a joint tender seeking 650kt of coal for delivery during July to September. Coal specifications include CV 5,700 kcal/kg NAR (net as received) (min). Russian coal was precluded from this tender. Meanwhile, Kowepo issued a tender seeking 140kt of coal with specifications including CV 4,600kcal/kg NAR (min). Delivery is required during July and August. In Taiwan, Taipower awarded the business to Energy Man Holdings (four Panamaxes), Vitol (four), and Advance Trading (one) following its recent tender seeking 11 Panamax cargoes of coal. A total of 675kt of coal with specifications including CV 5,000kcal/kg GAR (min) was purchased. Delivery is required during April to September and the price is reported to be in the range US$90.89–92.49/t CIF (cost, insurance, freight) from various suppliers. Two Panamax cargoes were left unfulfilled due to the offers being above Taipower's ceiling price.

Russian Trader Carbo One has established a new office in Seoul in order to tap further into the predicted growth in coal demand from South Korea over the next few years. The trader is looking to increase tonnage from the current 30mtpa in both thermal and coking coal business. Additional capacity at the port of Vostochny would allow Carbo One to expand in other Asian markets as well.

In India, the consortium involving state-owned entities, International Coal Ventures Limited (ICVL), is reported to be close to completing due diligence on certain coal assets

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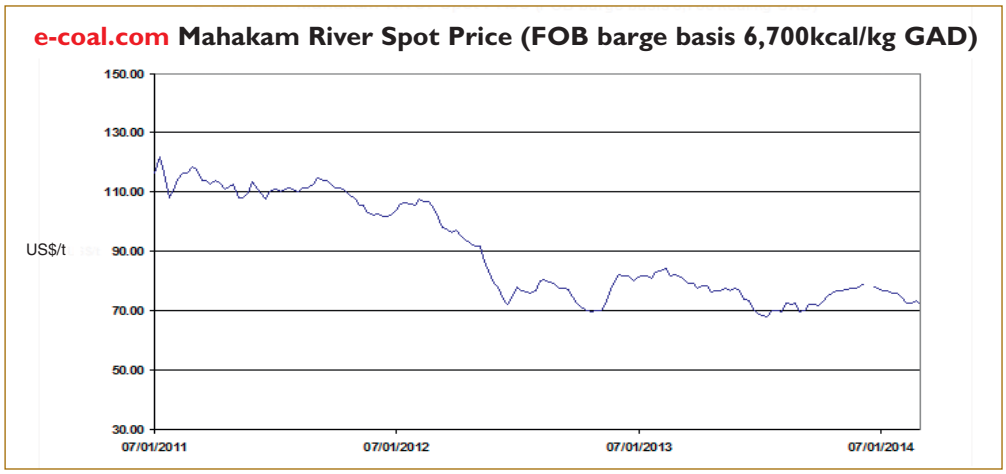
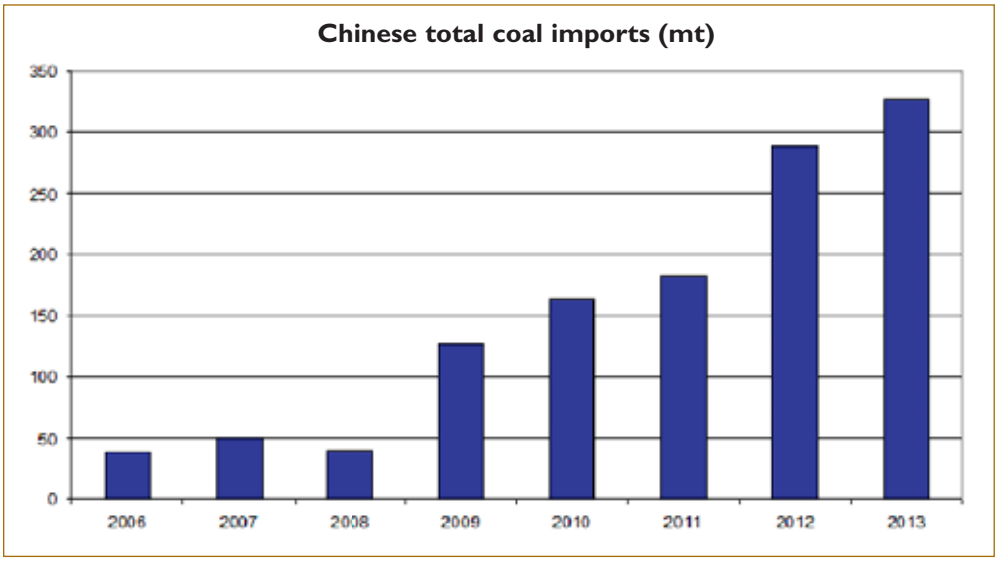


Newcastle Spot Price was US$78.00/t FOB basis 6,700kcal/kg GAD at the time. Higher ash material is said to be priced in the mid-US$60s per tonne. The Indonesian thermal coal market saw more activity from the Asian buyers, with India, Korea, Philippines, and Japan understood to have made enquiries for supply in the coming few months. The disruption to inland production caused by earlier wet weather, however, was still affecting supplies for prompt delivery, and prices were firmer. In contrast, there had been reports of low water levels on the coal rivers in Kalimantan, and this was having an impact on barging to the load ports. Japanese cement makers are among the consumers rumoured to have been the end destination for some of the enquiries in late February. Meanwhile, Asian coal demand has received a new boost from Cambodia commissioning its first coal-fired power station in February as well. In the coking coal markets in Asia, the steel makers are believed to be concentrating on blend optimization to control costs, and some shippers had been offering products at attractive prices. The blends are believed to be priced at several dollars per tonne below the price of the reference brand for contract deals.

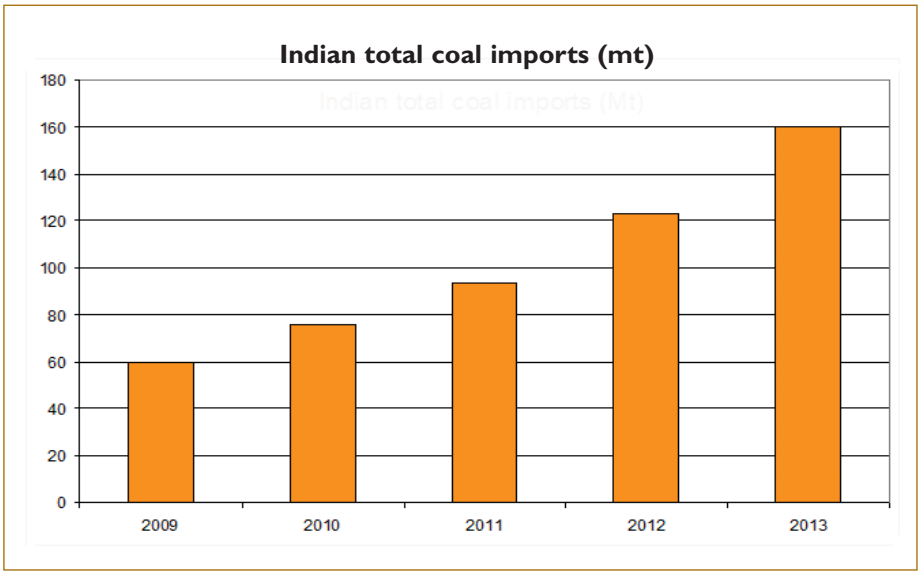
overseas. ICVL is particularly interested in strategically located coal mines in Africa and Indonesia, as well as in other regions including Australia and Canada. Its members are Steel Authority of India Limited, Coal India Limited, National Thermal Power Corporation, National Mineral Development Corporation, and Rashtriya Ispat Nigam Limited. All are said to have ample cash ready for the acquisition of suitable coal assets.

Meanwhile, a total of 31 coal blocks that were allocated to private entities for development have been retrieved by the government after they failed to meet deadlines for progress on development. Some of these blocks had been allocated to major companies including Jindal Steel, Reliance, and Tata Group.



At the end of February and over the following week, the spot market at Newcastle firmed a little, with traders reporting more enquiries for thermal coal. The buyers appear to have been from a range of Asian countries, and from general industry as well as the power generators. Some new Chinese interest was apparent after a bit of a lull following the New Year holiday there. The e-coal.com

As forecast by e-coal.com several years ago, Vietnam is needing more and more imported coal as its power generation programme proceeds. Petrovietnam's importing branch PV Power Coal has recently signed a memorandum of understanding with Australian and Indonesian shippers for

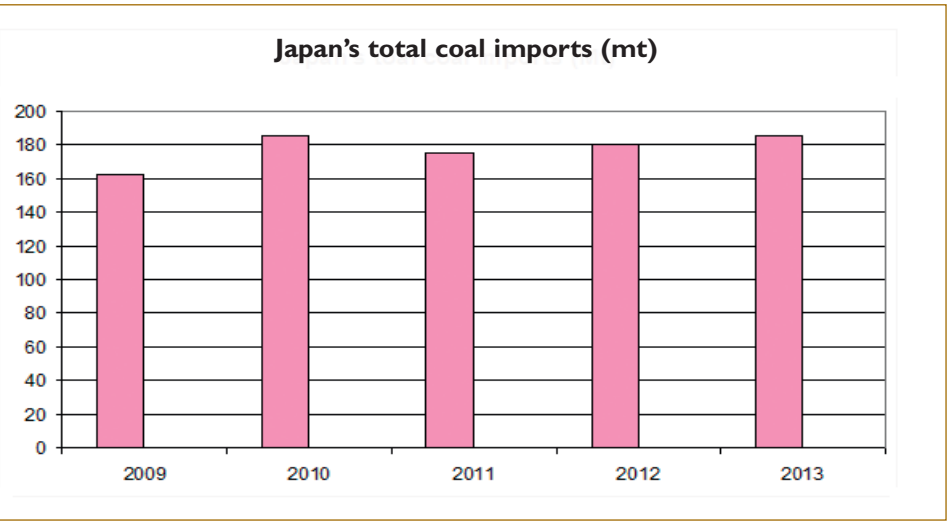


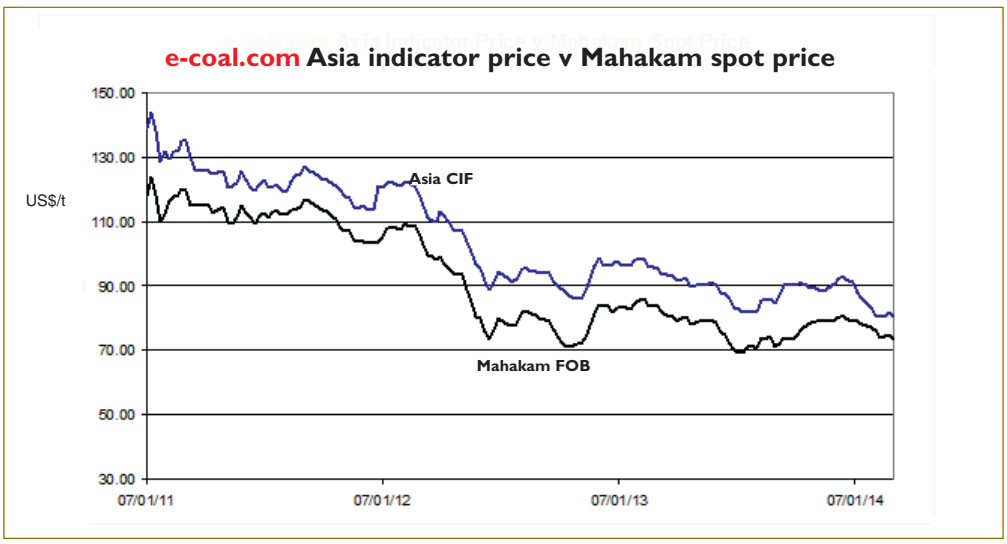
the supply of 10mtpa beginning this year. Several GW of new coal-fired power generating capacity is due to come online in the next few years.

In mid-February the spot market in Australia saw a Capesize cargo of higher ash thermal coal sold at a price of US$65.50/t FOB basis 5,500kcal/kg NAR. A 25kt parcel of higher quality coal was reported sold on an electronic platform for US$78.00/t FOB basis 6,000kcal/kg NAR. Delivery is required in June, which puts this deal outside the 90 day prompt spot category. India's NTPC Tamil Nadu Energy was seeking offers for 1mt of coal for delivery to Ennore port. The coal is to supply new coal-fired power stations in the area, but market players indicated that the tender documents provided few details as to the coal specifications required. Meanwhile, Essar Power has been seeking two Capesize cargoes of coal for delivery in March and April. The buyers were targeting Indonesian and South African material to supply power plant in Gujarat, with the coal shipped to the port of Bedi.

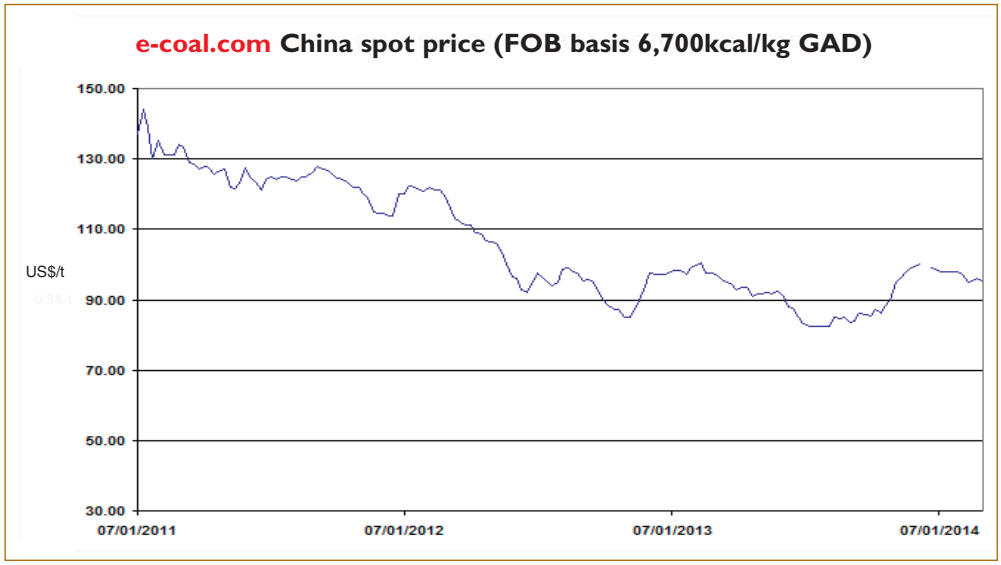
In Korea, Kowepo has been in the market with a five-year term tender seeking coal with CV 5,700kcal/kg NAR (min). Beginning in the July quarter 2014, three Capesize cargoes are required. Kosep is reported to have awarded the business to GlencoreXstrata following its tender seeking coal supply for three years, with 420kt for delivery in the first year. The material is believed to be Russian with specifications including CV 5,500kcal/kg NAR (min). The price is rumoured to be about US$83/t FOB adjusted to basis 6,080kcal/kg NAR. Meanwhile, Russian Sakhalin coal is understood to have been purchased in a spot tender, with 2x40kt cargoes due for delivery in May and June.

At the time, Australian spot market players believed the price of thermal coal at Newcastle had begun to slow its decline although spot market activity there was reported to have been quiet. The Indian buyers had been active in the spot tender market again, and there had been enquiries in the spot market as well, with cement maker UltraTech seeking a Panamax cargo of South African coal for delivery in March. There had been relatively little activity in the Chinese thermal coal market following the national holiday, and shippers in the region had not been reporting renewed interest in February. Lower quality thermal coal sales were being reported in parts of the Asian market, but there had been few reports of spot interest in quality material from Australia, Indonesia, or elsewhere.





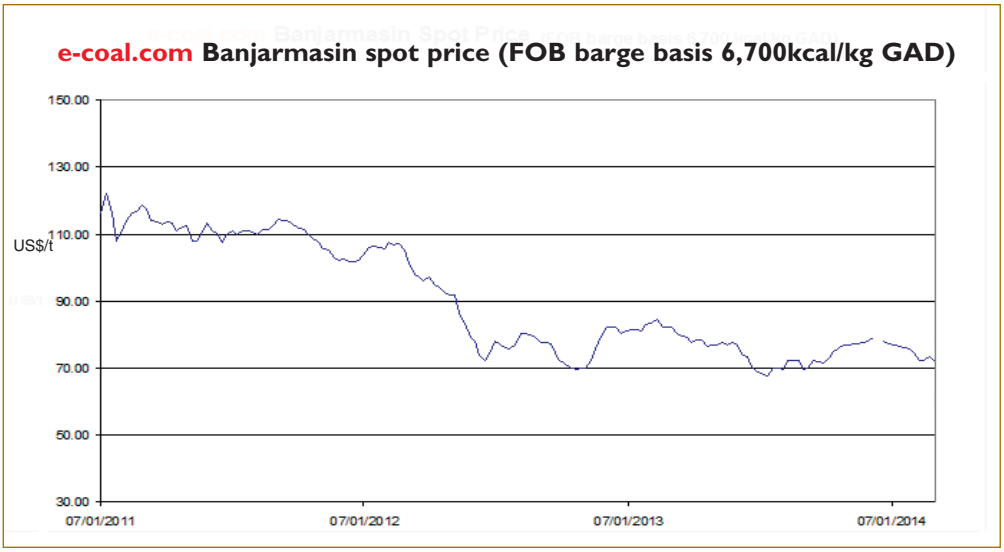
The Japanese steel makers are rumoured to be seeking to put greater importance on



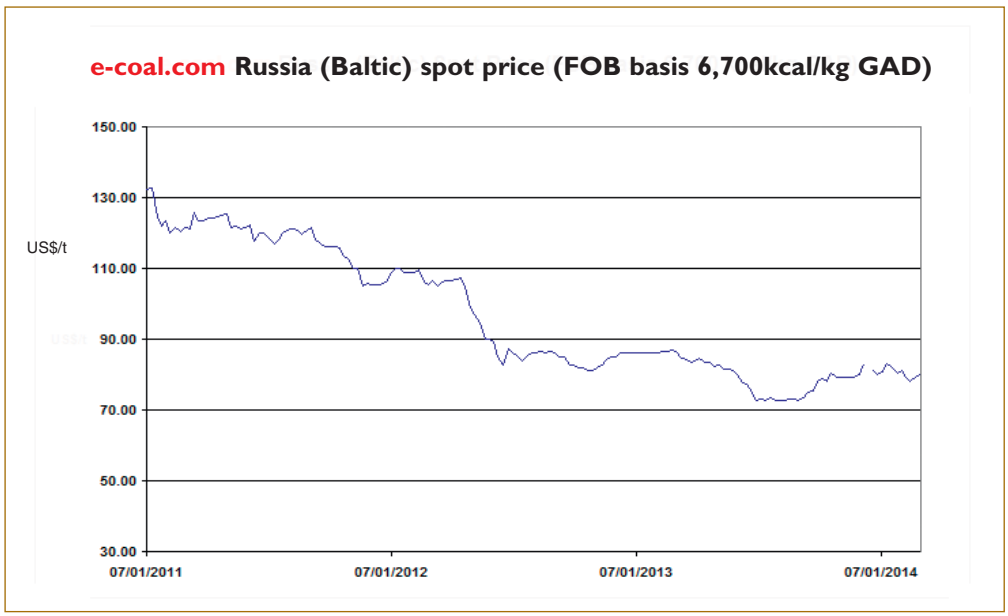
quarterly contract deals this year, and while conditions suit them, with less of their tonnage being subject to monthly contracts. The coking coal market has been weak for some time now, and they may be looking to lock in more tonnage at these low prices for longer before the price rises again.

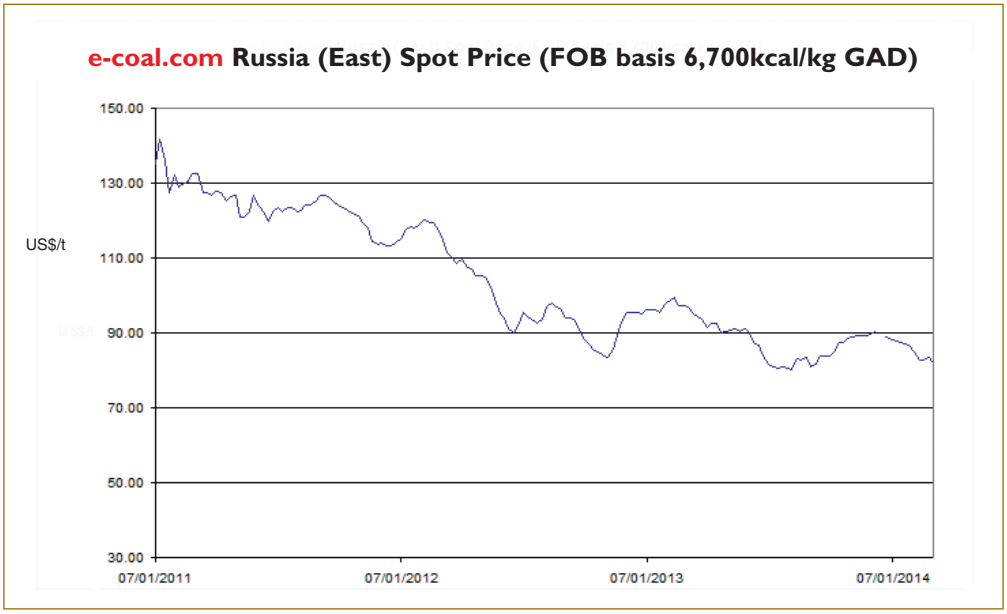
Coal India Limited is reported to have admitted that it is not possible to achieve the production target for FY2014/15 of 530.75mt. The company was also aiming to reach a total coal output of 615mt during FY2016/17. Organizational and infrastructure issues, as well as bureaucratic delays and security problems have been cited as the main reason for the reconsideration. The production target has been revised to around 507mt for the coming financial year. This is likely to result in additional imported coal being required in the coming years. Meanwhile, a new 1,400MW power station in Punjab has been commissioned for Larsen & Toubro, and there are plans for further expansion of the plant. Sembcorp Industries has also signed a conditional agreement to acquire a 45% stake in NCC Power Projects. NCC is constructing a 1,320MW coal-fired power station at Nellore in Andhra Pradesh.

In Indonesia Tata Power is to sell its 30% stake in PT Arutmin to Bakrie Group for US$500m. The low price of coal has been cited as the main reason behind the move. In order to secure coal supply for its power plant, Tata retains its interest in PT Kaltim Prima.



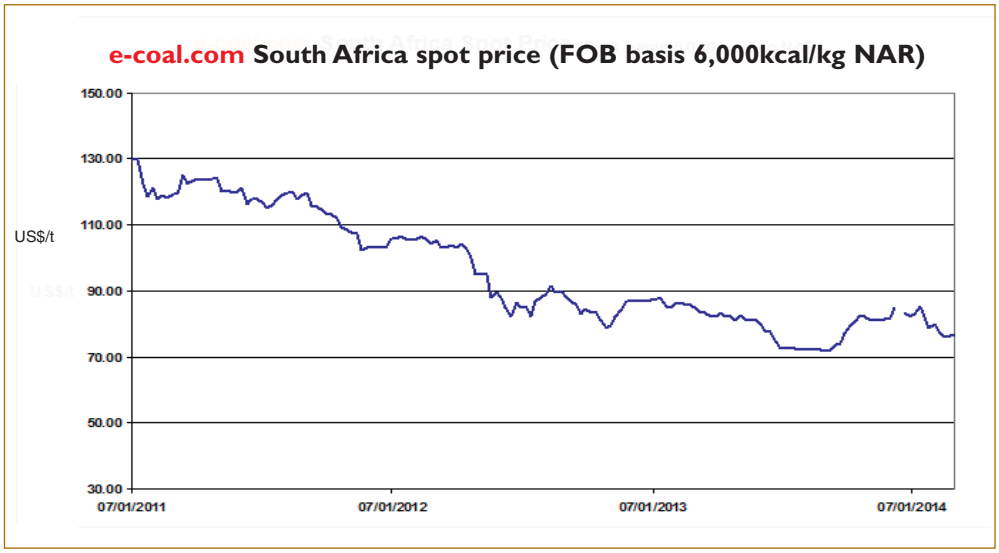
An International Energy Agency consultant has prepared a report for the Energy Policy Institute of Australia on the future of thermal coal. The fuel is expected to dominate power generation for the next 25 years, and the strategic importance of coal is at its highest since 1971. Coal-fired power generation is forecast to increase by 70% over the period. There are, however, a number of economic forecasts which suggest a range of demand scenarios for thermal coal, influenced particularly by environmental policies and to what extent these are implemented. e-coal.com notes that while coal prices are in a slump at present, and many producers are struggling to remain profitable, recent





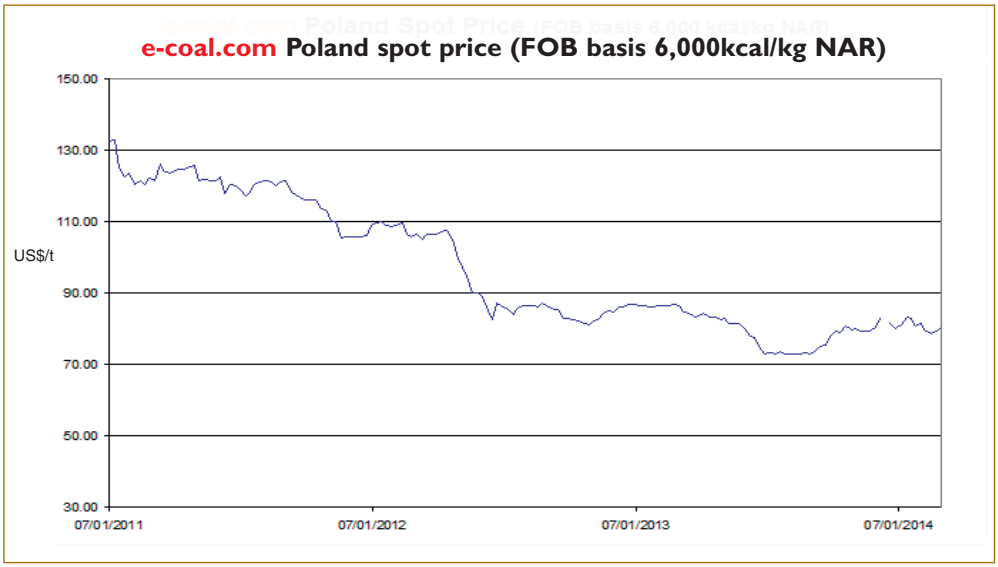
statistics indicate that coal production has been increasing in some regions during 2013. Demand growth therefore does not necessarily mean the industry will be profitable.

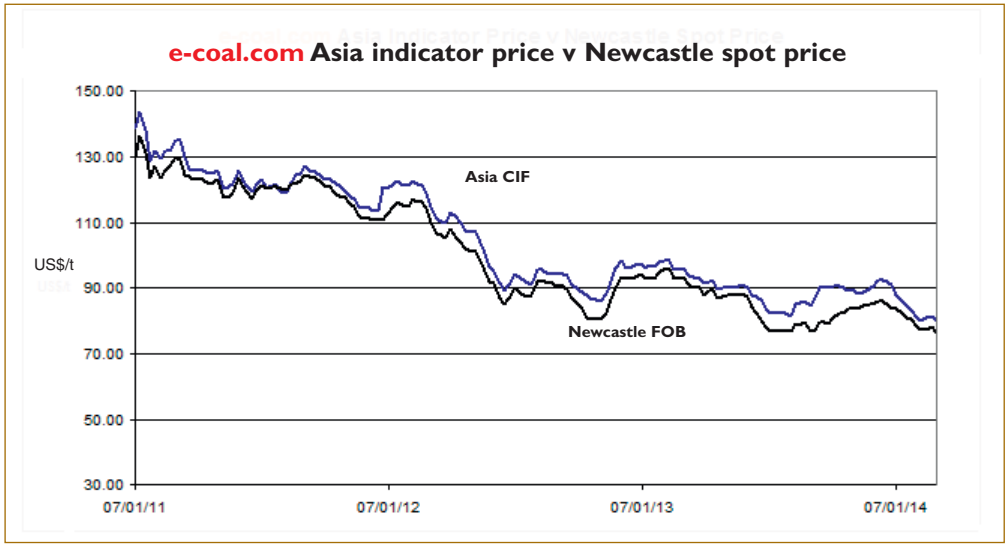
The Indian buyers are reported to have been quite active in the spot market during the first half of February. Traders say that Indonesian and South African shippers have been seeing enquiries, with lower quality material being of interest again in Indonesia. The customers are understood to have been keen on Indonesian coal with CV 4,900kcal/kg NAR for a price around US$58/t FOB. Sellers had been trying to keep the price above US$60/t FOB. Meanwhile, Coal India Limited re-issued its tender seeking 5mt of thermal coal after its previous attempt in November received no responses. The conditions were constrained by excluding private companies from participating, and access to the necessary international market was therefore limited. The re-tender is understood to be seeking supplies until September 2015. According to market players, there was insufficient information in the tender to motivate much response again.



During the second week of February, thermal coal spot markets softened. Following disruptions at Richards Bay, the resumption of supply from South Africa had been influencing the Atlantic market as well as that to India and other parts of Asia, and prices decreased. The return of the Chinese buyers after their holiday had not had an upward effect on the spot price of thermal coal. Meanwhile, negotiations on the new contract price between Glencore and Tohoku EPC in Japan had started.

Early in February, new monthly contract prices for hard coking coal were agreed between an Australian shipper and European steel makers. In India, provisional data indicated that the country had been importing more coal over the past year, with demand still firm. Meanwhile, the annual lull in Chinese activity had some impact on the spot market in the southeast Asian region. While high output had been reported for the major miners in Australia, other large coal miners in other countries were beginning to report similar record levels of production amid a weakly priced global coal market in 2013. BHP





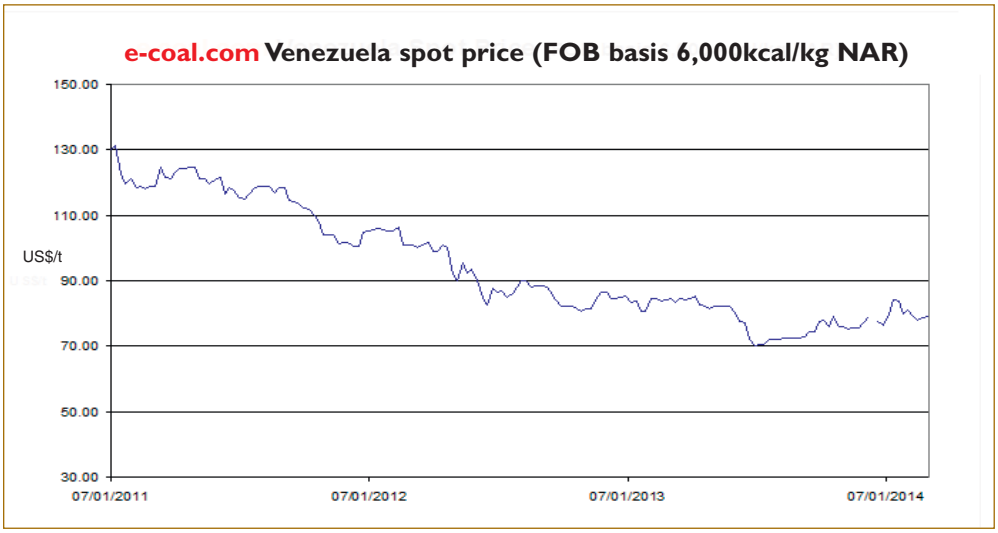
Billiton settled some new supply contracts for Queensland hard coking coal with its European customers. The deals referred to the March deliveries, and the price for the Goonyella reference brand was reported to be about US$132/t FOB. The higher quality Peak Downs brand was priced at about US$135/t FOB. These prices were about US$4/t lower than those for February — a decrease of some 2.8%. The quarterly contract price of the Peak Downs brand for Q1 2014 was previously set at US$142/t FOB, while the monthly price average was about US$139/t FOB indicating a softening short-term trend in the price of hard coking coal.

In the early part of 2014, traders reported that the spot price of thermal coal at Newcastle had softened further amid the Chinese holiday period. The **e-coal.com** Newcastle Spot Price was US$78.50/t FOB basis 6,700kcal/kg GAD at the time. Rumours had started that some high cost miners may have been in the market as tonnage was available at below their cost of production. Any deals done by them were not confirmed, however, but the suggestion was logical. The absence of Chinese buyers over their New Year holiday had some impact on the spot market in Indonesia. Traders in the region, and those operating from elsewhere around the globe saw a softening in the price of about a dollar per tonne.

The **e-coal.com** Mahakam Spot Price was US$76.25/t FOB barge basis 6,700kcal/kg GAD then. In Korea, Kosep issued a spot tender seeking 160kt of coal for delivery during May to June. Specifications included CV 4,600kcal/kg NAR (min). The genco also issued a term tender seeking 840kt of coal for delivery up to 2017. Specifications included CV 5,500kcal/kg NAR (min). Meanwhile in Taiwan, Taipower issued a tender seeking 825kt of coal for delivery during April to September in 11 Panamax cargoes. Specifications included 5,500kcal/kg GAR (min).

In port news, The Great Barrier Reef Marine Park Authority has granted conditional approval to North Queensland Bulk Ports Corporation to dump dredge spoil from Abbot Point coal terminal at sea. The application was for a deep water location beyond the World Heritage reef system.

Despite adverse currency exchange rates last year, the total quantity of coal imported by India is believed to have increased to about 130–135mt according to provisional estimates. This compares with the official total of 123mt recorded in 2012 — and could be an increase of up to 10% year-on-year. In Indonesia, Adaro has reported a record coal production total of 52.3mt in 2013. This is an increase of 5.1mt or 10.8% compared to the total in 2012. Sales in 2013 reached 53.47mt which was an increase of 10% compared to 2012. The second half of 2013 was the company's strongest to date, and it aims to produce up to 56mt of coal in 2014.



Coking coal shippers might take some encouragement from the news that world steel production increased in 2013 to reach 1.607bnt. This was an increase of 3.5% compared to the total in 2012. The growth, however, came from the Asian markets while other regions recorded a decrease in steel output. The Asian steel makers produced 1.080bnt of the total which was an increase of 6% for them compared to 2012.

This year we can expect China and particularly India to be the main focus for import growth in Asia again, with steady trade in Japan, Korea, and Taiwan. The shippers in Australia and Indonesia also hope to see some growth in coal exports again, with some new competition possible from Russia in its Pacific ports. The first quarter of 2014 may have already set the tone for the rest of the year, but Russia's latest actions in Ukraine could be a real game changer in the global energy sector in the months ahead.

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.*

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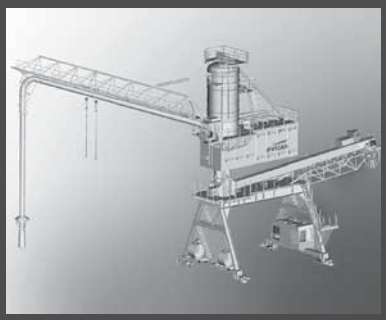

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Asian agribulk

Bumper harvest feeds Indian optimism

Kunal Bose

Thanks to a highly encouraging monsoon leading to a bumper food grains harvest, India finally got relief from a searing inflation in prices of food items. Not only that, the record food grains production of 263.20mt (million tonnes) in 2013/14 is to leave enough surplus of rice and wheat for exports. India harvests food crops in two phases — summer-monsoon kharif (July to December) yielding rice, sugarcane and oilseeds like soybean, groundnut and rapeseed and winter rabi (November to March) when, besides wheat and rice, some other oilseeds are grown. The fate of kharif crops is linked to the behaviour of southwest monsoon between June and September. It also has a significant bearing on winter crops, which draws sustenance from soil moisture and water levels in reservoirs left by southwest monsoon. Fortunately for the country, the 2013 monsoon was recorded as having the fastest pace of advancement from the breakout point in Kerala to the rest of the country since 1941, and the season finally ended with 106% of the long period average rain.

No wonder, India, the world's second largest rice producer after China, is set to harvest a record crop of 106.20mt (second advance estimate), including 96mt in the summer monsoon period and the expected winter rice production of 14.2mt. Unfortunately, unseasonal rains and hailstorms in the country's principal wheat-growing states like Madhya Pradesh, Uttar Pradesh, Punjab and Haryana have somewhat clouded the yield prospect of wheat. Experts will not as yet hazard a guess about the likely wheat crop loss even though reports of logging, that is, crop falling flat are pouring in from some centres. Whatever the loss, some of that will be compensated by the rise in land under wheat to 31 million hectares in the current season from 29.6 million hectares in 2012/13, plentiful supply of improved varieties of seeds and absence of yellow rust.

Imports of edible oils in a major way and pulses to some extent are among the commodities responsible for the current unacceptably high current account deficit (CAD) faced by the country. Among the slew of steps that the government has taken to address CAD problem are stepping up the productivity of oilseeds through technology missions designed to motivate farmers to use high yielding and hybrid seeds and cast a safety net to protect crops from damages by insects, pests and weeds, a major problem area for the Indian farm sector in general. An industry official says even while "our oilseeds production this year is likely to see an improvement over the record production of 32.5mt in 2010/11, our oils imports this time will be a record 11.2mt compared with 10.679mt last season." No doubt, over the past decade, oilseeds productivity has improved from around 810kg a hectare to about 1,500kg a hectare. But this is still just about half the average world productivity. India has a growing middle class with high disposable income, allowing them to consume food, the preparation of which requires use of good quantities of edible oils. Imports are rising because of this and also due to population growth.

Farm sector expert Om Prakash Dhanuka says, "getting more land under oilseeds or any other crops is to become more and more difficult. Yes, farmers will move from one crop to another for a growing season or more depending on relative rates of return. To give one example, enticed by high returns farmers grew sugarcane in 5.064 million hectares in 2012/13 compared with 4.316 million hectares in 2000/01. The reality, however, is India has recorded a 2% decline in agricultural land area in the past two decades, while factor annual productivity growth is only 2%." The challenge for the country is to harness technologies that will allow food production of 500mt by 2040 when its population is to increase to 1.5 billion from the present 1.2 billion. According to Dhanuka, technologies will have to be such as to respond to the compulsion of producing larger crops with less and less water. Moreover, the seeds will have to be such as to lend resilience to crops to withstand the impact of climate change.

Thankfully things are changing in India. For example, no sooner had the weatherman sounded the alarm of the likely emergence of the *El Niño* phenomenon leading to a poor monsoon in India this year, than the agriculture ministry gave guidance to the states to prepare contingency plans. Well ahead of the monsoon starting in June, the states will have to be ready with rainfall and soil maps for each district and details of response to different levels of deficiency in rains. Contingency plans also require of the states to stock large quantities of seeds of short duration crops.

The US Department of Agriculture says a poor or erratic monsoon that may be triggered by *El Niño* could bring down Indian rice production during 2014/15 season by anything between 10 and 12mt. In the meantime, however, India built highly comfortable food stocks of 53.19mt, including 32.35mt of rice and 20.84mt of wheat as of March 1, 2014.

The Prime Minister's Economic Advisory Council says in a paper that good rains are likely to lift production of pulses to over 20mt this year from 18.45mt in 2012/13. If the forecast comes true, then our annual import dependence will be down. Last year India had to import 3.84mt of pulses when domestic demand was close to 21mt. Pulses imports prove expensive since not many countries grow this crop. The agriculture ministry has forecast this year's demand at 21.77mt. Dhanuka says of all the imports of agricultural products, procurement of oilseeds and pulses costs the maximum and that leaves a major impact on the country's balance of payments. "Self-reliance in pulses is our target. But this is to be seen in the context of growing demand for lentil, green gram, chick pea and red kidney beans, which scientists and dieticians strongly recommend for vegetarians as the most important source of vitamin for them. Close to two-thirds of the Indian population are vegetarian, including part-time vegetarians. The rise in this year's pulses production is largely on account of good rains. But for sustainable high production, technology breakthroughs supported by ideal packages of agricultural practices are needed." Canada is reportedly interested in a tie-up with Indian government owned agriculture research agency ICRISAT for transfer of frontier technologies in pulses growing. India imports pulses from Myanmar, Canada and African countries.

Ideal wheat export scene

If the weather does not play truant in the next few weeks then India could record an encouraging agriculture growth rate of 4.8% this year against 1.9% in 2012/13. For the current five-year plan period (2012/17), the farm growth rate target is 4%. Bumper rice and wheat crops and overflowing warehouses in the country causing concern about wastage and disturbing political turmoil in Ukraine have created ideal condition for India to step up exports of both rice and wheat. India, which last year became the world's largest exporter of rice leaving behind Thailand, is set to make record shipments of the cereal in 2013/14, according to the USDA. Besides regular rice, India is likely to make an improvement on export shipments of long-grain, fragrant basmati rice in 2013/14 over last year's 3.46mt.

The unique rice species basmati grown exclusively in India and Pakistan and which is available in the market as white and brown depending on the milling process is as popular in West Asia as in Europe and the US. The outlook for exports to the US should improve as the country has given indications of relaxing its import tolerance norms for fungicide found in basmati rice originating in India. The popularity of this special rice and readiness of buyers to pay a premium for basmati encouraged some combines of laboratories and investors in the US to develop clones of the original and then make attempts to pass those in the market as basmati rice. An Indian government official says "clones whatever the pretensions are never like original. We are making attempts to obtain legal protection to basmati rice brand under Geographical Indications tag." But the Indian efforts in getting the tag is delayed due to various government departments failing to come to a common platform and Pakistani opposition to include any new Indian areas like Madhya Pradesh in Geographical Indication scope.

World wheat prices got a leg up in the wake of Ukrainian crisis, which is further exacerbated by a Soviet style referendum letting Crimea to join Russia. This and also reports that farmers in Ukraine are hoarding the grain against the country's depreciating currency created by political crisis are to incentivize exports by India.

At a recent trade conference in Singapore, the consensus emerged that India's wheat exports could climb to 5mt this year from 3mt in 2012/13 and a good portion of export sales could fetch $290 a tonne. Depending on the scale of stand-off between Russia and Ukraine and severity of Western sanctions, India would stand to cut into the share of the two countries in wheat sales to West Asia and south-east Asia.

After many months of intense lobbying by the country's bleeding sugar mill industry and growing restiveness among farmers for their long-pending bills for cane supplied to factories not being settled, New Delhi finally sanctioned export of 4mt of sugar in the next two years. As it would happen, India's arrival in the world market coincides with reports of dry weather to crimp sugar output in the world's biggest producer and exporter Brazil. Experts see sugar moving into bull market territory since prices of late is up nearly 20% from the recent low. Even then, the carefully drafted WTO complaint subsidy of Rs3,300 ($53) a tonne offered by New Delhi is making exports a feasible proposition.

According to Abinash Verma, director general of Indian Sugar Mills Association, of the export contracts for 1.6mt made so far as much as 1.35mt have been despatched. The trade is in the process of wrapping up export contracts for another 400,000 tonnes. While Iran has become the major outlet for Indian raw sugar, deals have also been made with Bangladesh and some south-east Asian countries. "An inventory of close to 9mt at start of the current season in October 2013 and the prospect of a bumper sugar production fourth year in a row require of the government to promote exports and discourage imports through a high customs barrier," says Dhanuka. DCi

Fednav pioneers the use of drones in Polar shipping

Fednav recently became the first shipping company to employ drones, or Unmanned Air Vehicles (UAV), for ice reconnaissance on a commercial voyage. The *Umiak I*, one of Fednav's most powerful icebreakers, used a variety of video-equipped drones to scout ahead of the vessel in the ice-covered waters of the Labrador Coast. The goal was to provide the captain and officers with detailed real-time visual information on the local ice conditions.

Enfotec, a Fednav subsidiary and industry leader, has for 20 years specialized in providing advanced ice imagery and analysis to vessels operating in difficult ice conditions. With advances in recent years in the quality of information derived from satellite and radar images and conventional ice charts, this new method of ice detection allows for the immediate capture of subtle ice features such as ridges, leads, and fractures. The UAVs deliver critical high-quality, short-range visual observations allowing navigators to see beyond the normal horizon for strategic navigation.

The backdrop for the application of this emerging technology was the Labrador Coast. The coast experiences the heavy winter conditions of the Canadian Arctic — thick first-year ice that is heavily deformed under wind-induced pressure and remnants of multi-year and glacial ice that are embedded in the ice cover — which pose great challenges for navigation.

"The use of UAVs is proving to be extremely beneficial to identify many ice features that should be avoided ahead of the vessel, as well as identifying open water leads to improve voyage efficiency," says Thomas Paterson, senior vice-president of Ship Owning, Arctic, and Projects of Fednav Limited.

"In addition, the deployment of drones fitted with top-quality cameras, gives the ice navigator another useful aid when making important decisions while transiting heavy ice regimes, and in turn, improved safe navigation," he added.

With this application of modern technology, Fednav and Enfotec remain at the leading edge of ice navigation efficiency.

Fednav Limited

Fednav is an international ship-owning company headquartered in Montreal. Its principal activities include the transport of bulk and general cargo worldwide. The company has offices in Antwerp, Barbados, Hamburg, Rio de Janeiro, London, Singapore, and Tokyo and regional offices in Canada and the United States. Fednav also has terminal, logistics, ice analysis, and shipping agency services and divisions. It employs 260 people and nearly 2,000 crew members and stevedores.

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Liebherr-Werk Nenzing GmbH
Dr. Hans Liebherr Str. 1
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performing a vital role

Richard Scott

Extensive and growing employment opportunities, for Capesize and Panamax bulk carriers, are reflected in the huge investment interest shown by shipowners. The range of commodity trades, in which these ships are employed, is more restricted than that available for smaller tonnage. But the sheer size and expansion of trades in which Capesize and Panamax vessels perform their vital role continues to dazzle.

These characteristics have resulted in massive global fleet expansion during recent years, which is now slowing noticeably. Over the five year period from 2009 to 2013, the Capesize fleet slightly more than doubled in deadweight capacity, while the Panamax fleet expanded by almost two-thirds, both remarkable achievements.

Although the gearless Capesize ships depend chiefly on iron ore and coal trade for employment, these movements, the two largest individual commodities, have seen very strong growth. Panamax bulk carriers, most but not all of which are also without cargo handling gear on board (gearless), are also heavily dependent on iron ore and coal. However, there is a much broader range of commodity trades in which they are often employable, including grain/soya and within the minor bulk sector.

Fleet growth

At the beginning of 2014, the Capesize fleet of bulk carriers from 100,000dwt upwards comprised 1,564 ships totalling 293.1 million deadweight tonnes, according to Clarksons Research data. Fleet capacity was almost 150m dwt or just over 100% larger than five years earlier at the start of 2009. Annual growth rates were very strong in the first three years of this period, varying between 19% and 23%, but have since slowed sharply to only 5% last year.

The Panamax bulk carrier fleet in the 65,000dwt to 99,999dwt size group, which includes the Kamsarmax sub-group, grew by about 63% during the same period of five years. At the beginning of 2014 this fleet reached 185.5m dwt (2,354 ships), a 71m dwt increase. Fleet expansion was greatest between 2010 and 2012, when it was 12–13% annually, after which there was a deceleration to about 9% last year.

In both size groups a further slowdown is now unfolding. Estimates for 2014 as a whole depend upon assumptions about newbuilding deliveries and scrapping: these key influences are not easy to forecast accurately. Nevertheless, it seem likely that the Capesize fleet's growth rate will be reduced to about 4% this year, while the Panamax fleet could see about 7% growth.

Lower newbuilding deliveries are the principal reason for expecting a further moderation of the heady capacity expansion seen in recent years. This great enlargement followed the enormous volume of orders place during the earlier boom period, reinforced by a subsequent ordering upsurge in 2010. The result, despite higher scrapping of old tonnage, has been a much faster pace of fleet capacity expansion than required.

Order books for newbuilding bulk carriers, at shipyards around the world, have been greatly reduced as deliveries outpaced the inflow of new contracts concluded. This feature is expected to ensure that, at least in the current year, deliveries

continue on a downwards trend.

Assuming that scrapping remains relatively high as well, estimates of slower Capesize and Panamax fleet growth are the outcome. But there is always a possibility that changes in market sentiment and expectations will invalidate such calculations. Already, a more optimistic market view, adopted by many shipowners and operators, apparently is contributing to less incentive to arrange demolition sales. It has also encouraged a distinct pick up in ordering new ships for delivery some time ahead from 2015 onwards.

Capesize vessel in dock.

Trade expansion

Steel mills and power stations provide a large proportion of employment for Panamax and, particularly, for Capesize bulk carriers. Iron ore and coking coal used in steelmaking, and steam coal used in electricity generation plus other industries which include heat processes (such as cement), are key commodities traded worldwide.

Capesize tonnage is almost entirely dependent on movements of steel industry raw materials and steam coal. In addition to participating in these commodity trades, Panamax vessels are extensively involved also in the transportation of grain and soya, while also carrying large amounts of other 'minor' bulks including bauxite/alumina for the aluminium industry.

In the past three years world seaborne iron ore trade has exceeded 6% growth annually and, in 2013, totalled over 1,200mt (million tonnes), as shown by the table. Most of the additional

WORLD SEABORNE TRADE IN KEY CAPESIZE AND PANAMAX COMMODITIES

(million tonnes)

	2009	2010	2011	2012	2013	2014*
iron ore	905	1005	1069	1124	1206	1269
coal	842	951	1013	1107	1176	1233
grain (including soyabeans)	295	297	313	326	338	345
total major bulks	2042	2253	2395	2557	2720	2847
% growth from previous year		10.3	6.3	6.8	6.4	4.7

source: Bulk Shipping Analysis estimates and forecasts **forecast*

volume seen during this period was contributed by China's strongly rising import demand. Other major importers, mainly the European Union, Japan and South Korea together provide only limited extra quantities over the period as a whole, and in some countries in some years there were negative changes.

China is the dominant importer of iron ore, comprising two-thirds of the global iron ore trade total. Last year's volume was a vast 820.3mt, resulting from a large 75mt or 10% increase compared with the previous annual amount. This expansion was supported by higher crude steel production, up by 8% at 779mt, a figure which probably will be revised upwards significantly when more accurate figures are available.

Japan also saw increased iron ore imports last year, when there was a 4% advance to 136.5mt. The European Union's volume may have risen by about 2%, to reach 101mt, while South Korea's quantity by contrast was 4% lower at 63.4mt.

World seaborne coal trade averaged over 7% growth annually in the past three years, reaching almost 1,200mt in 2013, as also shown in the table. The largest element is steam coal, comprising about three-quarters of the total, with coking coal forming the remainder. Expansion of steam coal import demand at a 9% annual average contributed most of the overall growth. Coking coal trade grew at 5% annually.

The positive influences affecting coal trade's enlargement were much more broadly spread than seen in the iron ore segment. China's additional coal import volumes were a substantial part of the expansion, but many other countries contributed with sizeable increases. India's very large rises formed an especially prominent trend, accompanied by growth in Europe, Japan, South Korea and Taiwan as well as smaller importers. In most of the bigger importing countries it was extra steam coal purchases which mainly resulted in higher overall quantities.

Global grain trade (including soyabeans) has also grown over the past three years, at an estimated 4% average rate, reaching almost 340mt in 2013. Year-to-year changes are often characterized by a very variable pattern, which has a substantial unpredictable element. This pattern reflects the impact of weather conditions on crops. Domestic harvests in importing countries vary greatly because of changeable weather and, in turn, this affects purchases of grain from foreign suppliers.

Amid these variations, one trend has provided a consistent growth element over many years. China's imports of soyabeans grew in most years, reflecting rapidly increasing consumption. The rising usage was directly translated into import demand because China's farms produce only a relatively small quantity.

In the minor bulk segment numerous individual global commodity trades are actually large and have increased greatly in

Panamax bulker unloading.

recent years. But some mainly employ ships in the Handysize and Handymax size groups. Although Panamax bulk carriers also have a significant role carrying a number of commodities, Capesize employment is very limited.

Bauxite and its processed form alumina is a prominent part of this sector. Seaborne movements of this aluminium industry raw material are estimated to have reached about 140mt in 2013, after averaging 14% annual growth over three years. Much of the expansion was caused by a huge upsurge in China's imports, which totalled over 75mt last year, more than doubling within the period.

Forecasts of global seaborne commodity trade in 2014 (see table) point to solid rises in iron ore and coal movements, assuming that China's import demand trend remains strong. Expectations of improving economic activity in a number of countries suggest a positive background for trade. Grain and soya trade prospects after mid-2014 are more difficult to assess, because unpredictable summer harvests in northern hemisphere importing countries will be influential. Additional minor bulk cargo volumes are foreseen.

Freight market

During the later months of last year and early part of 2014, perceptions of an evolving pattern leading towards an improved freight market balance in the bulk carrier sector were reinforced. In particular, a boost was received from several spikes in Capesize rates, bolstering the overall market tone. These temporary improvements appeared to suggest that much of the capacity over-supply which has been a feature in recent years is being absorbed.

But growth of carrying capacity in the Capesize and Panamax size groups, and indeed in the world bulk carrier fleet as a whole, is likely to remain quite sizeable over the next twelve months and possibly further ahead. Consequently, there is still a heavy reliance on substantial additional tonnage demand emerging, and especially on rising dry bulk import volumes. An expected further robust increase in China's commodity imports is a crucial element, assisted by higher import requirements in other countries.

DC

United approach to transshipment

PT Mitra Swire CTM (MSC) is celebrating six years of togetherness. This joint venture which was formed in 2008 is an Indonesian JV between PT MITRA BAHTERA SEGARASEJATI [MBSS] and Swire CTM Bulk Logistics (SCBL). The two parent companies MBSS and SCBL bring together vast experience and expertise in the marine logistics area. During this period MSC has transshipped 22mt (million tonnes), and loaded 324 vessels (from Handysize to Capesize).

MBSS (part of Indika Energy Group) is one of Indonesia's leading integrated service providers of sea logistic and transshipment services, focusing on natural resources and bulk materials. MBSS services range from material handling to transportation of the bulk materials by using barging fleets from loading port to unloading port as well as from loading port to the anchorage point, where the coal is transshipped to mother vessels. MBSS/MSC transshipped 21mt in 2013.

SWIRE CTM BULK LOGISTICS is a company 50% jointly owned by the China Navigation Company Limited, part of the Swire Group (a multi-national, multi-disciplined commercial group with over 130 years of experience in shipping) and 50% by DLBC Logistics part of DryLog Group. SCBL combines 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 specialized barge services, transshipment, river, coastal and ocean transportation by means of conventional bulk-carriers or self-unloading vessels. These services aim to offer substantial freight savings and therefore add value to its customers supply chains.

The MSC partnership was born in 2008 to synergize SCBL's worldwide experience in the offshore logistic field and MBSS' Indonesian expertise in providing an integrated logistic services to the Indonesian mining industry. MSC services include off-

shore transshipment facilities (floating cranes, floating terminals), tailor-made barges for coal transportation and customized solutions for domestic transport.

MSC owns and operates the floating crane *Princesse Abby* and the floating transfer unit *Princesse Chloe*, both designed by Italian company Logmarin.

The *Princesse Abby* is a heavy duty marine crane, manufactured by Liebherr, which has been strategically mounted on a pontoon. The Liebherr crane, incorporates specific features for open water and heavy duty conditions such as: customized hoisting winches, strengthened boom, slew bearings conceived with triple roller and four slewing motors. These features help the crane operate consistently in open sea conditions. This new concept of the floating crane was delivered from Subic Shipyard (in the Philippines) in October 2008. The *Princesse Abby*'s hull structure is made by longitudinal duly reinforced frame with spoon bow, inclined stern and two skegs aft. Movement dampening devices, such as bilge keels fitted on both sides of the pontoon and structural anti-rolling fins in way of the stern skegs, have been incorporated in the design of the *Princesse Abby*, to increase stability and to maximize the floating crane's availability.

Ocean going vessels up to the largest Capesize type can be loaded by means of *Princesse Abby* at an average daily loading rate exceeding 27,000 tonnes of coal.

Princess Chloe has two heavy duty cranes mounted on a pontoon which work in conjunction to a cargo handling system comprising hoppers, conveyors and a shiploader. The cranes are used to transfer cargo from the barges into the hoppers, thereby reducing the cycle time and increasing daily throughput. The *Princess Chloe*'s cranes are strategically placed in a way with respect to the hoppers so as to minimize the slewing movement, thereby increasing the cycle time and efficiency. These heavy duty cranes are specifically designed for offshore operations which means they are more robust in construction and are able to perform even in adverse weather conditions. They are guaranteed to operate up to 2 metres of wave height and 25 knots wind speed.

The cargo transfer takes places when the floating terminal is safely moored alongside the ocean going vessel with barges moored alongside. The cranes transfer the coal from the barges into the hoppers, which is then transported through the conveyor system and the delivery shiploader to the ocean going vessel's holds at an average daily rate exceeding 50,000 tonnes. The maximum daily loading rate achieved by *Princess Chloe* has been 56,000 tonnes which is really enviable considering the system is equipped with two cranes.

The swivelling capability of the shiploader, designed and implemented by Bedeschi, ensures serving multiple holds of the ocean going vessels without the need to shift the *Princess Chloe* alongside. The luffing mechanism of the shiploader is used to cater to the difference in the air draught of the ocean going

vessel at ballast to fully laden condition. At the shiploader's end, a movable banana chute is fitted, to ensure delivery of coal into all areas of the ocean going vessel's holds which are normally not accessible by a straight chute. This is more important while loading cargoes with large stowage factors like coal, when it becomes important to fill in all the areas of the holds.

An automatic sampling device has been installed on the terminal to enable the shipper take samples of cargo as delivered into the ocean going vessels' holds. It is also equipped with a belt scale to monitor the cargo quantity loaded and a metal detection system to initiate an alarm, if any metal is detected on the conveyor system.

By synergizing the capabilities of the parent companies, MSC offers a formidable gamut of activities to its discerning clients. This means MSC as a single agency can potentially deliver from mines to the end user. The sharing of information and expertise between the partners is seamless and both work in complete harmony with the sole aim of providing uninterrupted services to its clients. This is ensured by a well chalked-out maintenance plan, considering the remoteness of the location in which the systems operate and a closely monitored operation programme. The activities are monitored on a real-time basis so that remedial measure can be initiated in case of any anomalies detected.

Privatization in Poland's largest seaport

Port of Gdansk Authority SA, one of the most rapidly developing ports in the Baltic Sea, has begun the privatization of Port of Gdansk Cargo Logistics SA (Port Gdanski Eksploatacja SA, a joint stock company under Polish Law), its largest multipurpose cargo handling operator.

The Port of Gdansk is Poland's largest port designated by the European Union as the core port of the TEN-T Baltic Adriatic Corridor no.1. With 30.3 million tonnes of cargo handled in 2013, a record in the port's 1,000-year long history, it ranked seventh in the Baltic Sea and second in terms of the number of containers handled.

Another stage of the Port of Gdansk's intense development is a decision to sell a block of shares in Port of Gdansk Cargo Logistics SA, a stevedoring company that provides cargo handling and storage services for goods delivered by sea, road and rail, to one of the largest seaports of Central and Eastern Europe.

Port of Gdansk Cargo Logistics SA is a port operator focused mainly on handling general cargo, including containerized and bulk cargo, that pursues its business on over 90ha of the Port of Gdansk's attractively located plots.

The purchase of a block of almost 100% of shares in Port of Gdansk Cargo Logistics SA (99.1% of shares belong to Port of Gdansk Authority SA and the outstanding 0.09% is subject to compulsory buyout) is currently one of the most interesting investment options on the maritime market in Central and Eastern Europe.

Gdansk as the largest port located in Poland, is a commercial centre that in 2013 handled in its terminals and quays the cargo worth of roughly EUR 40 billion, which accounts for 50% of Poland's (the sixth largest European market) income.

Detailed information on how to join the negotiations procedure for the purchase of shares in Port of Gdansk Cargo Logistics SA can be found on the port's website.

The deadline for sending bids expires on 12 May 2014.

Vizag fertilizer terminal delayed

Problems with land transfer are delaying the implementation of Vizag Agriport Ltd's new mechanised fertilizer berth at the Indian port of Visakhapatnam. The port says that Vizag Agriport is to blame, since it has not taken possession of land, to which the private operator retorts that it is the responsibility of the port to first transfer it the land.

The concession for the six million tonne terminal was awarded in July 2013 to the joint venture, consisting of ALBA (74%) and IL&FS Maritime (26%). ALBA, itself, is a joint venture formed between ABG Ports of Mumbai and France's Louis Dreyfus.

The port has therefore refered the matter to the Ministry of Shipping. *Barry Cross*

Ilhéus invests to reduce congestion

The construction of Porto Sul, in Ilhéus, Brazil, has been authorized by the National Waterways Authority (Antaq). The project, which will require investment of $1.35 billion, forms part of a national plan aimed at reducing congestion in the ports of the south and south east.

The port will have two terminals, one privately owned and managed, while the other will include the Bahia state government in partnership with private investors. The former, to be know as TUP Bamin, will handle iron ore, and be built by Bahia Mineração, which already owns mines in Caetité.

The project will involve the construction of a shared causeway, linking stockpile areas in the port to loading piers to be built within the area sheltered by the breakwater.

The Ports Secretariat (SEP) estimates that Porto Sul will handle a combined 75 million tonnes a year of dry bulk and general cargo. Each of the terminals will be able to accommodate vessels of up to 260 metres in length, drawing up to 18.3 metres of water.

TUP Bamin will require investment of around $987 million, while TUP Porto Sul will absorb $370 million, with both terminals to be built within the next five years.

The Porto Sul project is part of the national Production Outflow Logistics Plan, which also encompasses integration with the East-West railway project. According to SEP, the expectation is that the production of grain in the midwest of the country — primarily in the state of Mato Grosso — will have the option to make use of Porto Sul, using the north–south and east–west rail links, thereby cutting the number of trucks having to use the ports of south and southeast, thereby cutting transport costs. *BC*

Tender issued to build new inland ports in Brazil

A tender was issued on 29 January this year to prepare projects and studies for the general cargo ports of Ártemis, Araçatuba, Rubinéia and Salto to be built on the Tietê-Paraná inland waterway. The point of building these new facilities is that they will attract new cargoes to the waterway network, as well as boosting the amount of products such as wood and cellulose, which first began using the waterway network in the first half of 2013.

Besides the basic projects and environmental studies, a market analysis and operational models will also be developed to find the best way to maximize cargo, looking, for example, as to how they can be integrated into the railway network, with both Ártemis and Salto close to existing lines.

The studies are expected to take nine months following the signing of a contract. Construction work and concessions will then be finalized in 2015, with investment in the Tietê-Paraná system to absorb $617 million.

The existing navigable network amounts to some 2,400km, of which 1,600km belongs to the Paraná River, connecting the five largest grain producing regions in the country: Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais and Paraná. In 2013, the current port network handled more than 6mt (million tonnes) of products such as soya, soya flour, wheat, cane sugar, oil, wood, coal and fertilizer. Traffic is expected to reach 14mt this year. *BC*

Legal intervention stops conversion of coal berth to box terminal at Chennai

A writ petition filed by the Tamil Nadu Power Producers Association at the Madras High Court has successfully obtained an interim stay, preventing a berth at Chennai's Jawahar Dock (East) being converted into a container terminal. The ruling was based on perceived hardship to private coal importers, who claimed that there was insufficient capacity at Ennore port to handle all the coal on offer.

Chennai had previously been forbidden by the same court from handling dusty cargo, such as coal and iron ore, which subsequently moved to Ennore, although this is now being reviewed by the Supreme Court.

Jawahar Dock (East) berth had previously been used to handle coal, although has been vacant following the move of such traffic to Ennore port. The port trust now wants the private sector to convert it to box handling as part of a 30-year concession. *BC*

Queue to load sugar reportedly decreasing in Brazilian ports

At the end of last year, the number of vessels seeking a berth at Brazilian ports had been cut from 36 to 32. Up to 1.11 million tonnes of sugar was awaiting loading, with the Port of Santos having a stockpile of 670,230 tonnes, which is 60% of the total. In second place, with 27% of the total, was Paranaguá, with 302,800 tonnes, followed by Maceió (111,500) and Recife (31,850 tonnes), respectively accounting for 10% and 3% of the total. *BC*

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Proposed West Coast coal projects battle bureaucracy

The multi-product Fraser Surrey Docks in Port Metro Vancouver is losing container traffic and wants to barge coal.

Ray Dykes

Four proposed coal export terminals on the West Coast of North America are jumping through hoops no one has had to tackle before as bureaucracy and environmentalists combine to make life tough.

Once there were up to seven or so coal export terminal projects in the Pacific Northwest, but sagging coal prices and heated opposition have thinned the ranks down to only a handful today and there's no certainty in the current environmental climate that any of them will go ahead soon.

There are no existing coal export terminals of any size on the West Coast of the United States. Proponents remain undaunted and are rallying the troops for support through labour unions hoping for the extra jobs and in communities which also need the wealth from the work.

The campaign against coal in the Pacific Northwest has never been more sustained.

So much so that in Canada a Coal Alliance has been set up by all segments of the coal chain to battle misinformation about one of the nation's bedrock revenue generators. The alliance contends strongly that it is unlikely coal dust from passing trains en route to the existing coal export terminals such as Westshore Terminals and Neptune Bulk Terminals in Vancouver will have health impacts on the public.

Three surviving terminal projects in the United States — one in Oregon and two in Washington — and one in British Columbia are being forced to do precedent-setting studies well beyond normal environmental impact assessments.

In fact, one former World Trade Organization official, Judge James Bacchus, claims that Ambre Energy's Millennium Bulk Terminals Longview WA project is being forced to violate international treaties to meet a "dramatically redefined environmental review process."

Normally, the US Army Corps of Engineers determines the scope of the environmental studies after local consultation. The corps has announced what environmental critics call a narrow study largely focused in and around the Millennium Bulk Terminals site on the Columbia River and the Gateway Terminal site near Bellingham and the Canadian border.

But, in what has been termed "an episode of eco-brinkmanship," the Washington State Department of Ecology joined by the local Cowlitz and Whatcom Counties have "reached far beyond the normal scope of environmental impact studies" by requiring Millennium and Gateway Pacific to include global warming effects from burning the exported coal in Asia and such things as the rail impact as coal is shipped by train from the Powder River Basin in Montana and Wyoming through Washington State.

The reach back to Montana mines and rail networks has been called an "unheard-of step" designed to "undermine coal mining in Montana." And SSA Marine Vice President Business

Exports of raw logs and imports of steel are sustaining Fraser Surrey Docks while it awaits a permit to ship coal.

Development, Joe Ritzman, in Seattle, whose company is behind the Gateway Pacific Terminal Project, says they are concerned the fight against fossil fuels could cause collateral damage for exporters of other non-energy products, "whether it's wheat or widgets."

Gateway is now spending another US$7 million to meet the over 40 different topics of the wider environmental review ordered by the state, on top of $2 million already spent on the Environmental Impact Statement review process. This stage will take another 13 months or so.

"We are sticking with this, we are in this for the long term," says Ritzman. A draft EIS (environmental impact study) should be up for review in the first quarter of 2015, he adds.

In British Colombia — where Fraser Surrey Docks plans to bring in coal from the rich seams of the Powder River Basin, carry it by barge to offload at Texada Island in the Strait of Georgia, where it will be loaded on ocean-going vessels and shipped to Asian markets — the permitting authority is the landlord, Port Metro Vancouver (PMV).

However, there has been so much angst about coal train traffic — despite the fact that coal trains have moved through the area to two major export terminals for up to 44 years with few complaints — that PMV has asked Fraser Surrey Docks to provide technical clarity in its Environmental Impact Assessment (EIA) on so-called human health issues.

The port has asked for more information on such things as the "impacts of coal dust and diesel emissions, particularly how they impact vulnerable populations like children, seniors and people with respiratory diseases."

A few local municipalities in Greater Vancouver have also joined together to condemn coal traffic and were probably the reason why the port asked for the extra health risk assessment, which goes well beyond the confines of all previous EIA studies. The Corporation of Delta, through which Westshore bound coal trains now travel is concerned about additional FSD coal trains and has even set up an independent committee to look into the terminal proposal and any possible health issues. While the committee has no weight with the port or any real clout except public sentiment, it symbolizes the environmental anxiety when it comes to moving coal through residential areas.

The largest of all projects, Gateway Pacific Terminal near Bellingham WA, is spending another US$7 million on a wider environmental review.

The coal export terminal projects

Morrow Pacific — Ambre Energy of Australia plans to barge about 8mt of low-sulphur coal from Boardman on the Columbia River to the Port of St. Helens in Oregon. There will be no coal visible thanks to covered barges and enclosed ground storage.

Millennium Bulk Terminals — another Ambre project with Arch Coal Inc., Millennium is cleaning up and redeveloping an abandoned 416-acre Alcoa aluminium smelter site on the Columbia River at Longview WA. It plans to build a new import-export facility on the site for bulk materials, especially coal with shipments planned as high as 44mt.

Gateway Pacific Terminal — about 25 kilometres from the Canadian border, this SSA Marine terminal project at Cherry Point WA plans a multi-commodity facility to export 44mt of coal per year in its first phase, rising to 56mtpy, which will make it the largest coal export terminal on the West Coast. Grain and potash are also possibles.

Fraser Surrey Docks — part of Port Metro Vancouver in British Columbia, FSD plans to offload Powder River Basin coal from trains and barge it to Texada Island in the Strait of Georgia about 100km northwest of Vancouver for transshipment to ocean-going vessels destined for Asian markets. The Macquarie Infrastructure Partners owned existing deep-sea port facility plans to ship about 8mt a year initially.

The attack on coal is unrelenting, yet it is the major export through Vancouver with over 38mt (million tonnes) shipped in 2013. Westshore Terminals in Delta moved 30.1mt of that with a record 9.6mt of US product, including 278,000 tonnes of petroleum coke.

To add to the furore over coal, a 'crowd-funded' study by Professor Dan Jaffe, of Washington State University, which was at first hailed by environmentalists in the news media has more recently been severely criticized as being poorly researched and guilty of "misrepresenting the core finding for political or ideological reasons," which the Coal Alliance says "represents bad science, bad policy and bad journalism."

Despite the heated opposition, the Fraser Surrey Docks proposal is still very much alive. "We remain cemented to the project," says Jeff Scott, FSD's President & CEO. "We are confident we can operate the coal facility and have no significant impact on our communities; we have an impeccable safety record over many years."

The keenness to get into coal exports stems from a 75% reduction in container business on the river thanks to larger ships and shipping line consolidations. In 2013, FSD moved 1.1mt of combined cargoes led largely by steel imports and raw log exports.

Scott says the additional health information sought by Port Metro Vancouver as part of the permitting process should be submitted by May and he expects a decision from the port authority in June.

The one coal export terminal proposal that seems to be proceeding at a reasonable pace is in Oregon, where in its Morrow Pacific project, Ambre Energy plans to barge over 8mt of Powder River Basin coal down the Columbia River from the Port of Morrow near Boardman to the Port Westward Industrial Park in the Port of St Helens. The coal storage will be enclosed and the custom built barges covered as Ambre is committed to meet "the high environmental standards set by the state of Oregon," says Clark Moseley, CEO of the Morrow Pacific project.

So far, the Oregon Department of Environmental Quality has issued air quality, water quality, and construction storm water permits for what is known as the Coyote Island Terminal at Boardman. At the Port of St Helens the Oregon Department of State Lands has recently said the project will need submerged land leases to go along with the land leases it already has at the port.

Not surprisingly, project opponents say the new lease requirements "offer the state a new way to stop the project." Meanwhile, the US Army Corps of Engineers has indicated a permitting decision is likely this spring for the Morrow project and the coal mover could be operational by 2015. Moseley is unfazed by the opposition and says after what has been a "rigorous process" Ambre is "ready to start work just as soon as we receive permits." DCi

Ambre Energy's Millennium Bulk Terminal in Longview is also jumping through more environmental hoops.

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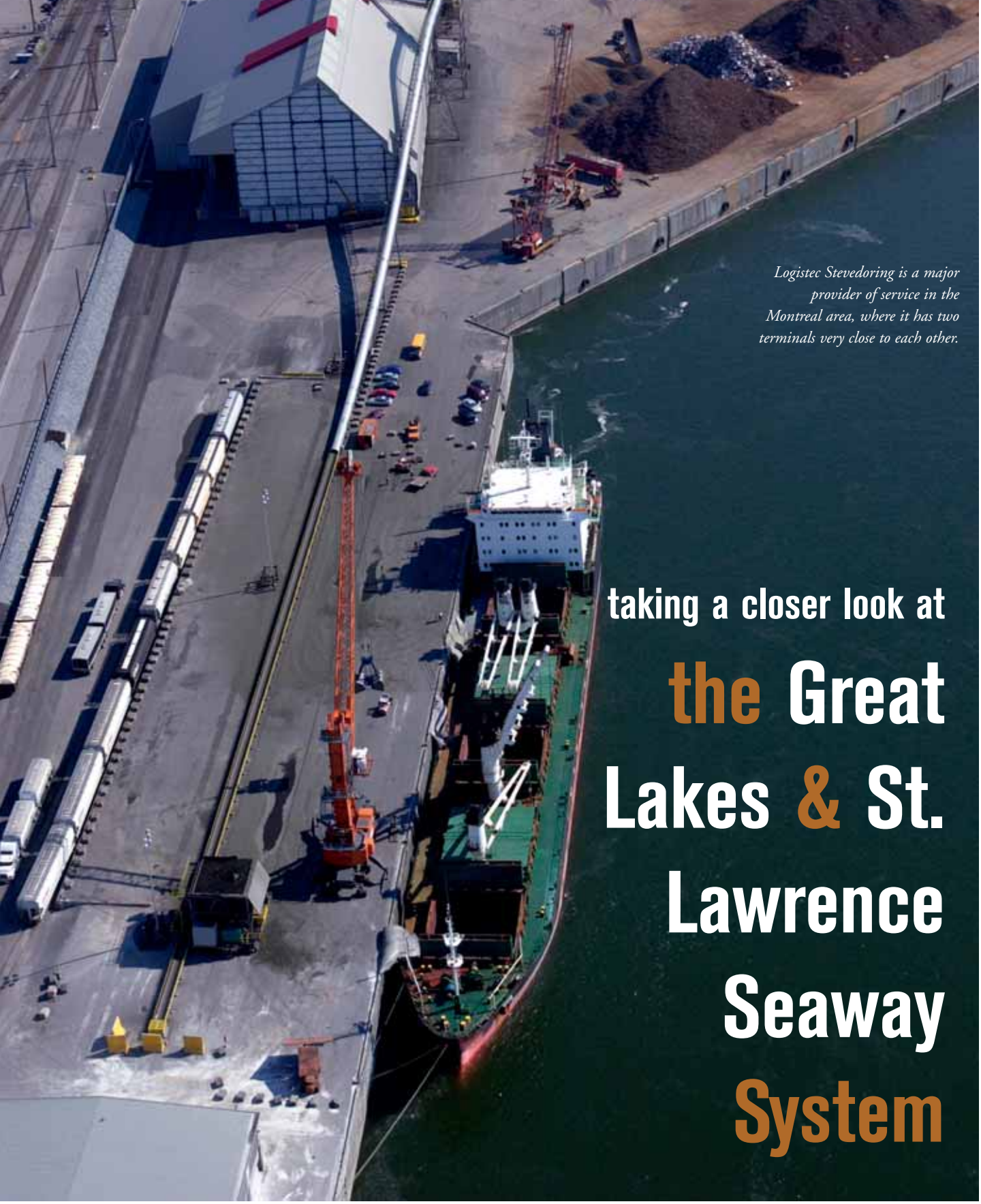


Logistec Stevedoring is a major provider of service in the Montreal area, where it has two terminals very close to each other.

taking a closer look at

the Great Lakes & St. Lawrence Seaway System

The Great Lakes and St. Lawrence River have been major North American trade arteries since long before the US or Canada achieved nationhood. Today, this integrated navigation system serves miners, farmers, factory workers and commercial interests from the western prairies to the eastern seaboard. Opened to navigation in 1959, the St. Lawrence Seaway part of the system has moved more than 2.5 billion metric tonnes of cargo in 50 years, with an estimated value of more than $375 billion.

Almost 25% of this cargo travels to and from overseas ports, especially Europe, South America, the Middle East, and Africa.

From Great Lakes/Seaway ports, a multi-modal transportation network fans out across the continent. More than 40 provincial and interstate highways and nearly 30 rail lines link the 15 major ports of the system and 50 regional ports with consumers, products and industries all over North America. The Great Lakes/St. Lawrence Seaway was built as a binational partnership between the US and Canada, and continues to operate as such.

Administration of the system is shared by two entities, the Saint Lawrence Seaway Development Corporation (SLSDC) in

the US, a federal agency within the US Department of Transportation, and The St. Lawrence Seaway Management Corporation (SLSMC) in Canada, a not-for-profit corporation (ownership of the Canadian portion of the Seaway remains with the Canadian federal government.)

US Saint Lawrence Seaway Development Corporation (SLSDC)

The Saint Lawrence Seaway Development Corporation is a wholly owned government corporation created by statute on 13 May 1954, to construct, operate and maintain that part of the St. Lawrence Seaway between the Port of Montreal and Lake Erie, within the territorial limits of the USA. Trade development functions aim to enhance Great Lakes/St. Lawrence Seaway System use without respect to territorial or geographic limits.

The mission of the corporation is to serve the US intermodal and international transportation system by improving the operation and maintenance of a safe, reliable, environmentally responsible deep-draught waterway, in co-operation with its Canadian counterpart. The SLSDC also encourages the development of trade through the Great Lakes Seaway System, which contributes to the comprehensive economic and environmental development of the entire Great Lakes region. The SLSDC headquarters staff offices are located in Washington, DC. Operations are located at the two US Seaway locks (Eisenhower and Snell) in Massena, NY.

DISTANCES/SAILING TIMES BETWEEN PORTS

Port	Distance (mi.)	Sailing Time	Lockage * (hrs.)	Total Hours Time (hrs.)
Thunder Bay	**1,222**	**102**	**17**	**119**
Duluth	1,344	112	17	129
Milwaukee	**1,186**	**79**	**17**	**116**
Chicago	**1,251**	**105**	**17**	**122**
Port Huron	680	57	17	74
Detroit	**618**	**52**	**17**	**69**
Toledo	**611**	**51**	**17**	**68**
Cleveland	534	45	17	62
Erie	**439**	**37**	**17**	**54**
Port Colborne	**374**	**31**	**17**	**48**
Toronto	349	29	5	34
Ogdensburg	**126**	**11**	**5**	**16**

** Welland Canal: 12 hours; Montreal / Lake Ontario: 5 hours*

Canadian St. Lawrence Seaway Management Corporation (SLSMC)

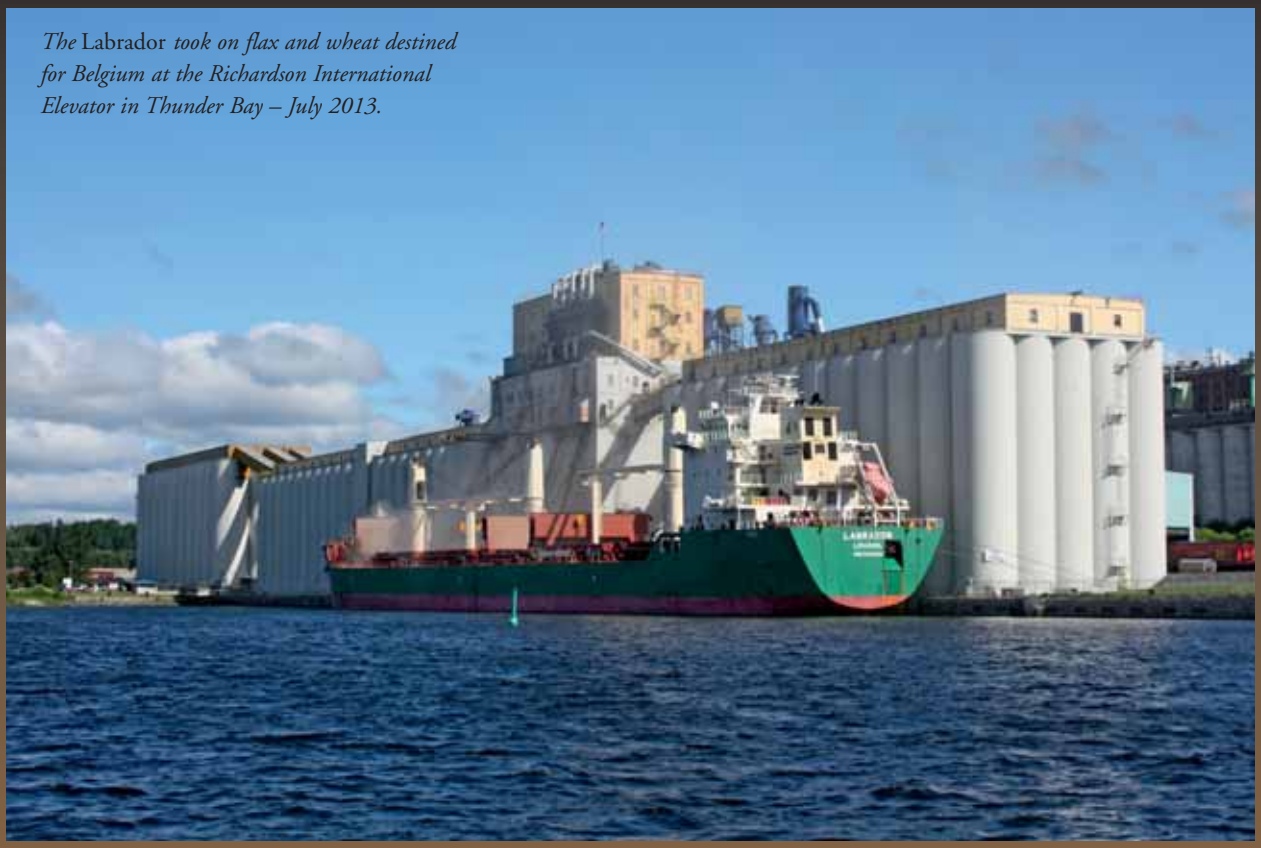
The St. Lawrence Seaway Management Corporation is a not-for-profit corporation responsible for the safe and efficient movement of marine traffic through the Canadian Seaway facilities, which consists of 13 of the 15 locks between Montreal and Lake Erie. The Corporation plays a pivotal role in ensuring that the waterway remains a safe and well-managed system, which it shares with its American counterpart, the Saint Lawrence Seaway Development Corporation.

The Corporation's mandate promotes efficiency and responsiveness to the needs of shipping interests, ports, marine agencies, and provincial and state jurisdictions. The two Seaway entities co-ordinate operational activities particularly with respect to rules and regulations, overall day-today operations, traffic management, navigation aids, safety, environmental programmes, operating dates, and trade development programmes. The unique bi-national nature of the System requires 24-hour, year-round coordination between the two Seaway entities.

Working Together

US and Canadian agencies share responsibility for maintaining aids to navigation (from buoys, lights and channel markers to sophisticated electronic positioning systems used by large commercial vessels) throughout the Lakes. They also operate marine communication and vessel traffic systems that co-ordinate the movement of

Thunder Bay looks forward to strong 2014



The Labrador *took on flax and wheat destined for Belgium at the Richardson International Elevator in Thunder Bay – July 2013.*

The Port of Thunder Bay is located at the head of the Great Lakes/St. Lawrence Seaway System, a dynamic navigable waterway that stretches 3,700km into the heart of the North American continent. A one-way voyage through the Seaway to Thunder Bay takes about five days with ships 228.6 metres in length, 23.8 metres in width with a draught of 8.2 metres being elevated some 180 metres through 16 of the most efficient locks in the world.

Both the Port of Thunder Bay and the Seaway System operate 24 hours a day, seven days a week, from the end of March through to late-December. However, in recent years, the season has been extended as weather permits.

Thunder Bay has port facilities for handling all types of cargoes and is served by both Canadian National and Canadian Pacific Railways, as well as major Canadian trucking companies. Numerous berths mean quick and efficient turn-around time to the 400 ships that visit the port each year. Cargoes like grain, coal, potash, forest products, manufactured goods and dimensional cargoes are shipped throughout the world via Thunder Bay's many port facilities.

Thunder Bay has an experienced labour force for the handling of all cargoes and a full range of marine services is available.

According to Tim Heney, CEO, Thunder Bay Port Authority, the prospect for 2014 in the Port of Thunder Bay is strong, due largely to a record grain crop harvested in Western Canada in 2013. Outbound grain destined for Europe, the Middle East, North Africa and Latin America accounts for roughly 80% of the port's cargo. At 1.2 million metric tonnes, the port has North America's largest grain storage capacity, including a 231,000-tonne-capacity elevator that was re-opened in autumn 2013 by Richardson International, having been idled in 2010 by Viterra. Grain throughput in the Port of Thunder Bay is highly efficient with broad terminal ownership by leading international grain companies.

commercial vessels in the waterway. The two countries share the job of investigating commercial marine accidents, and maintain search-and-rescue capabilities covering all the Great Lakes.

One of the best examples of this co-operative spirit is the joint foreign flag vessel inspection programme in Montreal that has dramatically streamlined St. Lawrence Seaway operations. The programme involves both US and Canadian Coast Guards, the US SLSDC and the Canadian SLSMC.

Since 1998, safety and environmental vessel inspections of foreign vessels have been conducted jointly by the US and Canada to accomplish the port/state vessel inspections as well as ballast water tests. By consolidating all required inspections and tests, the amount of time required by vessel operators to transit the waterway is greatly reduced.

Great Lakes/St. Lawrence Seaway (Highway H_2O) facts

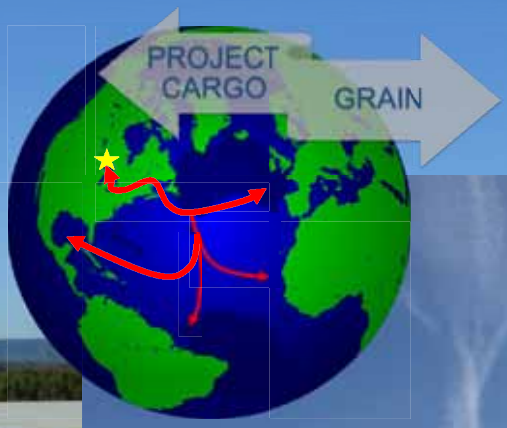
- Opened to deep draught navigation in 1959.
- Lock systems:
  - Montreal to Lake Ontario — two US, five Canadian
  - Welland Canal — eight Canadian
  - St. Mary's River — four 4 US parallel locks — one transit (Army Corps of Engineers)
- Vessel maximum: 225.5m (740ft) length; 23.77m (78ft) beam;

CANADA'S GATEWAY TO THE WEST

www.portofthunderbay.ca

The Port of Thunder Bay is a well-established gateway for wind turbines and oversized project cargo destined for Western Canada.

Grain, coal and potash exist as backhaul cargoes for European, African and Latin American destinations.



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8.08m (26ft, 6in.) draught; 35.5m (116.5ft) height above water.

- Channels maintained at 8.2m (27ft) minimum over the chart datum.
- Distance from the Atlantic Ocean to Duluth, Minnesota on Lake Superior = 2,038 nautical miles (2,342 statute miles or 3,700 kilometres), 8.5 sailing days. Includes some 245,750 square kilometres (95,000 square miles) of navigable waters.
- Sailing time (normal conditions) between certain ports on the Great Lakes and the intersection of the Seaway ship channel and Montreal Harbor, using an average sailing time of 12mph (10.4 knots).
- Since 1959, more than 2.5 billion tonnes of cargo estimated at $375 billion have moved to and from Canada, the United States, and nearly 50 other nations.
- Almost 25% of Seaway traffic travels to and from overseas ports, especially in Europe, the Middle East and Africa.
- Availability of a specialized laker fleet for maximum efficiency; many equipped with self-unloading devices for unloading at shore facilities (ship to land) or transshipping bulk cargo (ship to ship).
- Includes some of North America's largest ports, part of an excellent intermodal transportation network.
- Has maintained a near-perfect record of trouble-free navigation through ongoing improvements and meticulous maintenance for more than 50 years.
- Strategic geographical location: directly serves Ontario and Quebec to the north, and Illinois, Michigan, Ohio, Indiana, Wisconsin, Minnesota, New York and Pennsylvania to the south

Commodities transported along the waterway

Agricultural products: these represent about 40% of all Seaway trade. Grain shipped both by the United States and Canada is primarily for export. Cargoes include wheat, corn, soybeans, barley, oats, and flaxseed.

Iron and steel products: raw and processed, these have been a major cargo for the Seaway since it opened. Products include steel slabs, scrap iron, bars, rods, and manufactured iron and steel. These commodities carry the highest value of goods shipped on the Seaway and their handling is the most labour-intensive.

Mine products: these make up more than 40% of total Seaway trade each year. Products include iron ore, coal, coke, salt, and stone. There is strong demand by European utilities for low-sulphur coal from the Powder River Basin in Wyoming and Montana shipped via the St. Lawrence Seaway.

Other processed and manufactured products: in addition to iron and steel products, the Seaway is a cost-competitive route for a number of other processed cargoes. Each year more than 10% of Seaway trade consists of fuel oil, petroleum products, chemicals, forest products, and animal products.

Logistec Stevedoring: bulk handling on the St. Lawrence River and the Seaway

The Contrecoeur Terminal is one of Logistec's two bulk handling terminals.

Operators looking for a great place to load or unload their bulk cargoes near the largest population base in Quebec would do well to try Logistec Stevedoring. Logistec has two terminals located at close proximity to each other that can service the Montreal area with highway access to the road network for local destinations and can also provide access to markets that are further away, which can be reached with excellent rail connections available at both facilities.

Of course, we're talking about Logistec's premier bulk facilities: the Laurier Terminal is located at the Port of Montreal, and the Contrecoeur Terminal, approximately 45 kilometres downriver. Both terminals are located on one of the largest navigable waterways in the world — the St. Lawrence River — and offer the shortest route between major European ports and North American markets. Situated 1,600 kilometres inland from the Atlantic Ocean, both are international ports closest to North America's industrial heartland, serving a hinterland of some 100 million Canadian and American consumers, representing the shortest transit time between Europe and the

US Mid-West — open 365 days per year.

Because of the close proximity of both terminals, and depending on the nature of the product being handled, there is virtually no waiting time if the customer is the least bit flexible. If one place is busy, then the vessel can be served at the other terminal, easy as that. The customers must just remember to charter their vessels accordingly by including both names in the charter party.

Both facilities offer a high level of expertise in handling bulk cargoes with highly specialized equipment and machinery onsite, as well as an experienced labour force, supervisors, and managers. At the Contrecoeur Terminal, cargoes are handled with gantry cranes, whereas at the Laurier Terminal, state-of-the-art mobile harbour cranes are used. Products handled include iron ore, concentrates, fertilizers, coal, gypsum, sugar, alloys, and a variety of other bulk cargoes.

In addition to these two facilities, in October 2009, Logistec acquired Les Terminaux Rideau Bulk Terminals Inc. (RBT). With its network of four port terminals in the Seaway system, and two inland terminals, RBT allows Logistec to offer its customers a wider geographic coverage as well as many value-added services.

Logistec Stevedoring Inc. is a division of Logistec Corporation, a publically traded company on the Toronto Stock Exchange. Logistec provides over six decades of experience in cargo-handling services through a strong network of strategically located facilities in the Great Lakes, in the St. Lawrence River, on the eastern seaboard of North America, and in the US Gulf.

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www.fednav.com

Fednav's FALLine celebrates 55 years of continuous service

Fednav's FALLine division is celebrating 55 years of consecutive direct maritime liner service from Europe to the St. Lawrence and Great Lakes' ports.

It was with the opening of the Seaway in 1959 that Fednav first transported parcels of steel westbound to the heartland of North America under the name Federal Atlantic Lakes Line (FALLine). Initially an exercise of repositioning ships to load outbound grains at the head of the Lakes, FALLine developed into a competitive maritime service — combining steel beams, coils, plates, slabs, rods, etc., with bulk parcels and dimensional general cargo of various types including industrial and agricultural machinery (presses, transformers, generators, combines, large dryers), locomotives and railcars as well as yachts, windmill equipment, and tanks.

Today, FALLine offers over 40 sailings each year, mainly from Antwerp, Bremen or Brake (other load ports upon inducement) to Sorel, Hamilton, Cleveland, Detroit, Milwaukee, Burns Harbor, and other ports. During the winter the port of Sorel is called on a monthly basis.

Going forward, ISO/ISPS-certified FALLine will continue to offer its customers reliability and flexibility in scheduling, employing a modern fleet of Seaway maximum-size vessels, including six new box-hold Lakers to deliver in 2015 and a further six new Lakers in 2016, while remaining committed to reducing its environmental footprint.

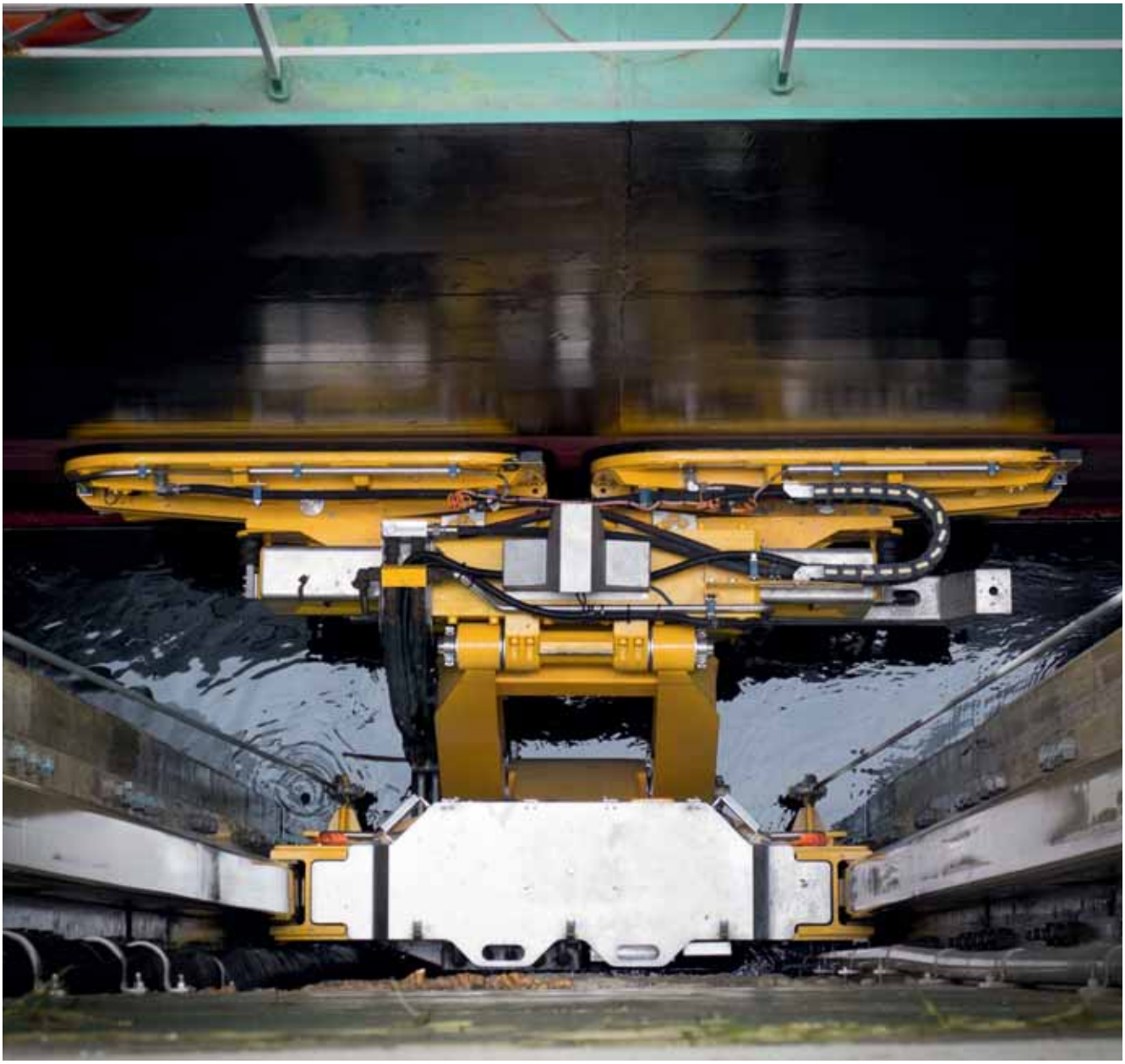
Fednav is an international ship-owning company headquartered in Montreal. Its principal activities include the transport of bulk and general cargo worldwide. The company has offices in Antwerp, Barbados, Hamburg, Rio de Janeiro, London, Singapore, and Tokyo, as well as regional offices in Canada and the United States. Fednav also has terminal, logistics, ice analysis, and shipping agency services and divisions. It employs 260 people and nearly 2,000 crew members and stevedores.

Fednav remains committed to the Great Lakes region

Fednav continues to play an important role in the St.Lawrence-Great-Lakes, transporting mainly grain and industrial minerals outbound and alumina, sugar, and fertilizers as well as steel and general cargo on its regular breakbulk service from Europe inbound.

Fednav currently has 20 ships on order, 12 of which are Seaway suitable, a clear demonstration of the company's confidence in the future of the Seaway and of its commitment to its shippers.

Cavotec wins €28m of orders for MoorMaster™ automated mooring systems



Cavotec has won three orders worth a total of more than EUR 28 million for MoorMaster™ automated mooring systems at applications in Australia, Canada and Denmark, one of which — for the St. Lawrence Seaway in Canada — is the largest to date for MoorMaster™, and one of the biggest projects in the history of the group.

"These projects further illustrate the growing acceptance of MoorMaster™ and its adaptability to a variety of locations and applications," says Ottonel Popesco, Cavotec CEO.

The orders incorporate three distinct types of application — lock, Ro/Ro ferry and bulk handling — and include servicing, installation and commissioning elements: areas where the group sees substantial growth potential.

"The project with the St. Lawrence Seaway represents a major milestone for the Group and for MoorMaster™. It is also the latest stage in our long-running cooperation with the Seaway," Popesco adds.

Under the terms of the agreement with the St. Lawrence Seaway, Cavotec will manufacture and deliver 39 MoorMaster™ MM400L (Lock) units for 13 locks, and related rail structures on which the units will be mounted. Cavotec engineers will also oversee delivery, installation and commissioning of the units. Deliveries are scheduled to run until the end of 2016.

Several MoorMaster™ units have been in operation at the Seaway for a number of years. These specially adapted units hold vessels securely through variations in water level of up to 14m. The St. Lawrence is the world's first inland waterway to introduce automated mooring.

"With the implementation of Cavotec's equipment, we are looking forward to welcoming more Seaway-sized vessels from the world's fleet, as vessel operators will no longer need to equip their ships with certain Seaway specific fittings. This will increase our access to the global fleet. Easing access to the Seaway carries the prospect of bringing more tonnage into our locks," says Bruce Hodgson, director of market development for the St. Lawrence Seaway Management Corporation.

Considered to be one of the greatest engineering feats of the 20th century, the 3,700km-long Seaway is made up of 15 locks, two in the US and 13 in Canada. It forms an essential trade link between the Atlantic Ocean and the Great Lakes at the heart of North America.

In Denmark, Cavotec has been awarded an order for two

MoorMaster™ MM400 units that will be used in conjunction with a new-build LNG passenger (and vehicle) ferry on a frequent service between Hov, in Jutland, and Saelvig, located on the west coast of the island of Samsoe. The order includes installation and commissioning.

The units will securely hold the vessel in place during mooring operations in wind speeds of more than 20m/s, and automatically adjust the position of the vessel according to tidal variations. The units will also enable more streamlined, efficient operations, and improve safety for those on board the vessel and those onshore. Cavotec won this order despite competition from rival systems, none of which deliver the operational and safety benefits made possible by MoorMaster™.

Similar MoorMaster™ units have been in operation at Hov and Saelvig for the past five years. In another example of how operators value the safety and operational gains made possible by MoorMaster™, these units are due to be relocated to two other ports (Ballen and Kalundborg), a process on which Cavotec will also work with the customer.

In the third project, Cavotec has been contracted to support the installation and commissioning of eight MoorMaster™ MM200B (Bulk) units by dredging company Jan de Nul at a bulk handling application in Australia.

MoorMaster™ is currently in operation at bulk and container handling, Ro/Ro, ferry and lock applications in North America, Europe and Australasia. In November last year, Cavotec also announced its first MoorMaster™ order in Africa.

MoorMaster™ is a vacuum-based automated mooring technology that eliminates the need for conventional mooring lines. Remote controlled vacuum pads recessed in, or mounted on the quayside or pontoons, moor and release vessels in seconds.

Cavotec is a leading global engineering group, developing innovative technologies that enable the maritime, airports, mining and tunnelling, and general industry sectors to operate productively and sustainably.

Logistec provides high quality cargo-handling services to marine and industrial customers through a strong network of strategically located facilities in the Great Lakes, the St. Lawrence River and on the Eastern Seaboard of North America.

THE CHALLENGES WE MEET

At Logistec, our commitment to provide timely responses and services is enhanced by our ability to monitor real-time performance. We are committed to the new opportunities that the latest technologies provide.

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LOGISTEC

THE PORT OF TOLEDO

The Port of Toledo - a 12 time recipient of the Robert J. Lewis Pacesetter Award - is at the forefront of cargo handling technology on the Great Lakes. Home to 15 terminals and a full service shipyard, the Port of Toledo is the largest landmass seaport on the Great Lakes. The Toledo-Lucas County Port Authority has acquired two new Liebherr Mobile Harbor Cranes, a High Rise Material Handler and other modern technologies that make it one of the most modern ports in the Midwest.

A newly launched virtual tour at www.tourtheport.com, provides customers a convenient and timely look at Toledo's waterfront resources.

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PORT AUTHORITY

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Making Marine Easier: Hamilton Port's portal matches cargo & vessel capacity

Within the Great Lakes basin, on both sides of the Canada–US border, ready access to a marine transportation option complementing robust road and rail networks helps power the region's $4 trillion economic engine.

Yet traffic levels on the Great Lakes–St. Lawrence Seaway are low by historical standards. The system's volume is estimated to be down by as much as 50% from its late-1970s peak. There are fewer vessels, making fewer trips, and there is also a fair amount of unfilled vessel space currently moving on the system, in the form of partial loads or backhaul capacity.

Transportation industry consulting firm CPCS undertook a study on Seaway competitiveness in 2012 which held good news for the marine sector. Modal comparisons for a number of commodities showed a marine cost advantage, across sectors such as manufactured steel, grain, petroleum and project cargo. CPCS's Marc-André Roy, who directed the study, noted that, "shippers make transportation decisions in terms of total time, total cost, from origin to destination. Part of the challenge, and the opportunity for marine sector transportation services providers, is making better, and more complete information available to shippers — that captures the full transport chain."

One issue flagged in the CPCS study was the system's reputation when it comes to convenience. Feedback from shippers was candid: "It can be exceptionally difficult to get quotes for Seaway routings," notes the report. Further,

"arranging Seaway-routing transport can be tough — more complicated than for rail routings."

"It is a blunt assessment, but not surprising," notes Ian Hamilton, vice president of business development with the Hamilton Port Authority (HPA). "For many years, we've known that marine shipping is green, it's cost-effective, but it hasn't always been seen as the most convenient, especially when it comes to smaller loads."

The Port of Hamilton, Ontario, located at the far western end of Lake Ontario, is the largest Canadian port on the Great Lakes, handling a mix of dry and liquid bulk, breakbulk and project cargo.

The Port Authority sees opportunity in the Seaway's underused capacity, and set out to tackle the system's barriers with new technology.

HPA has launched its new Marine Gateway online cargo and capacity matching service that provides a simplified way to move bulk, breakbulk and project cargo by connecting shippers with available vessel capacity.

"We're responding directly to customer demand, by making marine shipping easier and more flexible," said Hamilton.

Cargo owners, shipping lines, and other marine service suppliers can join up using the Marine Gateway link on the Port of Hamilton's website. The service is free and takes just a few seconds to sign up.

When shipping lines have room aboard vessels travelling to or from the Great Lakes and global destinations, they can post their capacity, notifying cargo owners of availability.

Cargo owners can in turn post cargo they need shipped, and request confidential quotes from a list of prequalified suppliers. It's a one-stop-shop that also connects shippers with quotes for insurance, storage and stevedoring.

"Marine Gateway fills a niche by putting top-up capacity out there for shippers and freight forwarders, making it more viable to choose marine for smaller loads," said Hamilton. "By finding cargo for some of this otherwise unused marine capacity, it delivers a win-win for cargo owners and shipping lines."

Since the web portal's launch in late 2013, more than 60 shippers, shipping lines and other marine service providers have signed up to use the service.

"Great Lakes shipping season is just kicking off, and we're already seeing new users, and new cargo on the Seaway," said Hamilton.

HPA is inviting shippers, shipping lines, freight forwarders, third-party logistics suppliers, and other suppliers to sign up to begin receiving capacity notifications and cargo quote requests.

"Our aim is to bring together a community of users who can make connections, find efficiencies, and save themselves some money."

P&H gears up Great Lakes Terminals for anticipated busy shipping season

What was once the 'quiet' time of winter in the Great Lakes region is now a beehive of activity as the grain terminals get ready for the opening of navigation and the start of what some predict will be a busy year for grain shippers. Grain trading company Parrish & Heimbecker Limited — 105 years old — is one that continues to upgrade its Great Lakes capacity. P&H's terminal in Hamilton, Ontario is getting an environmental facelift as the company invests in state-of-the-art dust control systems for shiploading. P&H's success in shipping corn, soybeans, and wheat from this Lake Ontario port has prompted it to invest in cleaning and aspiration equipment as well, as it strives to meet rigid quality standards around the world. P&H's focus on quality control is engrained in its day-to-day business. Being Canada's second-largest flour miller, P&H manages the supply chain to its internal demand as well as domestic and export markets around the globe, but its focus on understanding customer requirements and managing quality is evident in its meticulous preparation.

When asked about the design of the Hamilton facility and the unique dome structures and low profile belt systems, P&H regional manager Matt Gardner responded, "the design and equipment capability are very helpful in maintaining product integrity and quality. Loading corn out of the Great Lakes without cracking is a challenge, but our investment here is really paying off in that regard".

In 2013 P&H completed a joint venture with Cargill Limited in the Port of Thunder Bay to feed downstream domestic markets and the expanded export market, thanks to the removal of the Canadian Wheat Board monopoly on wheat and durum exports. P&H moves domestic wheat, durum, and canola from its line of prairie grain elevators to Thunder Bay, then through key bay ports in Goderich and Port Colborne Ontario, or on to export positions in the St Lawrence. "Our deck of system and private rail cars, our laker vessel capacity and our ocean freight commitments all work together to allow us some flexibility and security in our execution" stated Darryl Markle, a P&H trader. P&H views keeping supply chains secure and low cost as the secrets to its success. To that end, it supports marine shipping business with a group of five rail terminals in Ontario that feed grain to the St. Lawrence ports and to the markets in the US interior, and five marine terminals in the Great Lakes which facilitate both downstream movement of western Canadian grain and serve as export hubs to ship Canadian grain to the world markets.

New inbound cargo through Port of Duluth adds 'bulk & shine'

The dry bulk clay is offloaded by a clamshell into a hopper and then conveyed indoors for processing.

A new commodity is moving through the Great Lakes/St. Lawrence Seaway – extending a supply chain from Brazil to North America via the Port of Duluth.

The connection was established just prior to the start of the 2013 shipping season when 15,000-plus metric tonnes of kaolin clay was discharged from the Liberia-flag *Cornelia* at the Duluth Seaway Port Authority's terminal on Dec. 6, 2012. Not only was it the first shipment into Duluth, Minn., for the IMERYS company, but it also was the Cornelia's first transit of the Great Lakes-Seaway system.

A second shipment of 17,000-plus metric tonnes of kaolin arrived onboard the *Yulia* (also flying the flag of Liberia) in early June of 2013; and the *Cornelia* returned in late November with another 15,000 tonnes. Additional shipments are planned for 2014.

The slurry is delivered by tanker truck to kaolin customers in the Upper Midwest.

The first cargo of kaolin clay arrived in the Port of Duluth from Brazil aboard the Liberia-flag Yulia *just over a year ago.*

Kaolin is a hydrated aluminium silicate crystalline mineral used as a 'bulking agent' or filler in a variety of industries including ceramics, paper, paint, plastics, rubber, sealant, adhesive and chemicals manufacturing. This particular clay adds gloss/shininess in papermaking and is being mined, refined and shipped by IMERYS.

The world's largest producer of quality kaolin, IMERYS has deposits and production plants in the UK, Australia, US and Brazil. The product arrives in bulk as a powder, which is conveyed indoors to a covered facility on the port terminal for further processing into a slurry for final delivery by tanker truck to customers in the region.

South Africa

regional report

Iain McIntosh

Overview

Bulk export cargo flows from South Africa showed moderate growth of 2.8% in 2013 following a number of years of above-average growth. In many respects, this was less to do with any global market weakness and more to do with infrastructure constraints which have been building for a number of years. This can also be viewed as a pause more than longer-term demise, as there is numerous capacity drivers in play which will push volumes further in future years and this has been reflected in the summary below.

Whilst volumes of iron ore through Saldahna were perceived to have declined marginally in 2013 this was offset by good growth in coal exports from Richards Bay and general bulk growth from Durban. The forecast for the period 2014–2015 should deliver some marginally improved volumes with better growth rates as some of the significant Transnet port and landside infrastructure projects start delivering extra capacity. This however is only marginal and will flatten during 2016–2018 until the full impact of improved rail and port infrastructure is delivered by 2019 notably for coal and iron ore. This is tabled below with the main port exports and we have introduced a likely picture of what 2019 should look like. This reflects Saldahna and Richards Bay rail capacity both reaching 81mtpa (million tonnes per annum) whilst the new manganese ore terminal in Nqgura in the Eastern Cape will go live also at this time and deliver large bulk volume.

On the industrial front 2013 was another difficult year for the South African mining industry but again this was largely confined

SOUTH AFRICAN DRY BULK EXPORTS 2009–2019 (MT)

Port/year	2009	2010	2011	2012	2013	2014 (E)	2015 (E)	2019 (E)
Richards Bay	68.9	75.0	76.0	80.0	85.1	86.0	88.0	98.0
Durban	5.6	5.6	7.0	6.8	8.1	8.9	9.5	9.0
Port Elizabeth	2.8	4.1	4.6	5.3	5.7	5.7	5.7	13.0
Saldanha	43.6	47.4	53.3	55.7	53.4	58.0	62.0	81.0
Other	0.8	0.6	0.6	0.5	0.2	0.6	0.6	0.6
Total bulk	121.7	132.7	141.5	148.5	152.5	159.2	165.8	201.6
Growth (%)	5.3	9.0	6.6	4.8	2.8	4.4	4.1	21.6

Source: TNPA monthly data

Port of Nqgura.

to the platinum and gold sectors however an unhealthy landscape exists in this area not helped by government, the private sector and labour who seem unable to find common ground.

On the positive side Transnet, South Africa's state-owned freight transport and Logistics Company announced on 17 March a US$4.7 billion award for 1,064 locomotives from four overseas manufacturers. The four companies awarded the contract were GE and Bombardier from the USA and CNR Rolling Stock and CSR Zhuzhou of China. Transnet in ordering from four separate companies aim to secure the best supply lines/timescale and also the ability to have the entire order in place over the next three years. The order is structured as:

- General Electric – 233 Diesel Electric Locomotives
- CNR Rolling Stock – 232 Diesel Electric Locomotives
- CSR and Bombardier – will supply 599 Electric Locomotives

The positive aspect is also that the bulk of these orders will be assembled at Transnet Engineering with minimum 55–60% local content programmes and also with a skills transfer to the point where Transnet Engineering itself could reach OEM status and start exporting locomotives to markets overseas in the future.

The majority of the locomotives are actually going to be deployed in Transnet Freight Rails (TFR) general freight business which does not include the company's dedicated heavy haul lines for iron ore and coal (which are relatively well supplied already). There is an allocation for more trains required on the Manganese line (see later). TFR expects to increase the current 207 million tonnes of freight to 350 million tonnes once the order is complete.

The average age of the TFR fleet was currently 32 years so this implies there will be at the other end a clearing out of older stock but given the higher maintenance level of older units offset by less from a younger fleet this will still assist TFR with asset utilization. Therefore whilst the growth levels in freight might seem rather ambitious the facts are that a more efficient rail network will result and quickly will help both general freight and bulk hauls.

Review of the Major SA Bulks

Coal trade

The global seaborne steam coal trade grew by a much slower 3% in 2013 to reach 849mt (million tonnes) and is set to increase by 4% in 2014 to reach 885mt. This growth driven by both China and India has slowed somewhat in recent years and potentially not assisted by the low price of steam coal today. The long-term growth of this product is however solid and whilst RSA exports have lagged behind global trade they did post a new record in 2013 through Richards Bay Coal Terminal (RBCT) with a lift of 70.2mt. This is the first time that 70mt has been reached but still falls short of terminal capacity of 91 mtpa.

Elsewhere Durban loaded a further 1mt whilst 2.5mt moved through the TCM Maputo (Matola) gateway. Transnet Freight Rail (TFR) has delivered better volumes into RBCT as part of its commitment but these are only likely to reach 81mtpa by 2018

Transnet has won US$4.7 billion of contracts for 1,064 locomotives from four overseas manufacturers.

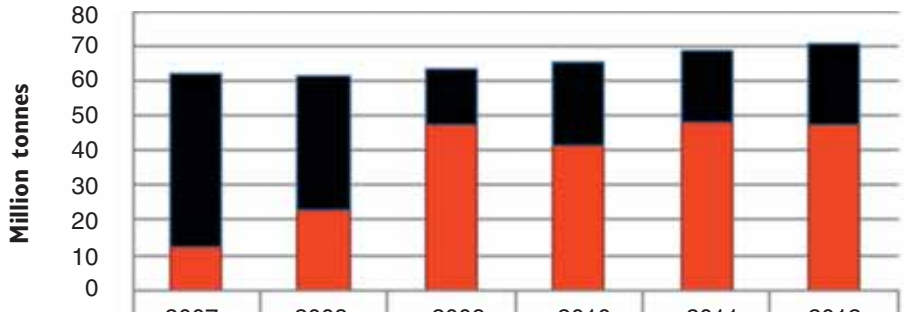
EXPORT OF STEAM COAL THROUGH THREE MAIN GATEWAY PORTS (MT)

Total SA coal (mtpa)	2008	2009	2010	2011	2012	2013	2014 (E)
Richards Bay Coal Terminal	61.8	61.1	63.8	65.5	68.3	70.2	75.0
Durban	1.5	1.2	1.0	1.2	1.4	1.1	1.5
Maputo	1.2	1.4	1.6	2.2	3.5	2.5	2.5
Total SA coal	**64.5**	**63.7**	**66.4**	**68.9**	**73.2**	**73.8**	**79.0**
Growth (%)	–6.3	–1.2	4.2	3.8	6.2	0.8	7.0

in line with the market demand strategy on rail. The export of steam coal through South Africa's main three gateway ports is detailed above.

Whilst Transnet is looking at developing its own terminal capacity in Richards Bay with up to 32mtpa capacity, this does seem somewhat short-sighted when considering the extra capacity already available at RBCT and the key is to ensure ongoing improved rail delivery to the existing facility. In this respect, TFR is improving. Overall exports through all channels meant that export growth was only 0.8% in 2013 even though growth via RBCT was 2.8% but the 2014 forecast is expected to rise to 79mt and a growth of 7%.

Richards Bay – Atlantic vs. Pacific Basin



	2007	2008	2009	2010	2011	2012
Atlantic	54.8	49.3	38.2	15.8	13.5	14.2
Pacific	12.0	12.5	22.9	47.5	41.5	54.1

Source data – SA Revenue stats & AfriCoal.

What is interesting is the TCM terminal in Maputo run by Grindrod South Africa where a shift in the cargo mix has taken place with a reduction in coal exports from South Africa and a swing to magnetite which comes from mines in Palabora in the North East of South Africa. Grindrod has recently stated the volume of coal that can move through Maputo will largely depend on rail capacity (supplied by TFR) and export markets. Therefore, with a short-term terminal capacity of 7.5mt at present, coal is only 33% of terminal utilization . The terminal also moved iron ore from the north of South Africa so swing volume between three key commodities gives the terminal some flexibility.

Grindrod/TCM is aiming to add a further 4.5mt capacity to 12mt by 2016 (Phase 4A) and a further expansion through phase 4B to potentially 20mt. At the same time the terminal berth area has been dredged and by 2015 will be able to handle 70,000-tonne Panamax tonnage and therefore improve terminal throughput. With this in mind, there is no question that Maputo, with its closer proximity to the major coalfields, can add further opportunity to the South African coal producers.

With the 70mt that moved through RBCT, the Atlantic volume increased a little in 2013 with a marginal decline to Pacific basin; however both China and India continue to take a large proportion of RSA coal (China 13.5mt and India 20.8mt) and this will continue in coming years. Most exports through Maputo are destined for Pacific markets but there is increasing demand into Turkey through this channel.

Whilst there is sufficient bulk terminal capacity available it is also worth noting that RBCT still plans to take the existing terminal capacity to 110mt (a growth of 19mt) in response to junior miners' requests to secure more export allocation (which today is quite limited). This expansion is still in the pre-feasibility phase. This would also require more equipment such as a tippler, shiploader plus additional conveyors, towers and silos. This type of expansion is a lot more economical than a completely new terminal as mooted by Transnet and it is hoped that sense will prevail and joint co-operation between RBCT/Transnet and miners will see this through.

Iron ore trade

There does appear to be a difference in terminal throughput of iron ore vs. that posted via Trademap (the latter which is usually accurate) however there would have appeared to have been some significant recovery in RSA exports during 2013 and notably to China as per the table and graph. Some iron ore volume from the north east of South Africa is exported through Maputo TCM terminal, which could have influenced figures. What is of more concern is that whilst RSA exports have kept pace with the global export trade (5% of the market) this could weaken in the next few years.

Saldahna exports will remain relatively flat over the next few years with various rail and terminal projects taking maximum capacity of the terminal to 65mt by 2018/2019. This will rise to 82mt by 2019/2020 therefore between 2015–2018 South Africa could see a decline in share on a global level with flat growth on this sector due to capacity constraints.

Whilst the Phase 1C upgrade was completed at Saldahna bulk terminal in 2012 and much of the gains have been made through operational efficiencies as since 2009 (phase 1B) the port has been running with two tipplers, four stacker/reclaimers and two shiploaders. This efficiency gain came via faster loading rates per hour. The Transnet MDS (Market Demand Strategy) will spend (US$ 3.1 billion) on rail and port infrastructure between 2013 and 2018 via phase 2A of the strategy. This would be via:

- one additional tippler (total three units);
- two additional stacker/reclaimers (total six units); and
- one additional ship loader (total three units).

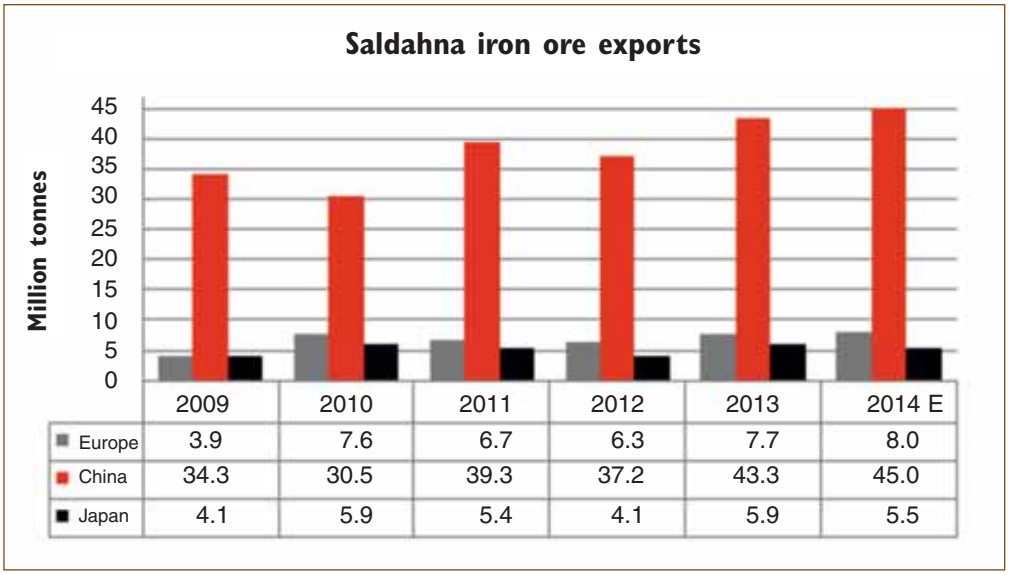
SALDAHNA IRON ORE EXPORTS (MT)

Year	2009	2010	2011	2012	2013	2014 (E)
Europe	3.9	7.6	6.7	6.3	7.7	8.0
China	34.3	30.5	39.3	37.2	43.3	45.0
Japan	4.1	5.9	5.4	4.1	5.9	5.5
Other	2.4	4.5	4.6	6.5	6.0	6.0
Total	**44.8**	**48.5**	**56.0**	**54.1**	**62.9**	**64.5**
Growth (%)	36.1	8.8	15.5	–3.4	16.3	2.5
Global trade	**898**	**991**	**1,052**	**1,109**	**1,186**	**1,295**
Growth (%)		10.4	6.2	5.4	6.9	9.2

Source: UNCTAD/Trademap.org

This would bring port capacity to 82mtpa.

As stated, all the upgrade plans are in place but the full effect of 82mtpa will only be available from 2019 onwards.



Manganese ore trade

This is an exciting and growing bulk area for South Africa. Data released through Trademap.org shows that Exports of South African Manganese ore surged again with a 24% growth to 9.8mt in 2013 following 16% growth in 2012. This has more than kept pace with world growth which also jumped strongly in 2013 but with a slightly slower 15% growth rate. Increasing production coming from emerging miners such as Tshipi, Asia Minerals and Kalagadi Mining was a factor in growth as well as general demand from steel markets. It is expected that a further 12% growth to 11mt will be possible for South African exports in 2014 pushing share to over 42.5% of global supply with the other major supplier being Australia. RSA has long-term resource growth and unfortunately for now limited beneficiation to alloys with shortage of power.

The challenges continue to come not from supply but the ongoing logistical challenges of getting the product to exit port. Manganese ore is mined in the Northern Cape nearly 1,000km from its gateway port in Port Elizabeth and volumes reached maximum capacity in the last few years. Some of the bulk growth has been absorbed by bulk via Durban which handled a massive 2.8mt in 2013 a growth of 47% over the previous record in 2012. There is a limit to how much more bulk can be handled and this is now clearly visible via the graph on p53x showing the penetration of containers in this sector. An estimated 1.4mt moved in containers in 2013 and there is a potential to move 2.5mt (92,000 × 20ft containers) in 2014.

Whilst on paper this is great for container operators, it is not really sustainable in the longer term from a logistics and cost point of view.

Given the challenges on infrastructure it is therefore important that a solid plan is in place for the future and this is now formally under way through Transnet capacity upgrades. This is via both inland rail upgrades as well as port. The key start-up date for new capacity will be 2018/2019 financial year.

For rail there is a process being followed which takes the existing line to a larger heavier haul scale. This will be via loop lengthening as well as extensions and new loops along the line on the main section between Mamathwane to Nqgura (new port). In addition, there will be an upgrade of existing wagons and a doubling of wagon capacity by adding 1,600 new wagons plus 121 new diesel and electric locomotives. This is required following successful trials of running a 200-wagon train with extra locomotive power last year. This, combined with the line upgrade, allows rail capacity to move from the current 5.5mt per annum to 16mt in 2018. There will be scalable port and rail capacity to move this to 22mt per annum by 2022 when axle weights can move from 20T to 26T.

MANGANESE ORE (MILLION TONNES)

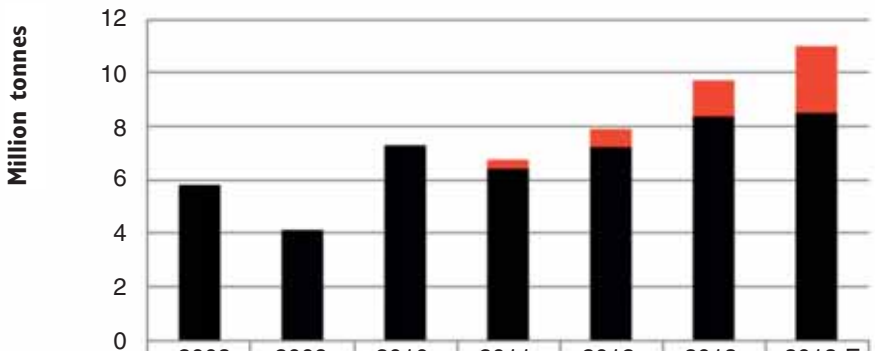
Year	2008	2009	2010	2011	2012	2013	2014 (E)
Total mang. ore exports	5.8	4.1	7.3	6.8	7.9	9.8	11.0
World export	18.0	14.9	20.2	21.0	21.1	24.2	25.7
RSA share (%)	32.4	27.8	36.1	32.2	37.5	40.3	42.8
Container	0.0	0.0	0.0	0.4	0.7	1.4	2.5
Bulk	5.8	4.1	7.3	6.4	7.2	8.4	8.5

On the port side, Nqgura Manganese Terminal will be commissioned in 2018/2019 and will have two shiploaders with the ability to load two 80,000dwt Panamax vessels simultaneously, which is a massive ramp-up over the current operation in Port Elizabeth handling only one vessel at maximum 60,000dwt capacity.

In addition, the terminal will have three stackers and related stockyard conveyors to stack ore on the stockpiles, with provision to add a fourth stacker in future. There will be two reclaimers and related stockyard conveyors to reclaim ore from the stockpiles, with provision to add a third reclaimer in future. The terminal layout will have four stockyard rows, with provision to add two additional rows in future and dual surge bins at the stockyards to optimize ship loading efficiency.

This is an exciting development but the real challenge will be between now and 2018 in spite of the various bridging methods to take care of this and unfortunately with the growth of trade gaps may appear.

Manganese ore ex-South Africa 2008–2014



	2008	2009	2010	2011	2012	2013	2013 E
Container	0.0	0.0	0.0	0.4	0.7	1.4	2.5
Bulk	5.8	4.1	7.3	6.4	7.2	8.4	8.5

Chrome ore trade

The global chrome ore trade is around 31mt per annum and China with no local resource is now close to 40% of global trade with over 12mt imported in 2013 and this will grow further as China imports again grow in 2014. South Africa is a major supplier of chrome ore and whilst traditionally 35% of South African chrome exports move in containers this is largely a bulk commodity and most growth should develop this way.

Chrome ore exports are updated below and shows South African exports of chrome ore grew by 45.2% in 2013 from 5.84mt to 8.48mt. Whilst there was only marginal growth in 2012 due to some shift into other more lucrative markets the general trend is for most growth being driven by China imports. South Africa represents over 50% share of Chinese total imports and between 76–78% of RSA total export moves to China.


Chrome ore.

A key driver for growth has been a combination of cheaply available UG2 a by product from the platinum mining sector and also less ferrochrome being produced due to South African power shortages forcing a number of smelters to be closed. At time of writing a major strike now in its eighth week continues in the South African platinum sector and this will potentially limit the availability of UG2 supply and could therefore impact on anticipated growth for 2014. Whilst Chinese chrome ore imports are expected to increase 20% in 2014, this will potentially be met from other markets if RSA export volume is impacted by a protracted platinum strike.

Summary

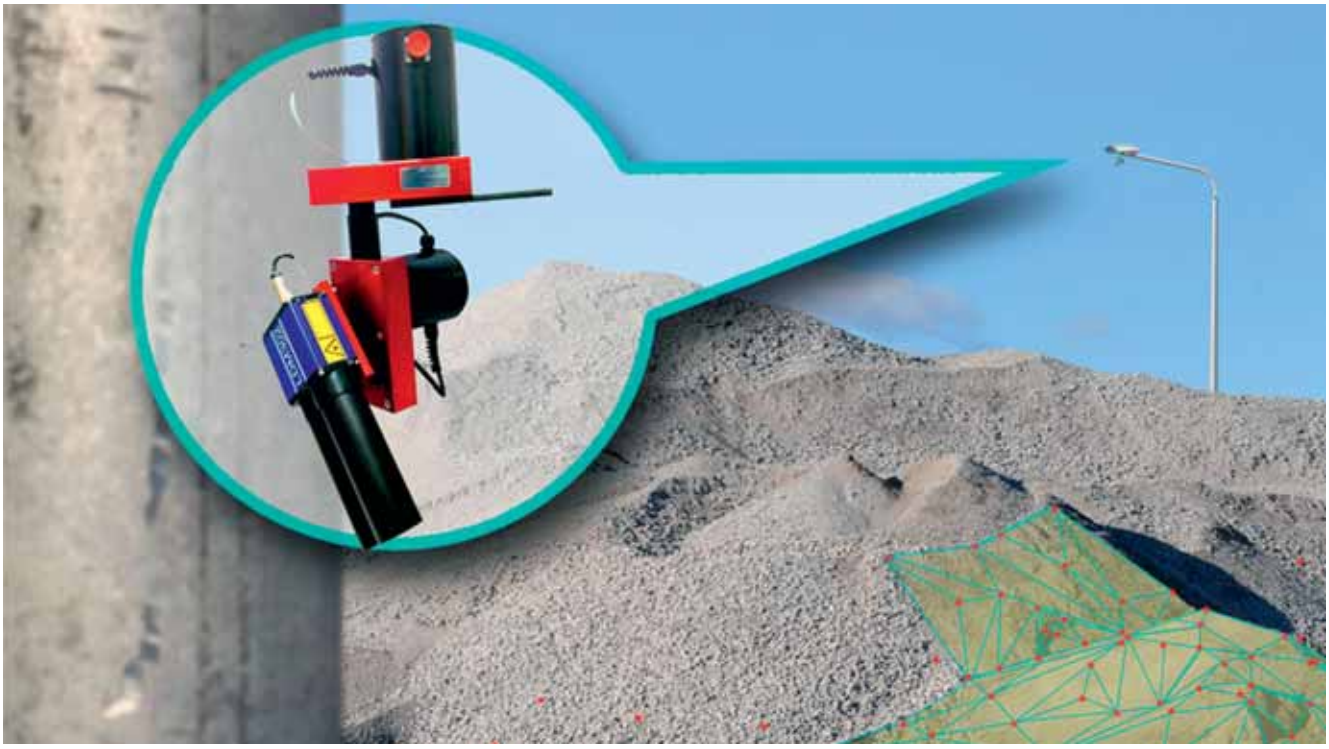
The longer-term future for South African bulk exports continues to look healthy although there is a likely flat to marginal growth rate over the next few years as infrastructure slowly catches up with and exceeds demand. Export volume will have good room to grow strongly once the state owned Transnet market demand strategy is complete. Aside from the main drivers being the base mineral mining industry and coal there is also ongoing good potential from the minor bulks such as grains and a range of smaller minerals.

What is also important is that South Africa's power crisis is resolved quickly so a number of base metals and minerals can be beneficiated. Whilst this might reduce some volume from commodities like manganese and chrome ore, it will add considerable value through the export of their alloys.

CHROME ORE EXPORTS (MILLION TONNES)

Year	2008	2009	2010	2011	2012	2013	2014 (E)
China	2.71	4.55	3.59	4.47	4.23	6.45	7.25
Europe	0.20	0.20	0.41	0.51	0.71	0.51	0.62
Other Asia	0.21	0.20	0.32	0.35	0.49	0.56	0.56
Others	0.76	0.22	0.38	0.37	0.41	0.96	0.80
Total	**3.88**	**5.17**	**4.70**	**5.70**	**5.84**	**8.48**	**9.23**
Growth (%)		33.2	–9.1	21.3	2.5	45.2	8.8

Ronin delivers another breakthrough in bulk commodity management with its ARTEMIS® 300 scanner and software



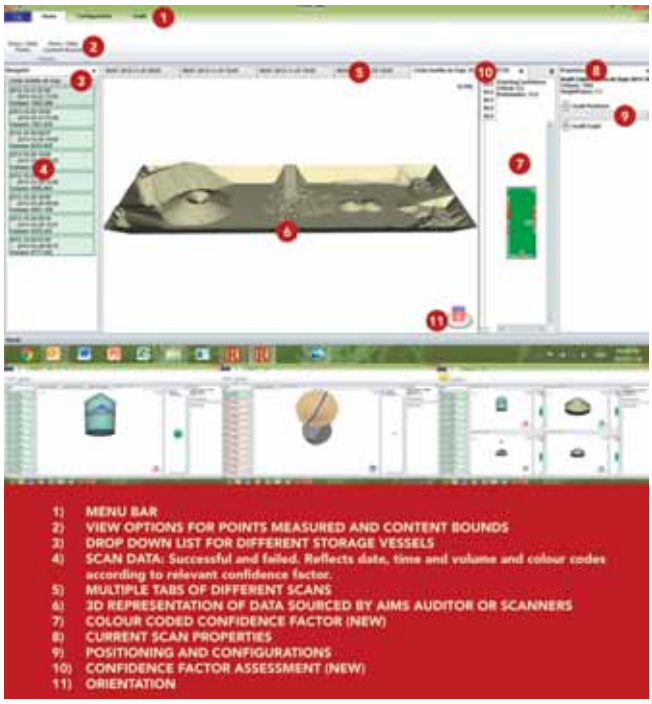
Ronin® is a solutions company active in agriculture, industry and the mining sector. The company has been in operation for over a decade and has its origins in the grain management industry, *writes E. Herridge – Ronin Marketing Specialist.*

Ronin® develops its own proprietary software as well as design and manufacture its own unique laser architectures capable of sourcing stock volume information in a variety of bulk commodity storage environments.

Ronin®'s latest breakthrough solution is the ARTEMIS® 300 series multi-axis 3D scanner and proprietary software. The Artemis 300 series is a fixed solution that allows for data sourcing in high saturation environments and is capable of doing so over longer distances. The hardware element of the ARTEMIS® solution consists out of the ARTEMIS® 300 series scanner, a control/communication box and a dedicated PC on-site running proprietary ART® and AIMS® software.

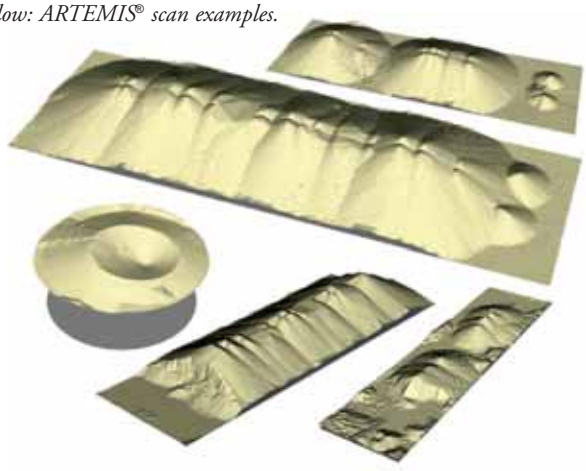
The ARTEMIS® 300 scanner takes an average of 10,500 point measurements on a surface per individual scanning cycle and offers exceptional accuracies when utilized to quantify hard and soft bulk commodities. The ARTEMIS® 300 solution can function with a single scanner or multiple scanners in a network, as required by the surface area of the commodity. Scans can be scheduled (i.e. for change of shifts), cycled or performed on demand. To enhance accuracy the ARTEMIS® 300 solution is customized to each client and application by factoring in the amount of points sourced per square metre, density of the points and the scan patterns of each ARTEMIS® installation.

The proprietary ART® and AIMS® software element of the ARTEMIS® solution calculates volumes, publishes reports and provides the graphic interface needed to operate the system. The PC running this software is usually located on the clients' network for easy distribution of data to all relevant personnel. Scan results are immediately available on completion of a scan cycle and no additional calibrations or calculations are necessary post scan as all 'spikes' or irregular points are automatically

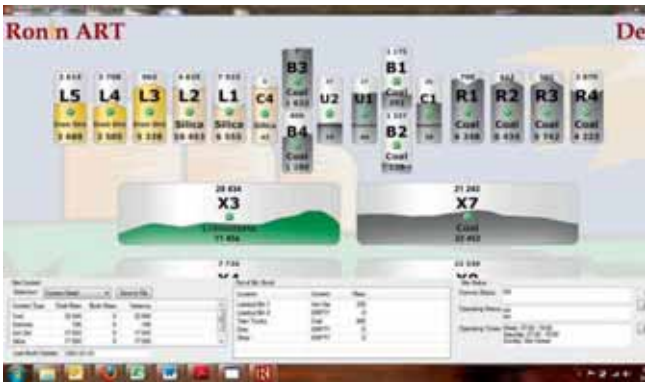


Above: AIMS® software interface.

Below: ARTEMIS® scan examples.



ART® software interface.



ART® software interface site overview.

eliminated by the software. Ronin® proprietary software also enables bulk densities to be applied to the calculated volumes, enabling reporting of bulk in tonnages. The software features a facility that allows for comprehensive 'contents bounds' to be built into the system for each individual storage vessel/area on the network. Flooring, walling, discharge points and structures are configured into the system, enabling accurate volumetric calculations for each bulk storage vessel or area.

Further features enhancing the functionality of the ARTEMIS® 300 series software includes management facilities such as automatic Daily Reconciliations between actual physical bulk and pertaining book values and a Head Office Awareness Element that networks multiple sites for complete stock management and planning. Further integrations are also available to those clients requiring custom functionality in terms of applying weighted averages of grading, such as moisture, bulk densities and sizing applicable to each individual stockpile or storage vessel on the network.

ARTEMIS® 300 literally place control over your bulk commodity stock right at your fingertips.

Tenova Mining & Minerals South Africa awarded DFS for high quality pig iron project

Tenova Mining & Minerals South Africa, the South African market focused black empowered operating arm of the global Tenova Mining & Minerals Group, has been nominated to carry out a definitive feasibility study (DFS) for London Stock Exchange-listed Baobab Resources. The DFS will be done on Baobab Resources' pig iron and ferro-vanadium project in Mozambique's Tete region. The iron ore resource to be mined in this greenfields project comprises magnetite and includes vanadium, with the pre-feasibility study test work having confirmed successful production of pig iron and vanadium as a by-product.

The DFS, which is intended to run from January to September 2014, will cover beneficiation and smelting of 1mtpa (million tonnes per annum) of high quality, low impurity pig iron, with Tenova Pyromet consulting on the smelting plant aspect of the study. The DFS includes pilot testwork on the comminution and beneficiation characteristics of the ore at the South African minerals research organization Mintek, from which a four-tonne concentrate sample will be shipped to FL Smidth in the USA. The sample will be used for pilot work on the pre-reduction step (i.e. rotary kiln).

The proposed flowsheet covers crushing, magnetic separation, direct reduction in a kiln and smelting of concentrates derived from the project's iron ore. Test work on thermal coal from a number of producers in Tete proved positive for Baobab's direct reduction process.

The project's strategic proximity to the requisite iron and steel making commodities of iron ore, coal, power and water presents an opportunity to add substantial value on site — through mine-mouth smelting of a pig iron product.

A major challenge associated with the project is the remoteness of the site and difficulty of access. The logistics aspects of the study will evaluate transport infrastructure requirements, including trucking of coal to site, trucking of pig iron to a railway siding and transport by train to the ports of Beira or Nacala. The study will also take the significant infrastructure investments already being made in the region into account. These include rail corridors linking the Tete province with the coast that are being refurbished and expanded, as are the ports of Beira and Nacala.

In addition, in conjunction with another consultant, Tenova Mining & Minerals South Africa will assess the possibility of co-generating off-gases for conversion into power.

Tenova Mining & Minerals South Africa is the broad-based black empowered operating arm of the global Tenova Mining & Minerals Group. The Company focuses on the provision of total innovative solutions across the full mining & minerals industry value chain in South Africa.

Tenova Mining & Minerals is a total integrated solutions provider to the global mining, bulk materials handling and minerals beneficiation and processing sectors, offering innovative technological solutions and full process and commodity knowledge across the mining and minerals industry value chain.

Tenova is a worldwide supplier of advanced technologies, products, and engineering services for the iron & steel and mining industries.

Martin Engineering names Zambian distributor

Fluid Base will be a source for all Martin Engineering RSA products and services throughout Zambia. In the photo from left to right is Trevor Bester (Export Sales Manager), Mr Fanuel Banda (Director Fluidbase) and Mark Jarrett (Sales Manager). Image & text © 2014 Martin Engineering Company.

In a move designed to broaden the availability of high-performance bulk material handling technologies in Southern Africa, Martin Engineering RSA has named Fluid Base Industries as its full-service distributor in Zambia. Fluid Base will be a source for all Martin Engineering RSA products and services throughout the country, including conveyor belt cleaners, transfer point solutions, flow aids, safety products and training, belt support products, silo cleaning and other field services.

The companies will primarily serve customers involved in mining and material processing applications, as well as the cement and oil industries. To minimize delivery times, Fluid Base will stock a wide range of Martin Engineering products and repair parts at its locations in Kitwe and Chilanga, which are strategically located near many of the major mining projects.

"This agreement will help us broaden our presence in Africa and create a customer base in the key commercial regions in Zambia," observed Martin Engineering RSA Sales Manager Mark Jarrett. "The companies here prefer doing business with local suppliers," he explained. "We've had many interactions with Fluid Base in the past, and they are one of the few distributors capable of representing the Martin Engineering brand with the level of technical expertise to ensure outstanding product support and service."

Fluid Base was formed in Zambia in 1997, initially focused on providing repair parts and services to the mining industry. The company is structured around a small group of technically-qualified individuals who deliver leading-edge components and expert service, including fabrication, installation and training.

"Our established contacts in the mining sector and other industries will help us introduce innovative technologies to improve the productivity and safety of bulk handling operations," said Operating Director Fanuel Banda. "The current levels of activity are bringing new opportunities, but with them come new challenges. That's where we are targeting our efforts: helping bulk handling operations achieve greater efficiency and environmental stewardship."

Banda is a 35-year veteran of the Zambian mining industry, with ten-year stints at two multinational firms, including a position as General Manager of Operations, in charge of mining equipment, spares procurement and maintenance. "Mr. Banda and his colleagues are well-recognized and respected throughout Zambia for their experience, strong technical acumen and business integrity," Jarrett continued. "They also bring an excellent understanding of local and regional markets and customs, facilitating good communication and fostering positive customer relationships."

Jarrett has been working with Zambian mining companies and distributors for the last twelve years, and he finds excellent market potential and opportunities for service.

"It can be difficult to gain entry into this market," he admitted. "But after observing the Fluid Base staff over the years, we feel confident that the company has the skills and collective mindset to help us develop a strong presence here, earning customer recognition and loyalty as we go. They have the ability to seamlessly integrate Martin Engineering products into customer operations, as well as the technical training to support them."

Since 1944, Martin Engineering has developed innovative products and services for solids handling applications around the world. The company attributes its success to the design of field-proven, cost-effective solutions for "real-life" problems. Martin Engineering products are designed for tough industrial conditions, engineered for simplicity, safety and efficiency, and built to allow easy maintenance.

Martin Engineering strives at making bulk materials handling cleaner, safer and more productive. The company supplies conveyor products and flow aids across the globe for a wide variety of bulk material applications, including mining, coal handling, cement, aggregate, biomass, grain and other materials. The firm is headquartered in Neponset, IL (USA), offering manufacturing, sales and service from factory-owned business units in Brazil, China, France, Germany, India, Indonesia, Mexico, South Africa, Turkey and the UK, and under exclusive licence with ESS Australia.

Reliable materials handling: SENNEBOGEN 835 R in demanding port implementation

Situated on the Turkish Aegean coast, the Izmir region is home to Turkey's second-largest harbour. Here the company, Yüksan & Prolojistik Ltd, relies on SENNEBOGEN materials handling machines for demanding port handling. Recently a new 835 R of the E-series has been loading and unloading the arriving ships in a significantly shorter time than was previously possible.

With the new SENNEBOGEN 835 R special, which was placed in service in mid-2013 at Prolojistik, the Turkish Sales and Service Partner, Forsen Material Handling, was able to place an additional crawler-driven materials handling machine in Turkey. With 224kW drive power and 8.9 l cubic displacement, the 835 R of the current E-series is impressive due to its high level of operational readiness and optimum reliability. Equipped with a 3m³ double shell grab, the machine unloads the arriving ships. Bulk goods of all types, from animal feed to ore, are loaded onto trucks. The SENNEBOGEN 835 R handles approximately four cycles per minute, up to 5,000 tonnes per day. Thus today the company handles just as much material as it handled previously with a significantly larger predecessor machine.

For the operator the cab adjustment of the comfortable Maxcab, which can be elevated 3m and moved forward 2.6m, offers an ideal overview of the work environment. Together with the 4.5 pipe pylon this brings the operator to a convenient viewing height of approximately 9m. Particularly for unloading ships the operator always has a free view into the cargo bay of the ship. The special materials handling equipment, consisting of a 10.8m banana boom and a 9.4m gripper stick, is also configured especially for the demanding port handling application.

Equipped with a particularly robust and wide gauge undercarriage with 700mm track shoes, the SENNEBOGEN 835 R is not only extremely safe it can also be moved flexibly along the quay. Here safety is written in capital letters. The perimeter uppercarriage railing and additional walkways offer ideal service and maintenance conditions.

As a machine of the current E-series the 835 R is equipped with the SENNEBOGEN Control System, SENCON. The system supports the operator in daily operation, and in addition to idle stop automation, also offers custom fine adjustment and real-time analysis of an extensive range of machine parameters.

South Port orders Liebherr mobile harbour crane

South Port NZ Ltd (South Port), located at Bluff in New Zealand's South Island, has just completed the order for a new LHM 550 mobile harbour crane. The crane will be used for highly efficient container handling for MSC, the port's significant containerized cargo customer. The new machine is the third LHM delivered to New Zealand's southernmost port.

"South Port is the regional port operator in Southern New Zealand, and it is important to our clients that we operate with a two-crane model, giving faster turnaround time to the container vessels and allow for projected growth in this area of the business," said chairman Rex Chapman.

South Port offers a comprehensive service portfolio. A projected containerized cargo increase over the next five years in the Southern region called for additional state-of-the-art cargo handling equipment. In particular growth in agricultural products — mainly dairy industry ingredients and finished product plus stock food — meant a second crane was a must.

Cargo operations manager Geoff Finnerty added, "We have worked with Liebherr since 1995, so a good partnership has evolved during that time. We know them well, and know that they will provide support when required, despite headquarters being at opposite ends of the world." In order to maximize crane availability, Liebherr puts

the focus on a well-structured global service with quick response times.

The crane comes with a twin-lift spreader and tower extension, giving a cabin height of around 29 metres.

"Most of the MSC vessels enter the port light meaning they are high in the water, so the additional height of the cabin and boom pivot were essential components of the order," Finnerty added.

The crane will be operational September of this year and will work side-by-side with an LHM 400, delivered in 2010.

Schade moves

After 12 years in Herne, SCHADE Lagertechnik GmbH took only three days to move to its new headquarters in Gelsenkirchen.

The reason for the relocation is an increased demand for office space due to the company's continued growth. "When we came to Herne with a staff of about 30 people back in 2002, some of our offices even remained empty," says Wolfgang Jung, managing director of SCHADE Lagertechnik. However, that has changed over the years. "Our former premises were simply too small for today's staff of 70."

Today, the new office hosts SCHADE specialists from engineering, construction and distribution. Its ample size leaves sufficient potential for continued further growth.

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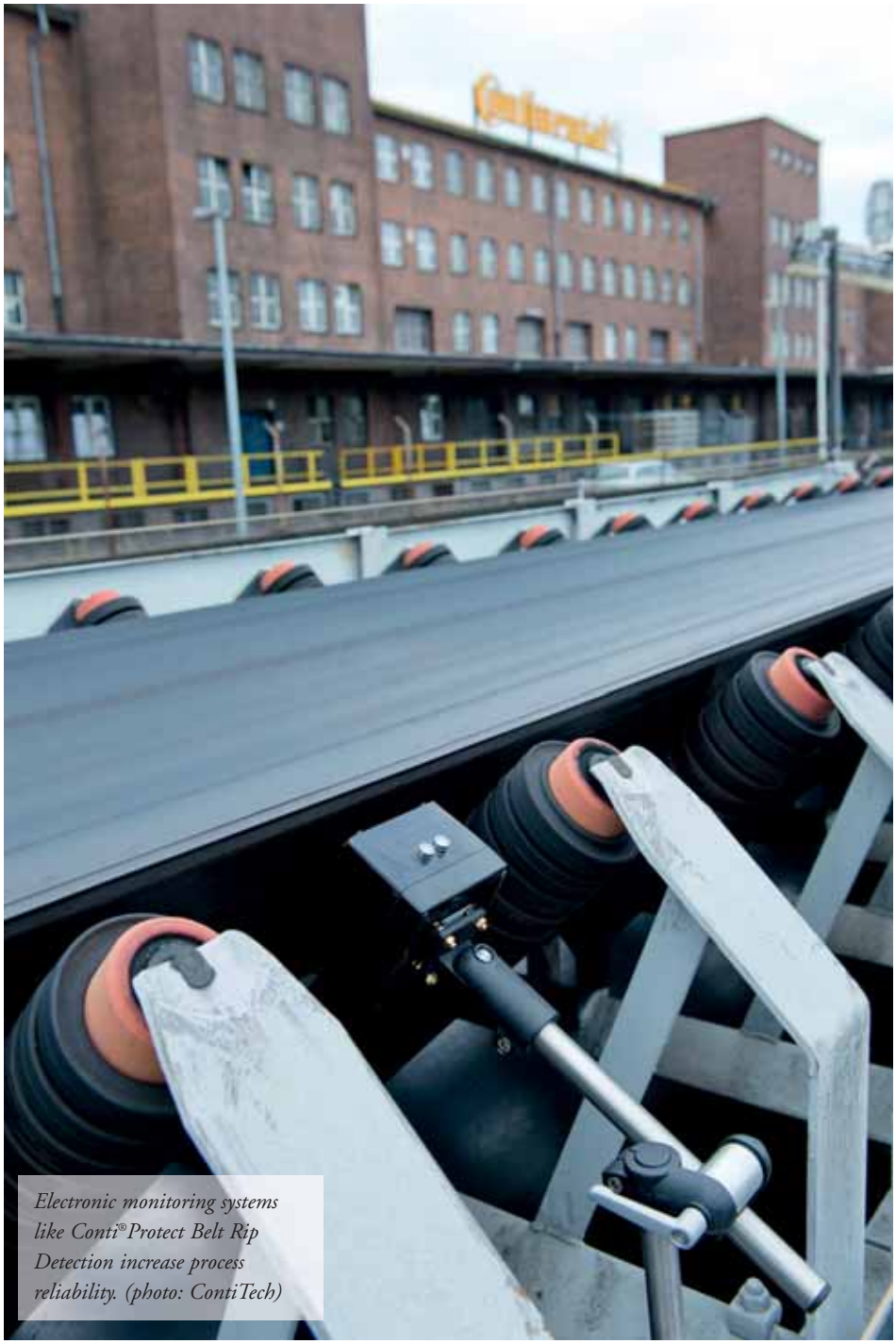
ContiTech

supporting mine development with intelligent conveyor belt solutions



Electronic monitoring systems like Conti®Protect Belt Rip Detection increase process reliability. (photo: ContiTech)

A large-scale project is now under way, and the ContiTech Conveyor Belt Group is delivering conveyor belts and belt monitoring systems for the development and expansion of the Chilean copper mine in El Teniente, which is run by mine operator Codelco. More than 20km of steel cord belts are to be installed between 2013 and 2017. "We are absolutely delighted to be involved in this large-scale project and to support the expansion with our innovative products," says Claus Peter Spille, head of the Mining World segment at the ContiTech Conveyor Belt Group. ContiTech conveyor belt systems have already been used in previous projects of Codelco. The conveyor belt specialist received this latest order via Tenova TAKRAF from Leipzig.

Innovative product solutions protect the environment

The project Nuevo Nivel Mina is intended to open up new copper reserves in deeper layers of the mountain so that increased underground mining can now take place. With the new conveyor belt system, which will transport the mined rock, the mine operator implements energy-saving solutions. The steel cord belts from ContiTech are manufactured with an XLL Compound, a special, energy-optimized rubber composition. Since this rubber compound significantly improves visco-elastic properties, the indentation rolling resistance on the conveyor belt system is minimized. In comparison with conventional conveyor belts, this enables energy consumption during the transport of raw materials to be cut by up to 25%. In this way, energy costs and CO_2 emissions can be significantly reduced.

Improved safety and reliability thanks to electronic monitoring

Alongside energy-optimized steel cord belts, the ContiTech Conveyor Belt Group is supplying innovative electronic conveyor belt monitoring and inspection systems for El Teniente. These systems are well suited for the diverse challenges of the copper mine and guarantee a high degree of safety and reliability.

Conti®Protect monitoring systems protect conveyor belt systems against serious damage, thereby making a major contribution to enhanced operational reliability by reducing the number and length of malfunction-related downtimes. Conti®Protect Splice Elongation Measurement is designed to monitor larger conveyor belt systems and uses magnetic markers to detect irregularities in splice length. On conveyor systems with ever more stringent safety factors and ever increasing conveyor belt strengths, monitoring the splice increases the Mining World segment at the ContiTech Conveyor Belt Group. Conti®Protect Belt Rip Detection uses conductor

loops vulcanized into the conveyor belt to detect longitudinal slits as early as possible. With improved conductor loops and low susceptibility to electromagnetic interference, the belt monitoring system prevents error messages and, in turn, costly conveyor downtime. Online support is also available. On request, the experts from ContiTech can log into the system and remotely check and optimize processes.

Conti®Inspect systems provide data that can be used to derive reliable forecasts about the remaining service life of the conveyor belt, allowing operators to estimate investment costs more accurately. This makes a vital contribution toward reducing operating costs and protecting the environment. With the aid of laser sensors, the mobile Conti®Inspect Belt Thickness Measurement system determines the thickness of the conveyor belt across the full width of the belt. Surface damage can be detected at an early stage thanks to the revolutionary Conti®Inspect Continuous Surface Inspection system. State-of-the-art scanning technology is used to examine the surface of the conveyor belt and generate a detailed image of the belt surface and its condition.

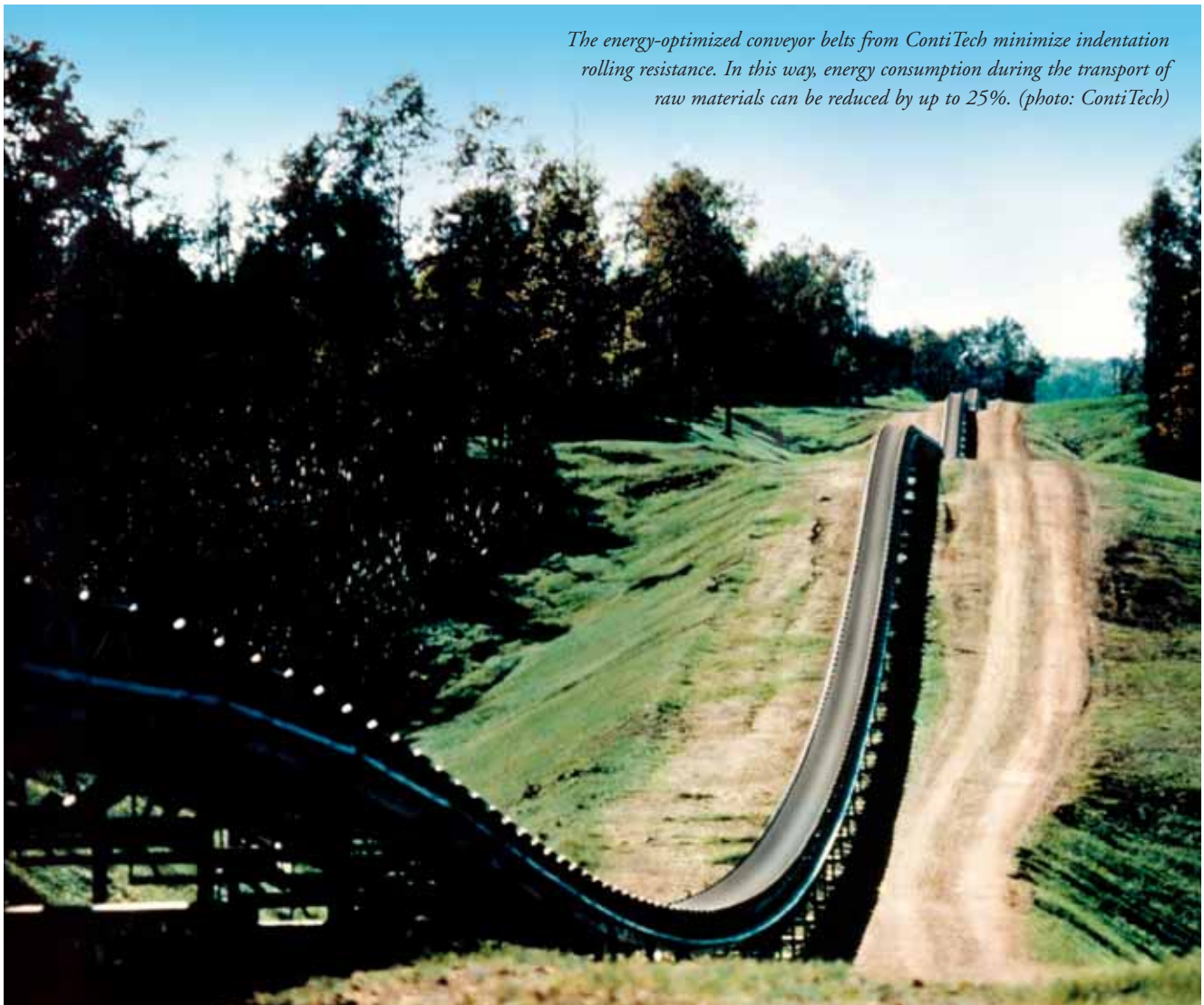
The Conti®Inspect belt monitoring systems can be used while the belt system is in operation. This avoids conveyor downtime for time-consuming inspections and reduces the expenses involved in conveyor belt inspections. Conti®Inspect Cord Monitoring uses magneto-inductive technology to monitor the steel cords of the tensile member and thereby improve the safety and reliability of the conveyor belt.

In the development of its electronic monitoring systems, ContiTech uses synergy effects across the corporation and builds on the know-how of the Continental Automotive Group, which among other things develops and produces pioneering electronic systems for the automotive and commercial vehicle industry. From this collaboration derive innovative solutions for more security in conveyor belt systems. The newly developed belt monitoring systems of the ContiTech Conveyor Belt Group meet the high standards of the automotive industry and guarantee a high level of reliability.

Company profile

With sales of around €33.3 billion in 2013, Continental is among the leading automotive suppliers worldwide. As a supplier of brake systems, systems and components for powertrains and chassis, instrumentation, infotainment solutions, vehicle electronics, tyres and technical elastomers, Continental contributes to enhanced driving safety and global climate protection. Continental is also an expert partner in networked automobile communication. Continental currently employs around 178,000 people in 49 countries.

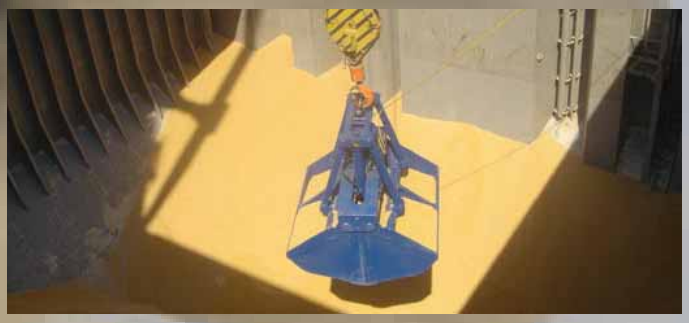
The ContiTech division numbers among the leading suppliers of a host of technical rubber products and is a specialist for plastics technology. The division develops and produces functional parts, components and systems for the automotive industry and other important industries. ContiTech currently has a workforce of approximately 29,700 employees. In 2013 it recorded provisional sales of about €3.9 billion.



The energy-optimized conveyor belts from ContiTech minimize indentation rolling resistance. In this way, energy consumption during the transport of raw materials can be reduced by up to 25%. (photo: ContiTech)

Beco Grabs

Bulk Grabs



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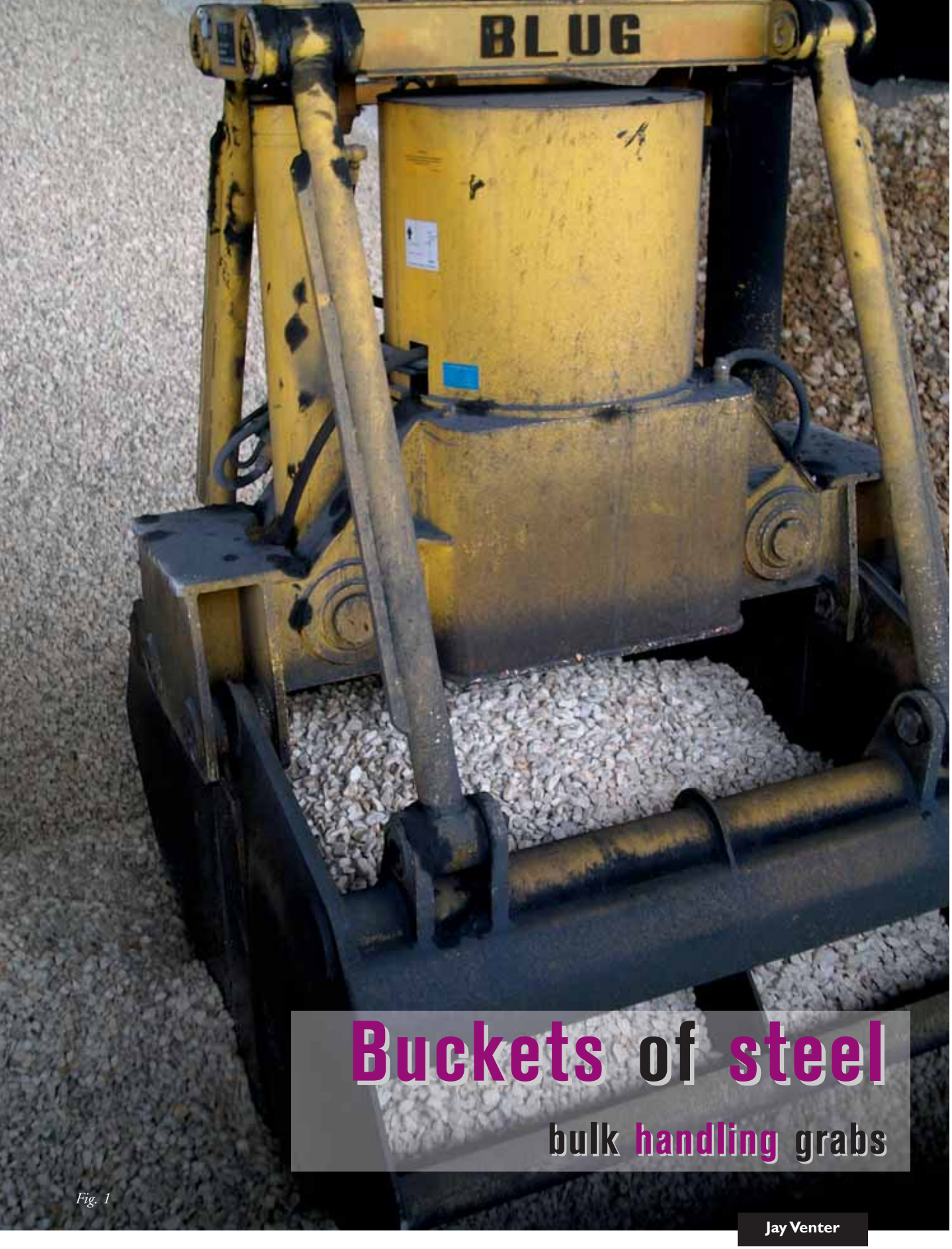

Buckets of steel

bulk handling grabs

Fig. 1

Jay Venter

Blug grabs: moving forward on handling innovation

Credeblug has been strongly involved in the dry cargo business, and underwater handling solutions, since 1965. Many of its products have been working successfully in 52 countries where Blug grabs have become a quality product reference.

In the last few years, the company has completed an international expansion, achieving a 70% export rate in 2013 and expecting 80% for the international turnover in 2014. Blug's product range goes from 50 litres to 150 tonnes capacity. It is one of the few worldwide grab manufacturers offering a quality rope-operated, hydraulic and electro-hydraulic or motor grab

catalogue. Blug solutions range from single-rope operated radio controlled and automatic grabs, to 4-rope or electro-hydraulic high volume grabs that fit any crane, material and production requirements (see *figures 1 and 2*).

Credeblug has recently finished a very ambitious research project in Pulanfi underwater handling technology which represents another step forward in the grab market; these additional grab capacities will be applied to Blug products and systems that require these kinds of high-tech features. The aim of the project has been to include the latest monitoring and motion capacities by developing its own technological innovations that can improve the performance of handling equipment, and their productivity, positioning and loading cycle flexibility. Dry cargo handling is moving towards cycle automation and Pulanfi technology will be a real step forward for incoming projects' execution. Below are the most relevant innovations that have been obtained during the project's research and development process:

Electro-hydraulic technology: the electro-hydraulic motion system was identified as the best option to power the grabs as it offers a full control and monitoring of the manipulator, as well as the highest overall efficiency. The hydraulic unit and sensors are assembled the body of the grab, and completely isolated from the environment, preventing the sensitive elements from being exposed to any contact with the environment.

Control and vision: Pulanfi technology offers a fast transmission for the information given by the vision systems during material handling and manipulators positioning as the grab offers a more accurate field of vision during different loading/transport/positioning/unloading stages. The grabs include an HD low-light cameras system and LED technology lights combination to offer the best vision possible even in dusty, deep water and/or dark scenarios.

Fig. 2

Material handling capacity and working environment: thanks to Credeblug's 49 years' experience in the design and manufacture of handling equipment, the type of materials and capacity production that could be improved with Pulanfi technology is almost unlimited. The manipulator design adaptation in terms of volume, density, shape and weight of the material can be developed depending on each project's requirements. In terms of underwater applications, Pulanfi technology is developed to work down to 1,000MSW (metres sea water) depth (though this range of use will be extended in the near future).

Material properties research: the different components' materials have also been adapted taking into consideration the impacts that the grabs suffer during their use, but also to avoid any corrosion caused by the marine environs, especially in aggressive environments. Each mechanical and hydraulic component has been subjected to finite element analysis and computer fluid dynamics simulations respectively to achieve the best performance against impacts, operational stresses and hydrodynamic requirements. The most sensitive parts, like the main structure and hydraulic cylinders, are specially protected with cone-shaped covers and conveniently heat-treated to increase their lifetime.

The project technical development finished in June 2013 after real conditions 1:1 scaled material handling validation tests performed on board the Investigation Vessel I in the north coast of Spain. The three-tonne loading capacity prototype successfully completed the tests for material loading, vision and control systems with different arm designs (see *figure 3*).

One of the major aims of the project is to offer an environmentally friendly solution to prevent any type of accidental marine oil spillage, to help on their fast sealing as well as to be used to help in any other kind of natural disaster. The environmental impact of the Pulanfi technology is minimal as the oil and grease used are bio-degradable type and the hydraulic unit includes a variable-flow system that minimizes the electric demand and optimizes overall energy requirements.

In terms of Pulanfi technology's return of investment, there are three main factors to be considered:

Product design flexibility: the possible applications of the Pulanfi technology are not limited to dredging or vessel loading/unloading but also to any specific handling or positioning operation to be performed in port and marine environment. During the different phases of the project, the modular conception of the manipulators has been prioritized so their structure could be easily transformed assembling different capacity and shaped tools, this way a wide range of materials could be handled without changing the grab's main body and motion systems. This modularity represents a big advantage in terms of required investment, but also concerning the simplification of the connection and lifting components.

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Fig. 3

Half-closed design: big volume parts handling, better penetration, smaller contact surface.

Fully closed design: fine material handling, less risk of material dropping during lifting stage.

High productivity: due to Credeblug's long experience in grabs' design and manufacturing, the efficiency of the manipulator for any material requirements is completely assured. The positioning of the grab could be continuously controlled by the crane operator and lift the cargo once the material is conveniently assured thanks to the high precision vision and data transmission systems. In this way, the highest productivity can be assured for every cycle and avoid material dropping during lifting cycle.

Reliability and automation: the specific technology and robust structure combination offers the maximum reliability and significantly reduces the non-programmed maintenance periods. The manipulators' main systems are continuously being monitored and checked so that complete operability and security can be achieved. Automation for material loading/unloading is also possible using the sensors, vision and security devices included in Blug grabs, so that each project can have a fast return on investment.

Following the Credeblug company expansion and product development, the company's customer portfolio has included during 2013 some of the principal European crane manufacturers, as the perfect crane/grab combination is one of the key aspects to be considered for any shipping contract profitability. Future deliveries for dry cargo handling include two rope-operated scrap handling 12m³ capacity orange peel grabs, three electro-hydraulic 9m³ capacity modular units for biomass handling and an electro-hydraulic mineral handling 20 tonnes capacity clamshell grab's supply.

PEINER grabs now from the new company PEINER SMAG Lifting Technologies

Salzgitter Maschinenbau AG (SMAG), parent company of the world-renowned PEINER grabs, has restructured itself and spun off the product divisions of the corporation into independent companies. With the transfer of the erstwhile business segment of grabs to the independent PEINER SMAG Lifting Technologies GmbH (PSLT), it will now be possible to concentrate all the processes exclusively on the core product, grabs. "This step is intended to optimize our products and strengthen our customer orientation", says Juergen Bialek, chairman of the board of Salzgitter Maschinenbau AG and CEO of the new PEINER SMAG Lifting Technologies GmbH. As a result, the company hopes to occupy an even more unchallenged position in the market.

PEINER SMAG Lifting Technologies GmbH will take over all the rights and responsibilities with regard to the PEINER grabs and lifting technologies in all the contracts previously signed by Salzgitter Maschinenbau AG.

"This will not result in any change in the operative business for our customers; the familiar persons will continue to remain the contact persons in all divisions in the new company" clarified CEO Bialek.

PEINER SMAG Lifting Technologies GmbH is one of the world's leading manufacturers of grabs for the international loading and unloading markets for bulk goods and other mass goods, particularly marine and harbour cranes. Customers in this segment include shipping companies, stevedoring companies and port crane manufacturers as well as construction machinery manufacturers. The range includes electro-hydraulic grabs, rope grabs, hydraulic grabs, special grabs well as slewing gear, which are used for different applications like the loading and unloading of bulk goods, scrap, trash and wood, as well as for dredging work and special deployments.

The SMAG Group is the holding company with factories in Germany, China and India, in which grabs for loading and unloading loading and unloading seagoing cargo vessels, completely equipped driver cabins, automated drilling technology for the open-pit and underground mining industry, special-purpose vehicles for the process industry as well as mechanic and hydraulic telescopic antenna masts are developed and manufactured. The group achieves an annual turnover of approximately € 150 million and employs about 900 staff.

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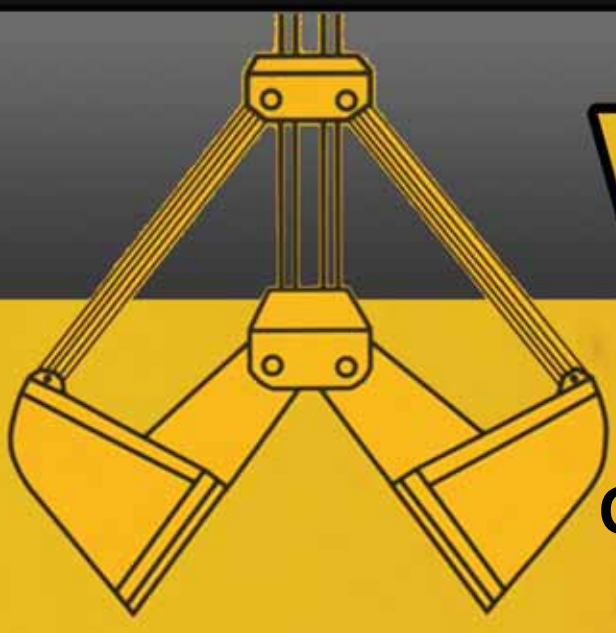

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Rapidpack Corporation makes strong grabs for tough places

Rapidpack Corporation™ engineers and manufactures state-of-the-art machines for bulk cargo handling that are operated by shipping companies, ports, dry bulk terminal and trading houses globally.

Over the last 30 years, Rapidpack grabs have operated in the most diverse geographic and operational conditions, its teams are experienced and offer customized solutions for all cargo handling issues. Rapidpack takes pride in consistently meeting customer requirements for operationally efficient, cost-effective grabs that are ideally adapted to each bulk commodity. The three core requirements are efficiency, performance and high health and safety levels. The company's grabs are manufactured using high-tensile steel, which makes cargo handling efficient and effective. Rapidpack grabs are extremely versatile, allowing cargoes to be handled by just one machine through removal of spill plates, which is designed to adjust the grab capacity to suit cargoes with varying densities. Rapidpack grabs are manufactured in accordance with industrial standards employing sophisticated techniques. These grabs can be mounted on E.O.T. cranes or on hydraulic mobile cranes. Rapidpack manufactures various types of grabs such as wire rope grab, clamshell grab, orange peel grab, remote control grab, electro hydraulic grab and hopper that can be attached to cranes for bulk commodities handling. They are excellent for clinker, wheat, fertilizer, etc.

Rapidpack Grab unloading fertilizer into Rapidpack Mobile Bagging Machine.

Rapidpack food-safe grabs — loading rice.

The company's Rapidpack grab service includes the following:

Smooth operations — experienced grab technicians employed by Rapidpack will be present at all times to monitor the equipment from delivery of the grabs through the operation until redelivered at the storage point. The technicians will prepare, rig, grease and service the grabs around the clock as required to secure optimum cargo production.

Easy maintenance — all grabs are serviced and maintained to the highest standard. Rapidpack's skilled workforce performs overhaul and programmed maintenance. As a result, the company can offer fully serviced grabs to its customers for non-stop cargo operations.

Skilled operators — in many ports of the world, Rapidpack also offers, in addition to its grabs, highly efficient and qualified crane operators to customers' loading or discharging requirements, thus the Rapidpack product is truly a one-stop business concept.

To complement its grab offering, Rapidpack also manufactures the following:

- mobile bulk bagging machines (ship side or warehouse portable bagging machines);
- bulk discharge hoppers (to feed trucks, rail cars, etc);
- shiploading telescopic conveyors (loading ships at up to 1,500 metric tonnes per hour each); and
- pneumatic conveyors (Vac-u-vators).

Rapidpack grabs are extremely versatile, allowing cargoes to be handled by just one machine through the removal of spill plates.

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CFS supplies the Port of Ravenna with two new electro-hydraulic grabs

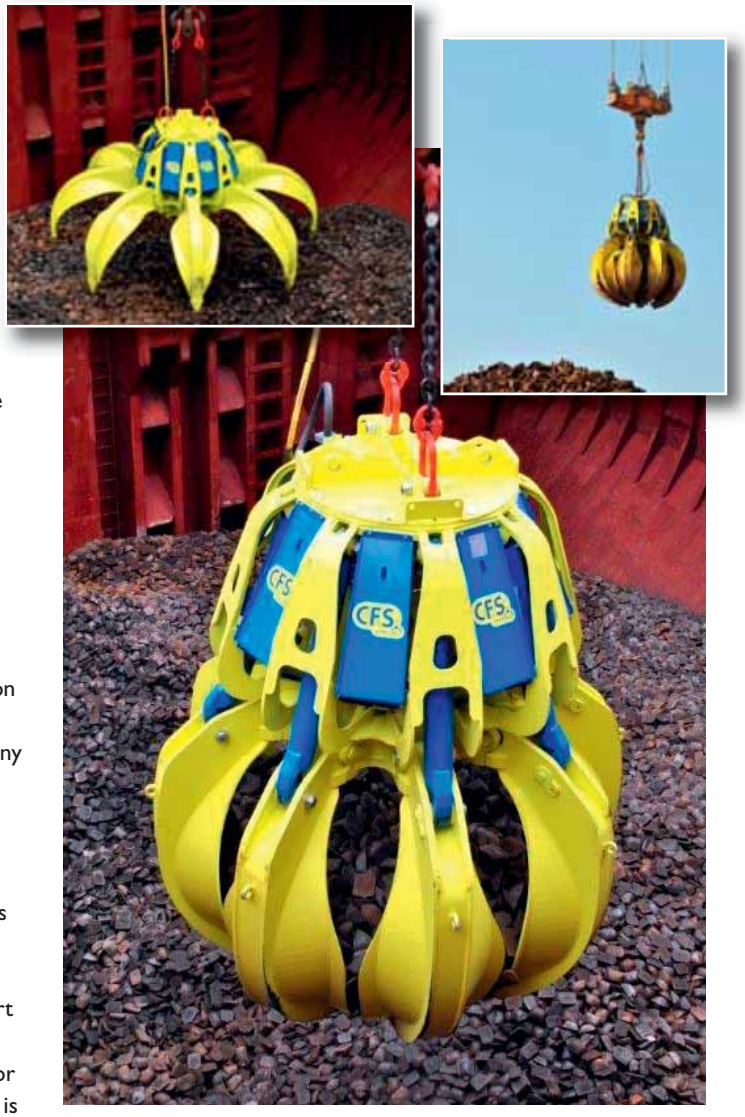
Italian company CFS International Engineering Handling srl develops, designs and manufactures bulk handling equipment.

CFS's products are used in sectors such as: ports, steel mills, waste, cement, demolition, waste and every type of material handling.

The company, a pioneer in the field of design and construction of equipment for handling, is located in Montichiari in the province of Brescia. CFS has a facility of over 2,000m², with 200m² for offices and an external area of 500m for the assembly of the hydraulic parts of its grabs, where highly specialized staff and latest technology support every stage of manufacture of the product. Through its experience in different sectors, CFS Handling is able to provide special equipment and customized solutions based on specific customer requirements. The company's customers use its machines for the loading and unloading of materials. Its grabs are used with the cranes of major manufacturers, including Liebherr, Gottwald and Italgru. CFS's production includes both mechanical, hydraulic and electro-hydraulic buckets and also hydraulic and electro-hydraulic grabs.

CFS recently supplied two electro-hydraulic grabs with capacities of 6.3m³ to the Port of Ravenna for ingots of cast iron handling. These grabs are used on Gottwald and Liebherr machines, with lifting capacities of 100 tonnes. The CFS company is very attentive to product quality and manufactures its own products matching equipment of international importance such as Bosch Rexroth and uses steels such as Hardox 450 and 500 of the SSAB.

Today it is standard practice to do things immediately and as quickly as possible in order to lower demurrage costs and to avoid penalties for companies that are doing the work. CFS is active in the port segment of the market, which for example in Italy is affected by the economic downturn in some sectors at the moment, but fortunately not in all.



What makes CFS competitive is its quick delivery times, but first and foremost is the product quality.

CFS' purchasing office is supported by knowledgeable engineers, ensuring potential customers a problem-free experience.

CFS recently supplied two electro-hydraulic grabs of 6.3m³ each for ingots of cast iron handling to the port of Ravenna. These grabs are used on Gottwald and Liebherr machines.

NEGRINI srl grabs for a multitude of environments

NEGRINI srl's depends on its professional, experienced and highly specialized personnel, who give the company a deserved reputation for reliability and expertise.

NEGRINI's technical team is always at the ready to deal with and solve any type of technical problem. It understands, and offers solutions to, its customers' problems. For more complex issues, the company turns to its qualified engineers to develop the appropriate solution.

Today, the company has 14 employees and, when necessary, it also works with external collaborators.

NEGRINI srl has three warehouses, of around 750m^2, equipped with two 6.3-tonne-capacity overhead cranes.

Production

With every customer application, all elements of a project are studied and planned, right down to the design sketches. Everything is carried out in accordance with the person responsible for the relevant department, in order to guarantee delivery times, reliability and the optimum use of resources.

All technical data, and sketches, are then input into a three-dimensional software system.

Welding procedures

NEGRINI srl's welders are all qualified according to the EN 287-1 standard. They are regularly checked and active in their recognized activity. Training is facilitated by certified external technicians.

Product testings

All products are subject to strict quality control procedures, from the beginning of a project right through to the production process. Before products are dispatched, the final unit is submitted to stringent controls and tests, with the aim of guaranteeing their effectiveness in trials and assuring a high-quality product for the client.

Type of grabs manufactured by NEGRINI srl

Hydraulic orange-peel grabs are the optimum solution for handling rock, scrap, and recyclable materials, applicable on all hoisting devices or crawler cranes.

Clamshell grabs are the optimum solution for any bulk material, that can be used on all hoisting devices — two- or four-rope or crawler cranes.

Hydraulic clamshell grabs are the optimum solution for any bulk material, that can be used on all hoisting devices or crawler cranes.

Clamshell grabs are the optimum solution for any bulk material, that can be used on all hoisting devices or crawler cranes.

NEGRINI's **radio controlled single cable clamshell buckets** are the ideal choice for handling all loose materials. They do not require any external power supply, are universal and applicable on all cranes. The radio control manages the opening of the clamshell.

Environmental clams are used for handling mud, polluting sludge, etc. They are ideal for underwater excavations in difficult areas such as quarry, river, sea, etc. They are constructed with Hardox steel to ensure strength, long life and moderate weight. Large hydraulic pistons are used to operate the grabs. In environmental dredging, it is essential to remove the polluting sediment evenly.

Clamshell buckets are an ideal solution for digging foundations and consolidation work, applicable on all tracked cable cranes.

Dragline buckets are an ideal solution for dredging quarries and rives, applicable on all tracked cable cranes.

Servoday Grabs develops new hi-tech panel board for electro-hydraulic grabs

Servoday Grabs has developed a high-tech electric panel board for all types of electro-hydraulic grabs. It is currently working successfully at India's largest and busiest Kandla Port/Mundra Port.

COMPARISON OF TRADITIONAL OPERATION V/S HI-TECH ELECTRIC PANEL BOARD

TRADITIONAL OPERATION	HI-TECH ELECTRIC PANEL BOARD
No electric motor protection	100% electric motor protection
Any electric phase disconnection or voltage imbalance damaging to electric motor	Any phase disconnection, voltage imbalance fully protected
RYB phase sequence must be maintained for right direction of electric motor	Not required, auto RYB phase managed system, phase sequence protection
No overload protection	Overload protection
Push button operation	Wireless operation up to 100 metres
No working hour log facility	Operation hour log maintain
Required expensive six-core electric cable	Only 3 core electric cable required
No IP65 protection	IP65 protection
Due to push button, visibility of grab restricted critical operation	Wireless remote operation enables full visibility of grab in
Required repeated installation, maintenance time consuming savings	One-time installation and forget, no maintenance, operation time

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Stockyard equipment

keeping bulk on track

Blending yard machines working in an iron ore concentrate plant in Brazil.

Louise Dodds-Ely

ThyssenKrupp Industrial solutions reports recent bulk activities

As a leading supplier of materials handling equipment, ThyssenKrupp Industrial Solutions has developed a complete range of products for the bulk handling process, including: stockyards; bulk terminals; fertilizer, steel and cement plants; and mines.

The company has over 100 years of experience, and its bulk materials handling products and systems include:

Stockyard equipment

- slew type or bridge type bucket-wheel machines of different designs;
- drum (barrel) type reclaimers;
- longitudinal and circular stockyards with stackers and scraper reclaimers;
- homogenization/blending beds with stackers and bridge-type scraper reclaimers, both as circular or longitudinal stockyards; and
- combined portal scraper reclaimers with both stacking and reclaiming functions.

Other materials handling equipment

- railway car tipplers;
- truck dumper and unloading station; and
- belt conveyor, curved conveyors and pipe conveyors.

Ship unloading and loading equipment

- grab type ship unloaders of different designs;
- continuous ship unloaders;
- shiploaders of different designs for bulks and bagged goods;
- combined shiploaders and unloaders; and
- pontoon based floating transshipment.

ThyssenKrupp's new development of full-line materials handling equipment has focused on:

- being a global supplier with its own subsidiaries throughout the world;
- a full range of products and designs;
- multipurpose applications;
- suitability of machines for diverse materials with significantly different characteristics; and
- design suitable for upgrading to either fully automatic operation or unmanned remote controlled operation.

Recent technical achievements and contracts highlight ThyssenKrupp's development work for the coal handling in terminals and stockyards.

Materials handling equipment for mine and Port of AML Liberia

In Liberia, iron ore was already in production before the Liberian civil war. Today, the production of iron ore is again being carried out by ArcelorMittal and shipped as raw material. In future, iron ore will be excavated in the Yekepa Mine, upgraded there to a high valuable concentrate product, transported by train to the port at Buchanan and shipped from there to the further processing steel mills. At the end of 2011, ThyssenKrupp received from ArcelorMittal Liberia (AML) a milestone order for engineering, supply, erection and commissioning of materials

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Blending yard machines working in an iron ore concentrate plant in Brazil.

handling equipment for its iron ore mine and port in Liberia.

The materials handling equipment of ThyssenKrupp comprises the following machines:

Mine site

- ROM iron ore blending yard stacker and bride type bucket wheel reclaimer; and
- product (iron ore concentrate) stockyard stacker and bucket wheel reclaimer

Port site

- high capacity railcar dumper;
- product (iron ore concentrate) stockyard stacker and bucket wheel reclaimer; and
- high capacity shiploader.

The mechanical, hydraulic and electrical equipment are engineered and manufactured in Germany and Western Europe, while the whole steel structures of the machines are fabricated in China. The steel structure and mechanical parts will be manufactured there under the permanent QA/QC by ThyssenKrupp and then assembled with all mechanical, hydraulic and electrical parts delivered from abroad.

The iron ore concentrate plant at the Yekepa Mine is equipped with a blending yard and product stockyard. ThyssenKrupp will design and supply the blending equipment as well as the stockyard machines as follows:

The blending yard stacker is designed for the stockpiling ROM iron ores in layers with a capacity of 8,300tph (tonnes per hour), while the bridge type bucket wheel reclaimer, having a design capacity of 5,600tph, will feed the concentrate process plant continuously for controlled mixtures of raw materials.

After the process plant a stockyard is arranged with a stacker and a bucket wheel reclaimer for buffer storage of iron ore concentrates. The stacker receives the materials from the plant and stockpiles them at a rate of 2,500tph. For shipment of the product, a bucket wheel reclaimer takes the stockpiled material back to the conveyor system and further to the railway train

A ThyssenKrupp high capacity bucket wheel machine (similar to the machine for the Liberia project) working at EMO Terminal, the Netherlands.

loading station. To match the train loading operation the reclaimer will feed the conveyor line at a design rate of 6,000tph.

The end product of iron ore concentrate will be transported to the port via railway for export. At the port, three key components from ThyssenKrupp will be constructed for operation:

- one high-capacity railway car dumper;
- stockyard equipment consisting of one stacker and one bucket wheel reclaimer; and
- one high-capacity shiploader.

The car dumper is designed as single cell tippler, designed for a maximum capacity of 5,400tph.

The stacker is designed for the handling capacity of 6,000tph to match the car dumper capacity, while the design capacity of bucket wheel reclaimer and the shiploader is 10,000tph each. This configuration gives the

A ThyssenKrupp high-capacity car dumper in operation in Brazil.

ThyssenKrupp high capacity stockyard machines in operation.

port operator one distinct advantage over its competitors in that region, which will also help cut costs by reducing the ship's berthing time.

Modern drive control and PLC system is incorporated in the machines, operation is mainly controlled via the computerized operator's panel for the stockyard machines and in the operator's cabin for the shiploader. The high degree of automation and the visually assisted operator's guide the operating staff to operate the machines easily and in a comfortable fashion.

One of three ThyssenKrupp ship loaders built for TIS Terminal in Odessa, Ukraine.

Follow-up Order from Guangzhou Zhujiang Power Plant, China

Back in 1994, the new power plant in Guangzhou City, Zhujiang power plant received ThyssenKrupp's ship unloaders for its coal

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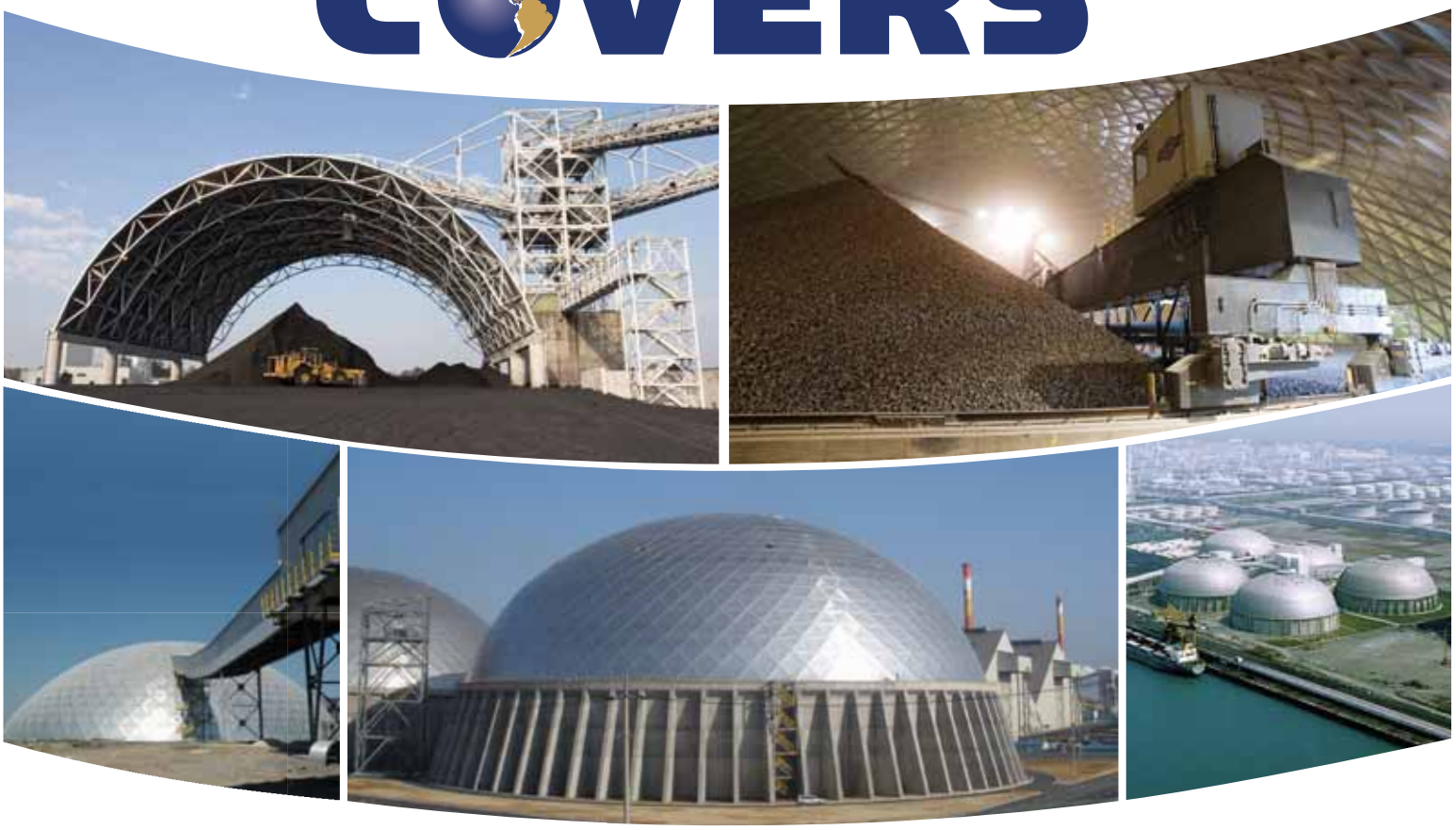

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terminal and put into operation. Since then these ship unloaders have been operating successfully to serve the power plant demand on coals for 3 × 600MW blocks and transshipment of coals for the region. An annual turnover of 6–8mt (million tonnes) is achieved by these unloaders.

With the increase of power consumption in this region, the power plant began the expansion project of Phase II for the other 1,000MW block. Through an international tender, ThyssenKrupp won again the new order for a further two ship unloaders, and this time chain bucket elevator continuous ship unloader.

The contract was signed in June 2012 for the supply and installation of two CSU (continuous ship unloader) units. These unloaders will be designed for an unloading rate of 1,500–1,650tph and ships sizes up to 70,000dwt, and in the future for 100,000dwt, representing outstanding success of ThyssenKrupp in China by covering >75% of market share.

Three ThyssenKrupp CSUs, similar to those for Zhujiang, in operation at Huayang Power Plant, China.

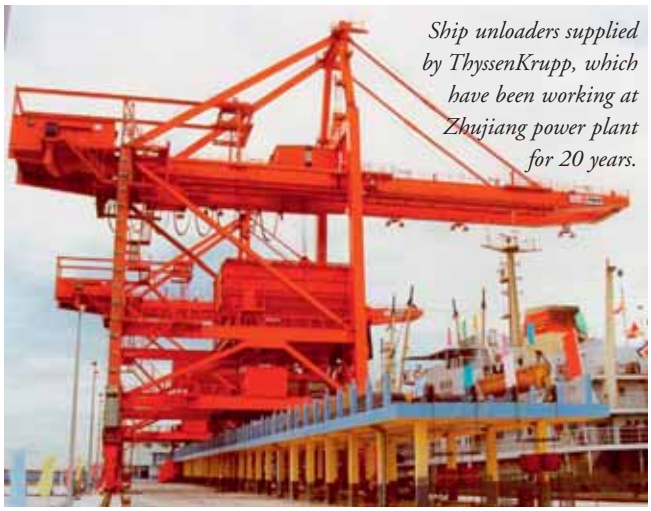
For ThyssenKrupp, this follow-up order not only means being awarded a further order, but also represents continuity with respect to design, supply, construction and management and demonstrates the client's appreciation of and satisfaction with ThyssenKrupp's performance to date.

The delivery to site and commissioning of the new CSU is schedule for end of 2013, the commercial operation was scheduled to start in February of this year.

The decision of Zhujiang Power Plant to choose ThyssenKrupp as supplier for all of its important ship unloaders has been made with the confidence in ThyssenKrupp's advanced technology, capability of execution of large scale projects and first-class technical service, as one of the decision makers said, the choice went in favour to ThyssenKrupp after accurate comparisons of several competitors on the evidence of

- worldwide and extensive experience in the development of coal ship unloader technology;
- excellent performance of CSU already built;
- high availability and long service lifetime without intensive repairs;
- reliable technical services during construction, commissioning and operation period;
- good relationship with Chinese partners for manufacturing and erection

With this contract, ThyssenKrupp has once again contributed to the development of China's coal ports and power plants along with other equipment of more than 60 machines for car dumpers, ship-unloaders, shiploaders, stacker-reclaimers, and more.



Ship unloaders supplied by ThyssenKrupp, which have been working at Zhujiang power plant for 20 years.

Success Story of ThyssenKrupp for EMO Terminal, the Netherlands

In the early 1970s, PHB and Krupp delivered the first ship unloading and stockyard equipment for the newly constructed EMO terminal. Since then, Krupp and PHB, later PWH, today integrated into ThyssenKrupp Industrial Solutions, have designed the entire ship unloading, shiploading, wagon loading and stockyard equipment for the EMO terminal.

Today the terminal, located at Maasvlakte right at the entrance to Rotterdam's Seaport, is the largest import and export terminal in Europe for dry bulk material with an annual unloading capacity of 42mt. Continuing and even increasing demand for coal and iron ore, in particular from German steel mills and power plants, as well as the construction of two new coal fired power plants directly at Maasvlakte has now lead to further investments for the terminal.

In the past five years, EMO placed orders to ThyssenKrupp for two units BW machines and last one KB 7 has been installed and commissioned 2012 and put into commercial operation 2013.

KB7, as well as all the other EMO stacker/reclaimers, have been designed to mainly handle coal and iron ore. Although the respective material properties are quite different, the machines nave been designed to reclaim and to stack each of these materials at the same capacity. This is achieved by using variable conveyor and bucket wheel speeds.

During the stacking operation, up to 6,000tph of coal or iron ore can be conveyed to the stockpiles. With a boom length of 60m, the machine is able to stack piles up to 60m wide and 24m high.

Besides the bucket wheel, the slewing mechanism is also driven by a slow running hydraulic motor in order to be able to control the slewing speed while protecting the mechanism from peak loads.

The geometry of the bucket wheel boom and the counterweight boom as well as those at the

Due to the fact that KB7 is an exact copy of KB6, and many of the parts and components are also identical to the other stacker/reclaimers, which have all been supplied by ThyssenKrupp, the spare parts management has been kept simple. These similarities also apply to maintenance and operation. The operation has now been changed over from manual operation to unmanned fully automatic mode.

Biggest ship unloader in the world — 85-tonne grab unloader

While KB7 is the largest stacker/reclaimer in Europe, the

unloader No. 5 is, together with its neighbour cranes No. 3 and No. 4, are the largest grab-type ship unloaders in the world.

With its span of 70 m, its overall construction height of 70m and its waterside outreach of 50m, the machine is able to unload even the largest existing coal and iron ore bulk carriers.

Apart from unloading ships the machine is able to serve an emergency stockpile which can be situated between the hopper installation and the landside leg.

The rope-drawn machine trolley with a working range of 102m comprises the hoisting and closing winches, each driven by two motors of 780kW which can list the 85-tonne load at speeds of up to 180m/min. By means of a grab cross-travel mechanism most of the movements alongside the ship during the unloading process in a single hold can be realized without travelling of the portal.

The electrical power feeding of the equipment installed on the machine trolley is realized by means of a power cable on a catenary system situated below one beam of the bridge girder.

The unloader travels on a double rail system at both water and landside and is supported on 56 runner wheels with 900mm diameter. Fourteen drives, each with 55kW, accelerate the unloader with the total weight of over 3,000 tonnes up to speeds of 25m/min.

With the flexible hopper discharge mechanism, which comprises of two apron feeders and two reversible distribution belt conveyors, it is possible to serve each one of the four quay conveyors at full unloading capacity.

Wagon loading stations

Increasing demand in particular for coal for German power stations has resulted in the existing three wagon loading stations being brought to the limit of their capacity. After the procurement of wagon loading station WB 3 (successfully commissioned by ThyssenKrupp in 2006) EMO decided to install a further wagon loading station WB 4, the commercial operation of which is scheduled for May 2011.

WB4 spans three parallel rail tracks and is able to serve two of them. Above the third rail track an operator's cabin has been integrated in the tower structure. In addition to having an excellent view of the loading process of WB4, it is also possible to monitor WB3 which is in the direct neighbourhood.

The material which is received by the feeding conveyor of approx. 180m length, which forms also part of ThyssenKrupp's scope of supply, is discharged at a height of approximately 33m into the surge bin of 350m³. From there, it is discharged into the weighing bin by means of hydraulically operated double-radial gates. As soon as the preset material content of the weighing bin has been achieved, the double-radial gates of the weighing bin are opened to allow a constant filling of the wagon to be loaded. During the loading process the wagons are pulled with a constant speed by a robot train. With a two-way chute directly installed underneath the weighing bin, both of the loading rail tracks can be served.

Rail car loading stations at EMO terminal, unmanned full automatic operation ensure high efficiency and environmental protection.

The decision of EMO to award THYSSENKRUPP with all three of their important contracts represents continuity in the long-standing relationship and demonstrates the client's appreciation of and satisfaction with ThyssenKrupp's performance to date. The choice went in favour of ThyssenKrupp after strong international competition.

Giant shiploaders and car dumpers for coal terminal of Caofeidian IV, China

From 1999 to 2008 ThyssenKrupp successfully supplied more than 18 high-capacity shiploaders for ships up to 200,000dwt and at 6,000/8,000tph and more than 12 high capacity car dumpers to the ports around Bohai Bay of Northern China, the most important China's coal terminals. The success story could be continued by a further award of four additional shiploaders and two quadruple car dumpers which are proven as the largest ones in size in China.

At the end of 2013, milestone contracts were awarded to ThyssenKrupp for design, supply and installation of four 6,800tph shiploaders and two car dumpers for coal by Huaneng Corp. China for their new coal terminal, Caofeidian No. 4 Coal Terminal.

Shiploaders

They are equipped with portal travel gears, boom with shuttle head and a loading device with trimming spoon, which allows

ThyssenKrupp's giant shiploaders at the Port of Qinhuangdao, similar to that for Caofeidian IV.

360° slewing. With this option it is possible to achieve homogenous filling of the corresponding ship holds up to the uppermost edge, at a high nominal loading capacity.

All of these machines are designed to load ships at a rated capacity of 6,000tph. (maximum 6,800tph.) and for Capesize ships and down to very small ships sizing to 15,000dwt. In order to save the space of the jetty, a special design for the tripper car is adopted in the shiploaders. Each base machine is equipped with a luffing boom, shuttle head with pin rack and pin drives loading spout and trimming chute. All mechanisms including for the belt conveyor are equipped with variable speed drives by means of frequency converter.

To serve the different sizes of ships, a shuttle with rack and pinion drive, controlled by frequency converter, is incorporated in the luffing boom, varying the outreach from a minimum for matching small ship size to a maximum of Capesize ships

Modern drive control and PLC system is incorporated in the shiploaders, operation is mainly con-troled via the computerized operator's panel in the operator's cabin. The high degree of automation and the visually assisted operator's guide in Chinese allow the operating staff to operate the machines easily and in a comfortable fashion.

For environmental protection a dust suppression system by means of water spray is installed with suction pump, water tank, spray pressure pump and spraying nozzles for all transfer points and the loading spout and cleaning compressed-air line. Special measures are also taken in the design to the transfer points and materials flow for a better and functional sealing of the chutes and skirting.

These giants will take shape, with commissioning expected in 2015 for putting into commercial operation.

Car dumpers

The award of the contract for two quadruple car dumpers by Huaneng Corp. China for its Caofeidian IV Coal Terminal is a breakthrough achievement for ThyssenKrupp in China for this kind of car dumper, following up its success in China back in 2000. The expansion project will make it possible for Huaneng Group to export annually 40mt coal. Each new car dumper has the same unloading capacity as the existing one, but with increased capacity of hauling railcars of longer and heavier trains arriving the port.

Each car dumper will simultaneously unload four rail freight wagons, each weighing a maximum 100 of tonnes, at a rate of up to 28 cycles per hour, thus unloading an average 8,000 tonnes of coal per hour with a maximum capacity of 8,600tph. The systems are equipped with positioner to position the wagons correctly, wagon weighing bridges, hoppers, discharge feeders and dust control systems

The new car dumpers shall be designed on the basis of the car dumpers ever built for China since 2000, however adopt a lot of improvement in the hydraulic system, special mechanisms for the rotor and drives and in the environmental facilities. These measures will ensure a high reliability and performance, so that the annual throughput of 40mt by facility of only two car dumpers.

The decision of Huaneng Caofeidian CT to choose ThyssenKrupp as supplier for all of their important car dumpers of the terminal has been made with the confidences in ThyssenKrupp's advanced technology, capability of execution of large scale projects and first-class technical service, as one of the decision makers said, the choice went in favour of ThyssenKrupp after accurate comparisons of several competitors on the evidence of

- worldwide and extensive experiences in the development of railway car unloading technology;
- excellent performance of car dumpers already built;
- high availability and long service lifetime without intensive repairs;
- reliable technical services during construction, commissioning and operation period; and
- good relationship with Chinese partners for manufacturing and erection.

In 2015 both car dumpers will be installed and commissioned for putting into commercial operation in the terminal, and a annual throughput of coal of more than 100mt, delivered by the company own railway and unloaded by the eight car dumpers supplied by ThyssenKrupp, will be reached.

High-performance rail car dumpers in operation at Huanghua Coal Terminal, China.

Materials handling equipment for Shougang Hierro Peru

In 2013, ThyssenKrupp won a milestone contract from Shougang Hierro Peru for its iron ore mine expansion project.

Shougang Hierro Peru, the Chinese mining and steel company, will begin to expand the production capacity of its iron ore smelter at San Juan de Marcona, on Peru's south coast.

The expansion will allow the refinery to increase production to additional 10mt per year. The iron ore of the company's mineral exports is mainly for shipment to China.

The contract awarded by Shougang Peru consists of the following packages:

1. One semi-mobile primary crusher plant with a high capacity gyratory crusher.
2. One curved overland belt conveyor system, in total 6km long.
3. One downhill overland belt conveyor system, in total 6km long.
4. One ROM ore blending yard plant with stacker, drum reclaimer and belt conveyors.
5. One product stockyard plant with stacker, bucket wheel reclaimer and conveyors.

Back to the 1960s Krupp built one downhill conveyor system for the Marcona Mine, which is since then in operation for

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Downhill overland conveyor in operation at Shougang Hierro Iron Ore Mine, Marcona. Built by Krupp in 1960s and since then in operation.

transport the iron ore from the open pit crusher plant down to the beneficiation plant of 10mt a per year more than 50 years and still in very good condition. This is one of the reasons that the client decided again for ThyssenKrupp.

The primary crusher plant equipped with a ThyssenKrupp's gyratory crusher of compact design is the key equipment for the expansion project, which will produce 10mt crushed ROM ore annually for the further process of the whole mining and beneficiation plant.

In front of the beneficiation plant the ROM ores should be blended on a storage and blending yard. This is equipped with a slewing and luffing stacker and a blending drum reclaimer.

The blending yard stacker is designed for the stockpiling ROM iron ores in layers with a capacity of 4,500tph, while the drum reclaimer, having a design capacity of 3,000tph, will feed the beneficiation plant continuously with controlled mixtures of raw materials.

A semi-mobile crusher plant for iron ore, similar to that for Shougang Hierro Peru, just put into commercial operation at Tangang Mine, China.

ThyssenKrupp blending yard machines operating at the mine in South Africa, similar to that for Shougang Peru.

The drum reclaimer is designed for bi-directional reclaiming operation, a specialized design to meet Shougang's requirements, that very high grade of blending of materials (sorts, sizes, etc) shall be achieved. This is the first installation of bi-directional reclaiming drum reclaimer in Peru.

This is ThyssenKrupp's first foot print of for a full range of high capacity iron ore mining and handling equipment set in Peru.

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Sandvik: wide stockyard expertise and product portfolio

Sandvik.s high capacity iron ore handling machines for a mine stockyard, South Africa

Sandvik is a major provider of stockyard systems. You can be sure that wherever bulk is being handled, Sandvik Mining's Product Area Mining Systems will be present. As well as 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 that Sandvik supports. The offering for turn-key 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 co-operation 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 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 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

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

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-, bucket wheel 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 bucket wheel- 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.

Reclaimer PR200 in Australia.

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Stacker/reclaimer PD200 in Canada.

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-slewable boom designs, with capacities from 150tph to 20,000tph. The choice of design depends on factors such as the 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: bucket-wheel models for alternate stacking and reclaiming, and circular units, which normally stack and reclaim the material alternately but can

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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 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. It also upgrades and modernizes systems and supplies a comprehensive range of its own quality components and spare parts.

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.

Automation & Smart Services as part of Sandvik Mining Systems Customer Services 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 Surface 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.

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 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,

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Shiploader PL200 in Colombia.

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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. Its 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 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

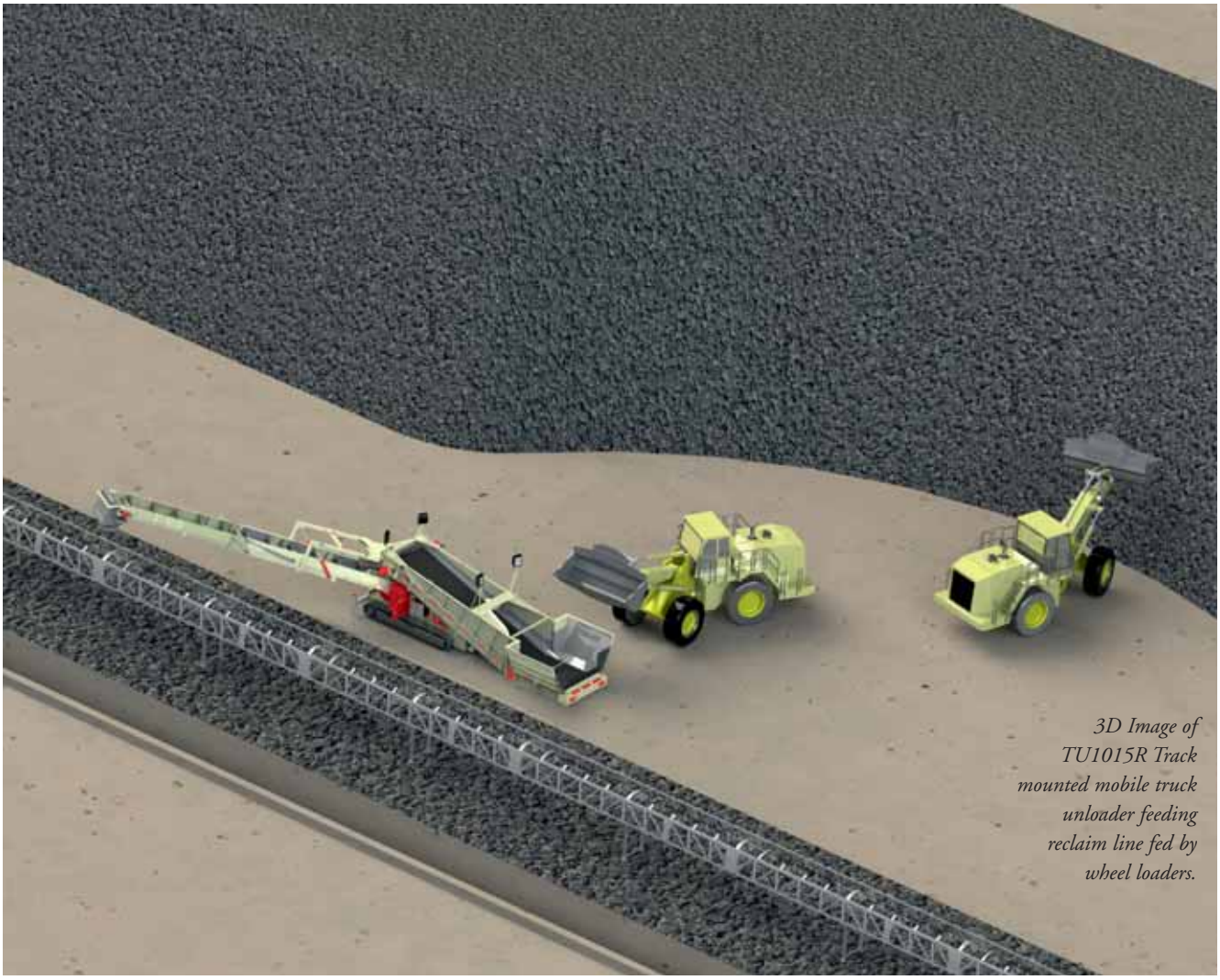
Sandvik's product portfolio of standard equipment for bulk materials handling applications covers HC-series belt conveyors and HF-series belt feeders, both having fixed and mobile units. With a wide range of standard modules and components these devices can be tailored exactly to meet the needs of the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

The advantages of the mobile equipment make them ideal and cost-effective in conveying and stockpiling materials.

Customer services and support

- **Sandvik Mining Systems Customer Services** is a strategic partner to all customers in managing their mining and material handling equipment by supporting them with most safe, reliable and efficient services. Sandvik's customer services offering portfolio is a collection of different programmes aimed to ensure peace of mind for all customers.
- **Machine Availability Plan** is a collection of technical services designed to drive continuous machine performance of supplied mining and material handling systems.
- **Life Enhancement Program** combines engineering expertise with major refurbishments and upgrades to assure the overall integrity and productivity of any mining and material handling system.
- **Spare & Wear Parts** is a programme of services with their parts packages that will support customers during entire life-cycle of equipment.
- **Automation & Smart Services** offer optimization of the equipment, increasing their safety, productivity and autonomous operations.
- **EHS Improvement Services** will support customer to reach higher standards in Environment, Health and Safety features of their equipment.

Telestack: alternative methods of coal blending for power plants & stockyards



3D Image of TU1015R Track mounted mobile truck unloader feeding reclaim line fed by wheel loaders.

Telestack continues to innovate with regards to providing technical solutions to its clients on material bulk handling issues. One such innovation has recently involved the accurate blending of differing grades/ qualities of coal within a power plant in South East Asia. In any given power plant stockyard, there will be various grades and specifications of coal which will have been sourced from various countries in various batch sizes.

Each of these grades will have a differing value of the following main material characteristics.

A. calorific value;
B. ash content;
C. sulphur content; and
D. moisture content.

The challenge with any power plant operations team is how to accurately blend the various grades of coal with the above varying material characteristics to ensure that they are sending a consistent blend to the furnace.

Traditionally this blending has been carried out by using two stacker/reclaimers that feed onto a central conveyor which then sends the blended coal mix to the furnace. The main issues with this method of blending is that the blend ratios can vary dramatically and, therefore, one of the stacker/reclaimers may be operating at a greatly under utilized rate.

This results in high operating costs per tonne for the process of reclaiming at these lower rates. For example: a power plant may want to blend an Indonesian coal of lower calorific value with that of an Australian coal with a higher calorific value. The total reclaim rate to the furnace is 1,400tph (tonnes per hour). If using a 80% Australian to 20% Indonesian blend, then the stacker/reclaimer A is operating at 1,120tph while the stacker/reclaimer B is only operating at 280tph. The operating costs per tonne for stacker/reclaimer B as a result are excessive.

Also the design of many power plant stockyards allow for

Typical 4 x line stockyard with three stacker/reclaimers.

Mobile Stockyard Systems

- Support existing Stacker/ Reclaimer during planned maintenance/ breakdown
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- Coal Blending in stockyard

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both stacking of imported coal whilst unloading vessels and simultaneous reclaiming of coal from the beds to the furnace. However, when unloading vessels and stacking, a typical layout would incorporate two ship-unloaders and these would feed material to two stackers. This normally only leaves one stacker/reclaimer to send material to the furnace, so blending cannot be carried out when unloading vessels. If reclaiming sub-bituminous coal, this can result in the de-rating of power generation.

This can also occur during periods when carrying out repair and maintenance on a stacker/reclaimer when the unit is not in operation. This can put additional pressure on other reclaimers when carrying out normal day to day reclaiming/stacking duties.

Solutions to these issues

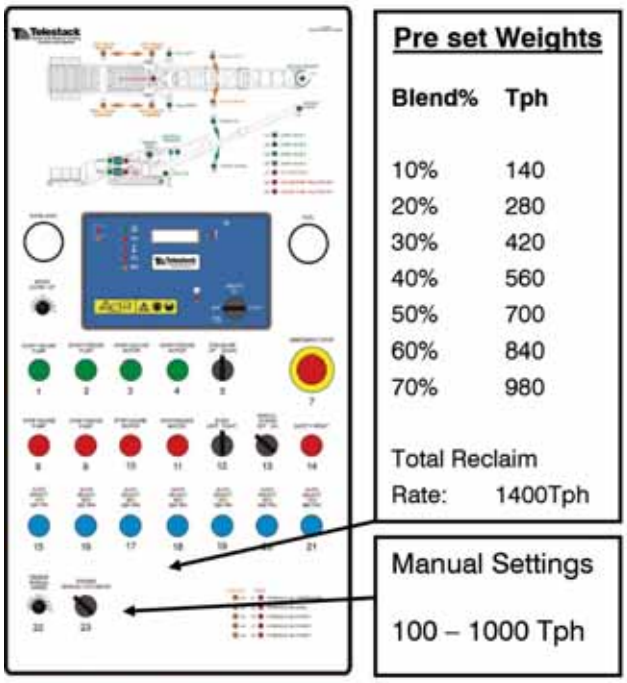
Telestack listened to the issues facing the operations team of the power plant and worked in conjunction with them to offer them a unique and innovative technical solution to the above operational issues.

The equipment selected was a Telestack TU1015R mobile track mounted truck unloader with integrated hopper feeder with radial and luffing boom. The machine was selected because of its excellent mobility and manoeuvrability around the narrow areas of the stockyard and narrow access roads between the stockpile and the reclaim line. The radial boom enabled the machine to fit within the 5-metre area and reach the reclaim line. The fully self contained machine with Cat 96kw diesel engine and 4.1 metre crawler tracks allows the unit to travel over rough terrain especially in the rainy season when heavy rutting can occur on access roadways.

The Telestack TU1015R has a fully integrated feed hopper to allow the trucks/ wheel loader to 'dump' and go, thus improving the cycles times and efficiency as well as allowing better control of the material onto the incline section. The integrated hopper is specially designed using a chain apron belt feeder which combines the strength of an apron feeder along with the sealing quality of a belt feeder.

The boom is radialled by a slew gearbox and drive, which turns on an external slew bearing on which the boom is mounted. This gives greater control when positioning the boom over the reclaim line and combined with the luffing ability from 0–23°, this allows the operator to precisely place the boom.

The Telestack design ensures versatility in that it can be fed by front end loader/excavator or trucks. When reclaiming the machine is fed by one or a combination of the above and can be



Panel mimic showing pre set weight selection buttons and blends.

set at pre-set percentage ratios with the touch of a button.

The Telestack TU1015R can work in conjunction with a Stacker Reclaimer to send an accurate blend to the furnace. The unit incorporates a dual idler belt weigher which is connected to a PLC on the machine; this PLC controls the feed rate to the reclaim line and can be linked to the central control room via an ethernet connection or a wi-fi communication system.

The 1015R can also be utilized for following duties within the stockyard:

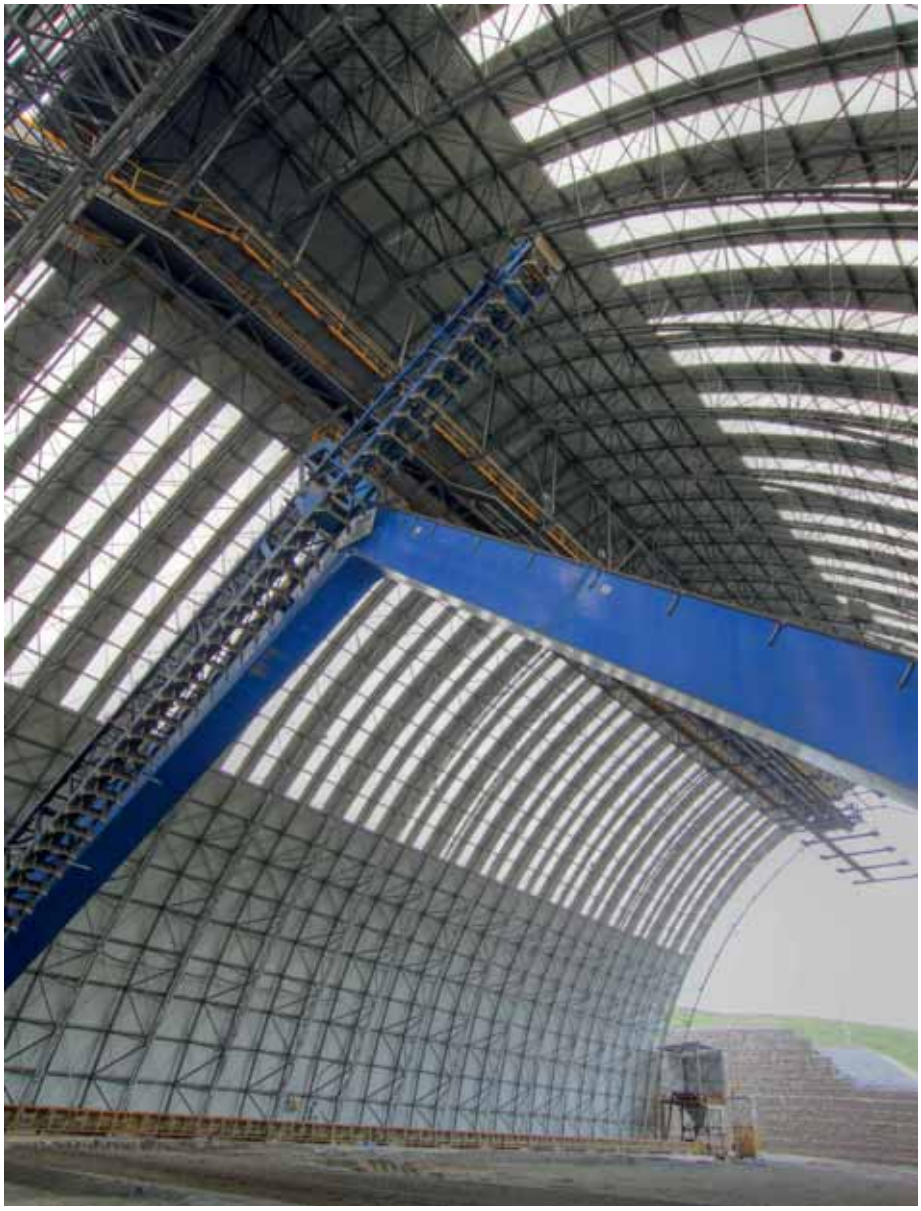
- stacking in passive areas — where the stacker reclaimer cannot reach;
- inter-yard transfer of coal from one heap to another via stacker reclaimer; and
- emergency reclaiming in event of breakdown/ or planned maintenance of stacker reclaimer.

In summary, the machine can be used to complement existing fixed stockyard infrastructure and can give the operations team additional capacity for reclaiming and flexibility with regards to stockyard management.

3D Image of TU1015R track mounted mobile truck unloader feeding reclaim line fed by wheel loaders.

Storing copper ore: Geometrica has got it covered

Sometimes stockyard equipment, including the mammoth stacker shown here, has to be kept under cover. Often, the material being handled is potentially harmful to the environment. In this case, copper ore is being stored in central-western Peru, and the client needed to find a contractor that could supply appropriate coverage — this is where Geometrica stepped in.

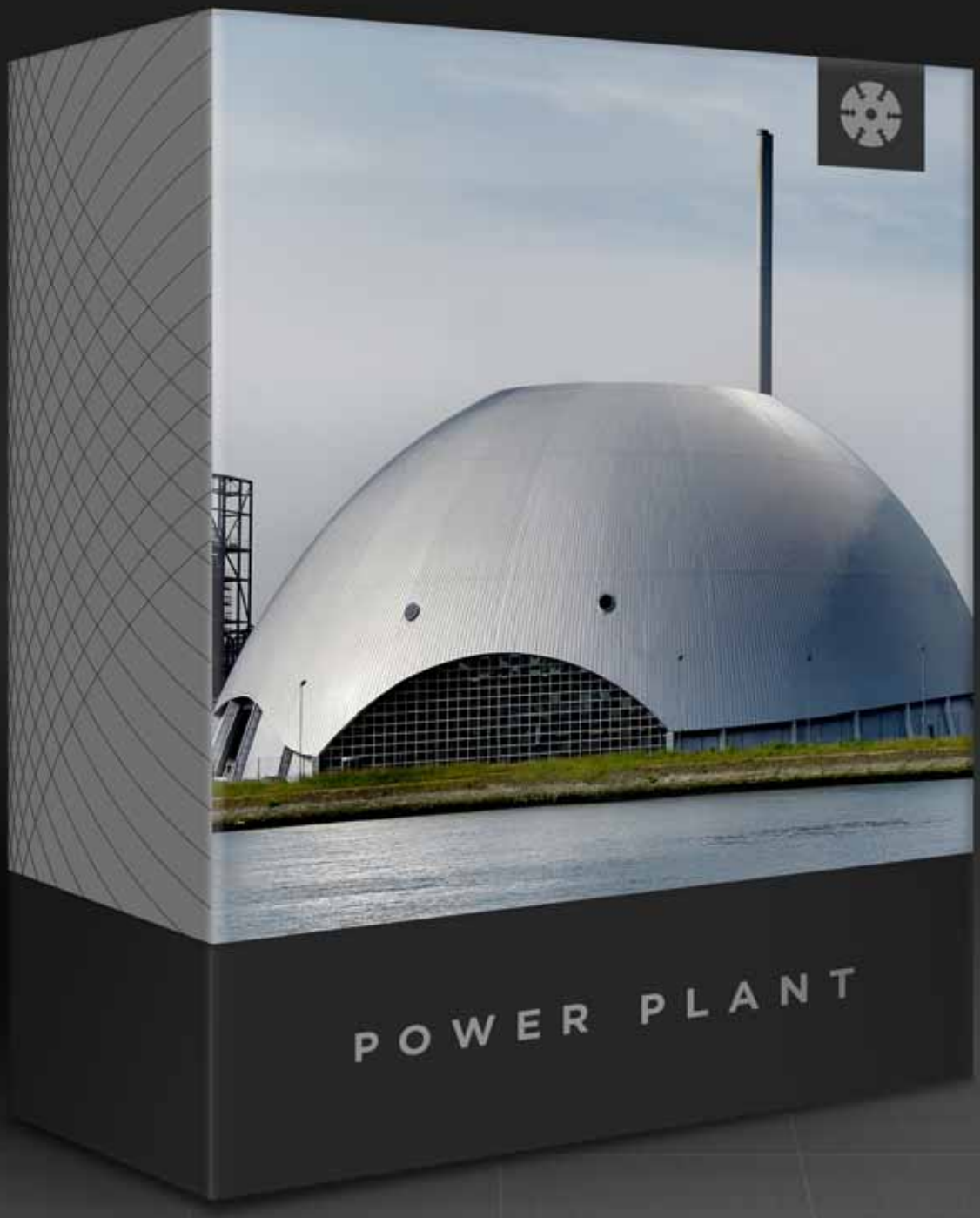


El Brocal: strength and beauty high in the Andes

In Peru and elsewhere, mining is often controversial. But El Brocal, Peru's largest publicly traded precious metals mining company, is committed to preserving the environment wherever it operates. This commitment extended to the architecture of its new storage building for copper ore in Cerro de Pasco in central-western Peru.

Cerro de Pasco, high in the Andes, is 14,200 feet above sea level — one of the highest-altitude cities in the world. The landscape is stark, and beauty is found in simplicity. Here, Geometrica's structural beauty blends with the environment. Equally important, the enclosed structure protects the environment from the dust generated when the copper ore is moved to and from storage.

Geometrica's structural system attracted the attention of the director of PHB Weserhütte, S.A.'s technical



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department, José Ramón Prado, who saw Geometrica's Aguas Teñidas domes at a copper, zinc and lead mine in Andalucia, Spain. The combination of strength, beauty and flexible construction appealed to Prado, and he was further impressed with the economy of the Geometrica system. "We are very satisfied with the building," said Javier Vizcarra, El Brocal projects and construction management assistant.

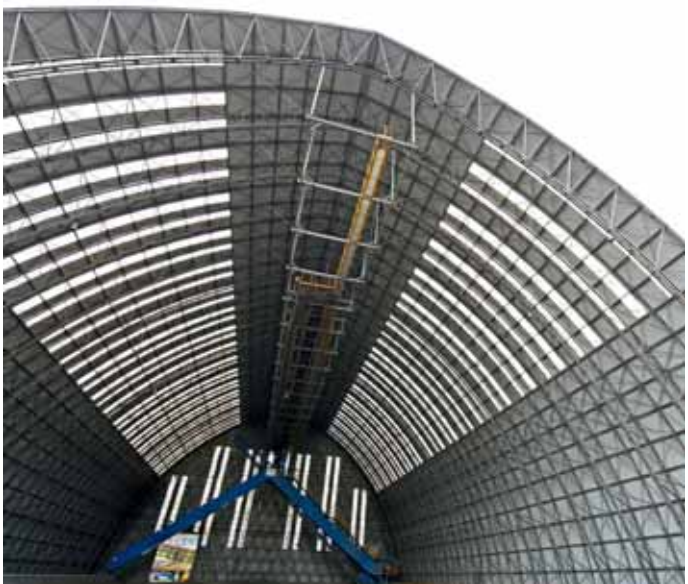
A HYBRID STRUCTURE

The new storage structure was to be built within a constrained space, which meant that copper ore must be delivered via a tripper conveyor suspended along the length of the building's apex. Therefore, the building's shape had to support both wind and live loads efficiently. It also needed a structure strong

enough to support the weight of the conveyor equipment, as well as the loads, vibrations and impacts created by the conveyed copper ore. Furthermore, even in the constrained space, El Brocal management mandated that construction take place with minimal interruption to its nearby mining facilities.

"We decided on a hybrid structure that combines Geometrica's hub-and-spoke system with welded components," said Priscilla Tamez, Geometrica's project manager for the building. "We designed the structure, a longitudinal arch, to optimize space and structural requirements. We shaped the structure with sufficient width to clear the ore stockpile — and sufficient height to suspend the stacking equipment. An opening at the end of the building allows for the passage of the conveyor."

The structure was remarkable in two ways: Geometrica combined its mechanical joint system with high-strength welded steel. Second, the tripper support was a completely separate framework that was assembled and joined after the longitudinal structure was complete. "The finished structure is light and

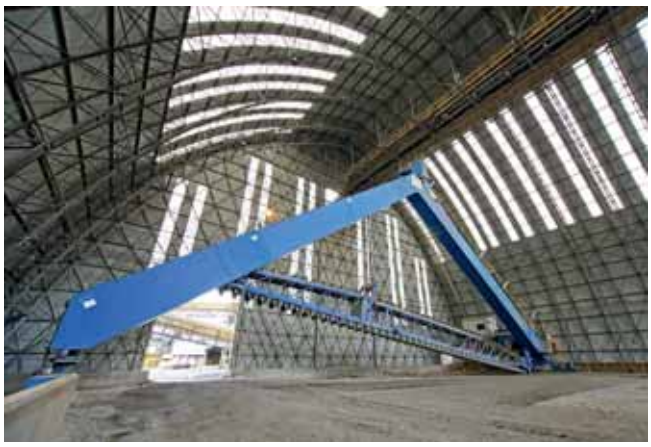


beautiful, yet strong enough to resist the tripper loads," said Tamez.

A TEN-MONTH PROCESS

Once the structure was designed, Geometrica set about assembling the components in its Monterrey, Mexico, fabrication facility. Four months later, the components were shipped in containers to the construction site--bar-coded, labelled and packaged in the correct order for easy, flawless and fast assembly by local labourers.

To build the structure, the contractor assembled half arches on the ground, then lifted them with cranes and joined them at



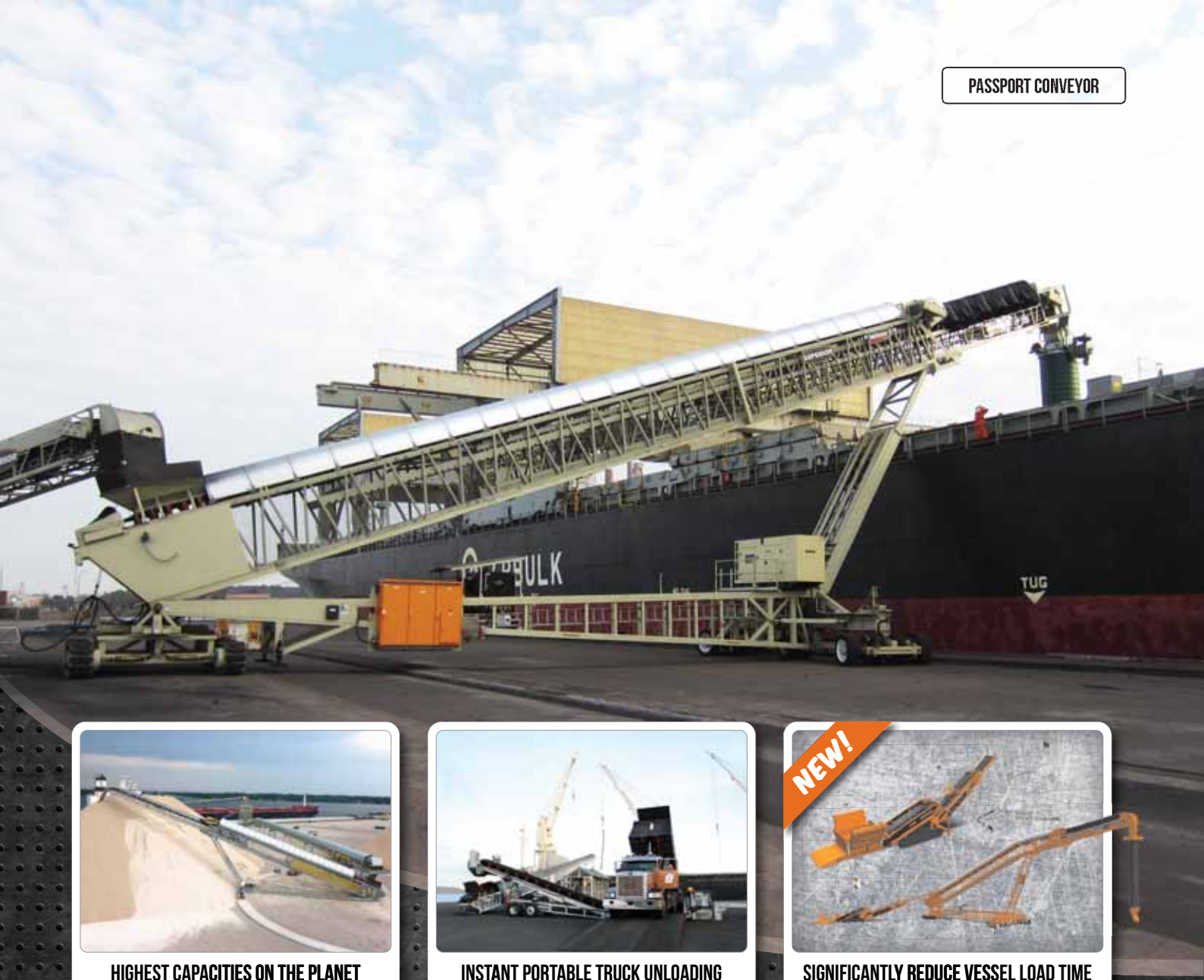
the apex of the structure. The arches were joined with Z purlins and bracings. The end wall was assembled in traditional Geometrica fashion, by assembling 'spiders' on the ground, then lifting them into position. The tripper likewise was assembled in sections on the ground, then lifted to its position and joined after the longitudinal structure was complete. The assembly took about six months.

El Brocal's Vizcarra said, "Geometrica's technician, Eduardo Medellín, was extremely helpful, explaining what to do and what not to do — and overseeing all the details necessary to assemble the structure. We look forward to working with Geometrica again."

In fact, Geometrica is currently manufacturing over half a kilometre of longitudinal structures that are similar in design to El Brocal's. They will be installed in various countries around the world.

The new ore-storage building was constructed by Geometrica at Mina El Brocal in Cerro de Pasco, Tinyahuarco District, Peru.

PASSPORT CONVEYOR



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Stockyard systems by RHC Heavy Machinery Ltd

Depending upon the commodity, such as coal, iron ore, grains, sugar, etc. specific stockyard systems are required. Open or and undercover storage also requires task specific equipment. Material like scrap needs a completely different loading/unloading and storage system.

Typical material flow for iron ore and coal:

WAGON →

Wagon tipper

BARGE →

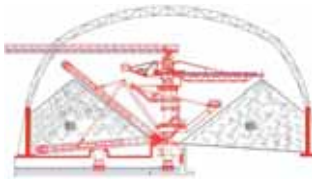
Barge unloader

Conveyor

Stacker

Normally coal and iron ore arrives at the port for export by wagons or barges. It is unloaded by wagon tippers or barge unloaders and transported via conveyor systems to the stockyard. Some export terminals have several million tonnes of material in stock. Export countries with such large stockyards are in Latin America, India, China, Australia, etc.

For food in-door/covered systems or silos are preferred in combination with covered conveyors.



Scrap is one of the most complicated goods to be handled, starting with unloading of the vessels and the transfer to the scrap yard. Incoming scrap by vessel is quite often compacted and is difficult to unload. Some steel mills combine the unloading of vessels and scrap storage. Scrap has to be separated into different qualities. The perfect solution for these tasks is hydraulic cranes. High performance, robust design make it the crane of choice.

RHC and manufacturing partners in Europe and China provide customized material flow and stockyard solutions for the bulk material handling industry; outdoor and under cover storage systems, conveyors and task specific optimized material handling systems for all dry bulk material as well as food, feed and biomass. RHC is a German engineering team that bridges the customers need for reliable equipment based on European design and engineering criteria, combined with the outstanding value proposition of equipment manufactured in China and/or Korea.

Famak S.A. builds bulk behemoth for the Port of Gdansk

Famak S.A. is a Polish company, and is among the market leaders in the manufacture of industrial steel structures, machinery and constructions. The company has been in operation since 1945, serving customers from all lover the world.

Famak S.A. produces equipment for the power industry, mining, metallurgy, ports, shipyards and many others, and includes a wide range of stockyard equipment in its product portfolio. Famak S.A. designs and manufactures vertical, continuous

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transport equipment and various handling systems.

Among the notable stockyard contracts completed by Famak S.A. is the design, manufacture and commissioning of a stacker/reclaimer for the Port of Gdansk in Poland. The original assignment was a challenging one. On average, the jib of a stacker/reclaimer is around 20–30m long. On this occasion, the client needed the jib to be a staggering 50m long. Łukasz Warczyk, the commercial director of Famak S.A. in Kluczbork, explained that achieving this — and a total stacker/reclaimer length of 122m — presented its own unique challenges. The Port of Gdansk is large, and requires a comprehensive range of specific cargo operations needing highly specialist handling and storage technologies. Therefore, the stacker/reclaimer had to be large enough to cope with the demands of handling the loose cargo. The stacker/reclaimer supplied by Famak S.A. is 700 tonnes in weight, and took 13 months to manufacture and start up once it had been designed.

Famak S.A. notes that the output capacity of the stacker/reclaimer is impressive — stacking capacity is designed for 4,000tph (tonnes per hour), while loading capacity is 2,000tph. As a result, the unit can function together with two modern port cranes and a wagon loading station. The ŁZKZ 1000.50 stacker/reclaimer, as a double-function machine, is designed to stack loose materials in a stockyard, or to take them from the stockyard and transferring them onto conveyors.

FAMAK S.A. FACILITIES

Total area:	20 hectares
Total production area:	30,000m^2
■ three workshops	
■ hydraulic and electric workshop	
■ shotblasting & paint workshop	
■ office buildings with design department	

Famak, based in Kluczbork, Poland, has highly qualified technical-engineering staff with interdisciplinary knowledge and experience, and design-development base, who implement the highest technical level in the products that are offered by Famak S.A.

Famak S.A. provides a wide range of services to its clients based on partnership and long-lasting co-operation, such us:

- technical advisory;
- design according to individual needs;
- production and on-site installation;
- start-up and personnel training;
- 24 hours full service after installation; and
- modernization of existing equipment.

In the production of equipment and services to its customers, Famak S.A. aims to meet the needs of its customers, and to retain their trust and good opinion. It is a strong believer in environmental stewardship, and implements stringent measures to ensure that its products are as 'green' as possible. It also follows all the relevant regulations in terms of health and safety requirements.

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Tenova TAKRAF – leading German bulk materials equipment provider

Tenova TAKRAF is a major supplier of a wide range of bulk materials handling products and services, including equipment used in bulk stockyards. It is a global leader in the mining and bulk handling equipment suppliers' industry. It combines German and Italian engineering skills with a worldwide organization on all five continents. The company has a versatile wealth of experience in development, design, fabrication, erection, and commissioning of open cast mining equipment and bulk material handling facilities.

Tenova TAKRAF is the result of the successful merger of Tenova Bulk Handling activities, strong of the renowned Italimpianti heritage, and TAKRAF with origins that can be traced back to 1725, and that has been designing and supplying equipment and technology to the mining industry for almost a century. Tenova TAKRAF has two development centres for bulk materials handling systems in Leipzig, Germany and in Genoa, Italy. These centres have pooled their expertise and resources from both experienced companies, TAKRAF and Italimpianti. Tenova TAKRAF is now recognized as a full line provider from the mine site of materials handling to loading/unloading, maritime and train transport.

Following a long history of systems development and supply in the area of bulk materials handling, Tenova TAKRAF has put in place various stockyard systems and export terminals around the world — systems which are today operating reliably in the harshest geological and weather conditions occurring. State-of-the-art technology applied to those systems generates optimum speed of bulk transport, provides secure materials' transfer involving environmental safeguards, operational automation to name a few. Additional to this standard of technology, Tenova TAKRAF supplies bulk materials handling systems that operate reliably during heavy snowfall and in lowest temperatures down to –45°C.

Reference projects, such as one of the most modern export coal terminal of Ust-Luga in the Baltic Sea Area of Russia, operated by Rosterminalugol, or the coal terminal in the export harbour of Wanino, at the Pacific coast of Russia, operated by SUEK, show evidence of Tenova TAKRAF's vast capabilities in planning, constructing, fabricating, delivering and erecting, and all connected services to new development and/or expansion of plants involving bulk materials handling systems.

Tenova TAKRAF's wide range of stockyard equipment includes:

- **stackers:** a complete range of stackers for stacking circular, kidney or length stockpiles as well as for homogenization and blending. Typical parameter for the different machine types are:
  - stacking capacities — from 300tph (tonnes per hour) to 20,000tph;
  - outreach — from 15m to 60m;
  - pile width ranges — from 20m to 70m;
  - track/ trail ranges — from 4 to 12.

  Tenova TAKRAF is capable of supplying stackers with boom lengths up to 200 metres. Whatever the material, Tenova TAKRAF can supply the most appropriate stacker for the material to be stacked and the parameters of the stockyard.

- **reclaimers:** turnkey reclaimers for reclaiming, blending and homogenization of stockpiles. Compared to other designs of reclaimers, bucketwheel reclaimers with bucketwheel booms offer the largest reclaiming capacities. Bridge-type

bucketwheel reclaimers are used to homogenize bulk material. Tenova TAKRAF's reclaimers are effectively used in systems with extensive automation. Typical parameters for the different designs of bucket wheel reclaimers are:

Reclaimers with bucketwheel boom:

- ❏ reclaiming capacity ranges — from 500tph to 20,000tph;
- ❏ tracks ranges — from 6m to 20m;
- ❏ outreach — from 25 to 60m

Bridge type reclaimers with bucketwheel:

- ❏ reclaiming capacity ranges — from 300tph to 8,000tph
- ❏ span width ranges — from 30 to 50m

Tenova TAKRAF has developed numerous reclaimers for special demands with bucket wheel boom length up to 80 metres.

❖ **stackers:** these are stacker and reclaimer combined in one machine with bucketwheel boom. The minimization of the total number of machines on a stockyard as well as the reduction of conveyors and trails constitute a great advantage of the stacker/reclaimer. Typical parameters for the combined stacker/reclaimer are:

- ❏ stacking/reclaiming capacity ranges— from 500tph to 20,000tph
- ❏ outreach ranges - from 25 to 60 m

For special operations Tenova TAKRAF supplies stacker/reclaimers with boom lengths up to 80 metres.

❖ **drum reclaimers:** Tenova TAKRAF's drum reclaimers are applied for the homogenization of huge handling bulks with large required homogenizing capacities. Tenova TAKRAF delivers single-covered and double covered drums. Drum reclaimers are able to reclaim in one driving direction as well as in both driving directions. Typical parameters for Tenova TAKRAF drum reclaimers are:

- ❏ reclaiming capacity ranges — from 300tph to 6,000tph
- ❏ span width ranges — from 20m to 50m.

❖ **scraper reclaimers:** side, portal, and bridge type scraper reclaimers for circular and longitudinal stockpiles. The simple moving process of the scraper reclaimer facilitates fully automatic operation and the delivery of a very homogeneous material flow. Due to their geometry, scraper reclaimers are applicable for inside and outside operations. Typical parameters of the different scraper designs are:

Portal scraper reclaimer:

- ❏ reclaiming capacity ranges — from 150tph to 4,000tph
- ❏ span width ranges — from 20m to 60m

Side scraper reclaimer:

- ❏ reclaiming capacity ranges — from 150 to 2,000tph
- ❏ boom length ranges — from 20m to 35m

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Bridge type scraper reclaimer:

- ❏ reclaiming capacity ranges — from 150tph to 1,300tph
- ❏ span width ranges — from 20m to 60m

The capacities of circular stockyard scraper reclaimer designs are similar to those of portal, side or bridge type scraper reclaimers. Here the outer diameters of the circular piles range from 60 to 120m.

❖ **tube conveyors:** environmentally friendly bulk materials transport is facilitated by the use of tube conveyors. Via encapsulation of the material while transportation interactions between environment and conveyed material, such dust emissions and water absorptions by the material in the cases of rain or snow are eliminated. Compared to typical belt conveyors tube conveyors have got very small curve radii. This often allows a reduction of the numbers of transfer points. Typical parameters for Tenova TAKRAF tube conveyors are:

- ❏ conveying capacity ranges — from 100tph to 4,000tph
- ❏ belt length ranges — from 40m to 15,000m.

❖ **overland and in-plant conveyors:** these convey bulk materials, from mine production facilities to process plants and to out loading at rail and port terminals. Services provided include system feasibility studies, finance facilitation, design, engineering, project management, construction and

commissioning of conveyor systems. Tenova TAKRAF's range of conveyors can cater for any plant, overland or stockyard conveying need. They:

- ❏ provide high speed and high capacity
- ❏ are designed to ISO and CEMA standards
- ❏ are cost effective and efficient with references up to 11,000tph and belt speeds of 6.7m/s
- ❏ handle difficult material
- ❏ use belt feeders with high capacity.

❖ **rapid rail-loading systems:** these comprise load-out stations and train movers. These systems are custom designed to meet the client's specified requirements and ensure the highest standards of performance. Tenova TAKRAF's load-out stations have a 'learning capability' and are equipped with user-friendly computer control, information and records systems for accurate loading. Flask or flood loading systems are used to load particulate materials into moving trains. Services range from feasibility studies to turnkey and project-managed materials handling contracts for major clients worldwide, backed by an efficient after-sales service. Benefits:

- ❏ high system availability and reliability, and low maintenance requirements
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- ❏ customized operating system to meet client's specified requirements
- ❏ comprehensive on-site training of operators
- ❏ fail-safe operation
- ❏ integrated rapid rail loading system — stockyard system design
- ❏ upgradeable firmware and control software
- ❏ 'point of sale' certifiable loading capability
- ❏ 'off the shelf' standard components and readily available spares
- ❏ automatic calibration capability
- ❏ fully automatic operation, with semi automatic and manual operating modes available.

Kumba Iron Ltd's stockyard machines

Accentuating reliability, references and trust; Tenova TAKRAF was awarded a contract for the turnkey delivery and installation of three stockyard machines to Kumba Iron Ltd, South Africa, which is part of the Anglo American Group of Companies. The three rail-mounted machines, a bucket wheel reclaimer and two stackers, operate on the stockyard of the Sishen South Mine from where the ore is sent to the Saldanha Export Terminal via rail. Sishen South is located approximately 90km from the existing Sishen Mine near Postmasburg in the Northern Cape Province.

The machines are to a large extent replicas of existing machines which TAKRAF supplied to the Sishen Mine several years back and which have been working to the client's satisfaction ever since. The robustness and proven reliability of the TAKRAF machines were important factors in Kumba's decision — the suitability of the equipment to the rugged mine environment and adherence to high quality and safety standards are of utmost importance. The iron ore is stacked in two different qualities, fine ore and lumpy ore, at a rate of 1,150tph (tonnes per hour) and reclaimed at a nominal rate of 5,500tph (peak rate 7,500 tph).

Extension of Krutrade AG coal export terminal

Expanding its export facilities in Ust-Luga, Krutrade AG awarded Tenova TAKRAF the fourth contract in a row for expansion stage IV of the erection and extension of the coal export terminal at the Baltic Sea side. Whilst erection phase III at the stockyard and pier, supplying one shiploader with tripper car, seven conveyor systems for the wagon-tippler site and the sea-site, and diverse auxiliary equipment, all equipment complying a capacity of 3,500tph, Tenova TAKRAF received the order of one more stacker with tripper car, and one more bucketwheel reclaimer, also of 3,500tph capacity, as well as the extending belt conveyors to restore the terminals storing and exporting capacity exceeding 12 mtpa (million tonnes per annum).

From contract closing to commissioning of the fourth expansion-stage a time frame of 24 months was given. Within the fourth expansion stage of the coal terminal a fourth stack-pile area in addition to the three already existing pile-tracks was built. The stockyard equipment, as well as the conveyors operate at a capacity of 3,500tph. The stacker has a boom length of 55m, and the reclaimer has a wheel boom with a length of 58m. Aligned to the already existing conveyor system, the new conveyors have a belt width of 1,600mm and transport the coal at a speed of 4.5m/s. In total the new conveyors added up to 1.5km in length.

Tenova TAKRAF

With over 600 employees worldwide and subsidiaries in Canada, USA, Chile, Brazil, India, Australia, South Africa and Bulgaria there are representative offices on all continents Tenova TAKRAF develops system solutions so they are close to the customers.

Tenova TAKRAF benefits from a global network of highly qualified staff, their technological expertise and proficiency ensures the supply of reliable, high-capacity and durable plants and machines, equipped with the most modern key technologies.

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Stockpiling with the Fuchs MHL385 in the UK

One of the UK's fastest growing ports, the Port of Workington in West Cumbria, has further boosted its improvement programme with the purchase of a large, fully mobile, high-capacity, long-reach wheeled Terex Fuchs MHL385D for stockpile-application. This versatile specialist machine was purchased from distributor Blue Fuchs in Great Britain, a member of the Blue Group of companies.

The material handler has been purchased by Cumbria County Council, the port's owner, and is the latest stage in a major expansion into container handling and developing the port into a key player in European multi-modal logistics with modern, multi-modal terminal transferring cargo between sea and road or rail.

The port handles around 300,000 tonnes of imported cargo every year, with over 250 cargo vessel movements. Materials include both dry and liquid bulks, timber and agricultural products and recyclables. The port's main cargo handling facilities are on the Prince of Wales Dock which has a 773m quay frontage with seven berths as well as a ro-ro facility. All berths are rail connected and the port authority also operates its own locomotive on the port's own extensive rail system.

Port of Workington's operations and safety manager Liam McAleavey reports that they are delighted with their new Terex Fuchs acquisition, particularly focusing on the excellent performance and the impressive elevating and forward-reaching

cab which provides the operator with a raised line of sight, so important for the safe and efficient extraction of cargoes from vessels' holds by giving a clear view right into the depths of the hold itself.

The new machine was delivered with its own 4m³ clamshell bucket, which is augmented by Port of Workington's own specialist attachments which include hook, bale clamp and pulp spreader beam. Vessels of between 2,000dwt and 8,000dwt are being unloaded and stockpiled by the Fuchs-machine, with annual volumes of 20,000 tonnes of gypsum, 50,000 tonnes of wood pulp, 24,000 tonnes of SRF and seasonally variable loads of fertilizer and animal feed being the main cargoes.

The Main-application of the MHL385D is unloading bulk of the vessels and stockpile the material for the additional processing in our facility.

The MHL 385 was selected after an extensive and stringent tendering process, following strict protocols. McAleavey commented that "the Terex Fuchs machine ticked all the boxes in terms of specification, price, performance and after-sales product support. Our operators are very happy with it, especially with

the port lift cab giving them excellent visibility into the hold and a full view of the hatch."

The Fuchs MHL385D is specifically designed and built for port and bulk-handling duties added Andreas Gruber, Port Application Manager Terex Fuchs. "Robust in construction, mounted on a heavy-duty eight-wheeled chassis with four hydraulic outriggers for added stability on static duties, the MHL 385 is agile around the site with a 9.9m turning radius. Weighing in at around 75 tonnes the machine is powered by a low emissions, fuel-miserly V6 Deutz diesel engine which develops 273kW. Travel drive is hydrostatic with infinitely variable speeds of up to 8km/h. Lift capacities are 29 tonnes maximum to 6.5 tonnes at 22m working

radius. The port lift cab provides a raised line of sight up to 8.5m for the operator, together with a 4.5m reach over the vessel being unloaded for optimum hold and hatch visibility; cab entry and exit for the operator is at ground level. The cab itself is state-of-the-art, featuring automatic machine monitoring and is an air-conditioned and extremely comfortable yet functional work station to ensure maximum operator comfort and efficiency." DCi

Mineral exports from Central & Southern Africa

Wheeled material feeder transports around the mine between working stations.

SAMSON Materials Handling offers new mobile shiploading system

Known as B&W Mechanical Handling till this last year SAMSON Materials Handling Ltd continues to diversify into the mining and minerals industry with new applications for its existing range of shiploaders, *writes Barry Woodbine – SAMSON Materials Handling Ltd*. SAMSON offers interesting new developments in material feeders, both for operation deep in the mine and at the terminal extending the performance boundaries in line with modern mine demands.

In Liberia, at the ArcelorMittal terminal, SAMSON has commissioned a new mobile shiploading system incorporating the company's new range of crawler track-mounted material feeders. The mobile shiploader is based on the SAMSON cambered boom design established for many years and proven in over 100 applications worldwide. Using the cambered boom the shiploader discharge section remains near horizontal over the vessel, thus minimizing the material free fall into the vessel hold. At the same time, by minimizing the conveyor lift, power demand is correspondingly reduced making this design particularly energy-efficient by minimizing the required drive size, especially important with mobile equipment. Using a tapered fabricated boom, stress levels in the structure are relatively constant along the machine length to maximize the design efficiency whilst retaining the capability to support high head loads for such as 'Cascade' trimming chutes with rotating trimming distributors.

Handling heavy mineral ores with densities over three tonnes per cubic metre places particularly stringent demands on the structural integrity of the shiploader construction and, in particular, the cantilevered section over the vessel. This is aggravated in many sub-tropical or monsoon areas where extreme rainfall — over 300mm per day — will turn normally free-flowing material into virtual slurry liable to bridge and block in chutes and trimming gear. To maintain the integrity of the shiploader boom, structural calculations must take into account a blocked chute condition and the maximum load level possible on the conveyor boom limited only by the material natural repose angle. In effect, this approximately doubles the distributed load on the shiploader boom and can easily more than double the head load from a blocked chute; clearly, the higher the material density, the greater the load and risk of catastrophic failure should these factors not be factored in at the design stage. With almost any design of trimming chute, there is a risk of material blockage. In addition, there is also the risk the chute may become buried in the material within the hold if the trimmer is not continually raised to keep the equipment clear. Of course, this is a double-edged sword when the raw material is dry and dusty, since the objective of the 'Cascade' or similar chute system is to mitigate dust generation by controlling the material free fall and limiting the material flow velocity; this control is lost if the free fall between the trimmer and the material is excessive.

To control such risks, SAMSON uses safety devices to control the applied head load including load cells mounted between boom and trimmer, plus level detection at the trimmer discharge and within the chute to automatically control the boom raising with a backup in case the primary detector fails. These are complex issues and go to the core of the equipment

Mobile shiploader operating with a single tracked material feeder in Liberia.

design both in safety and operationally and form a key part of the SAMSON machine design philosophy ensuring safe and reliable operation in service under all working conditions.

Of course, heavy mineral ores are only economically shipped in large vessels, Panamax size ships being typically the norm, even from smaller ports. This is illustrated here in Liberia at the port of Buchanan, operated by ArcelorMittal feeding ore from its mines inland using a refurbished rail link into the port. To bring the export facility on line with minimum delay, the operator decided to first install mobile loading equipment available on a relatively short lead time compared to a permanent fixed installation requiring stacker/reclaimer systems and a rail mounted shiploader.

The mobile shiploader with integrated diesel gen-set requires no fixed systems or port infrastructure. When paired with the twin SAMSON tracked material feeders, each with on-board diesel motors, the complete equipment may operate autonomously. The ore is stored outside and transferred from the stacking area to the material feeders by a fleet of wheeled loaders to achieve a loading rate of 2,500tph (tonnes per hour), subject only to the loader travel distance. The ore may be dry and dusty outside the rainy season in the middle of the year, but generally it is wet and sometimes very wet and cohesive and liable to bridge and block in chutes and hoppers. Even in the dry

Tracked material feeder discharges to mobile shiploader.

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Twin tracked material feeders discharge ore to a single shiploader.

season, monthly rainfall is 200mm ranging to 700mm in February and March. Therefore, stockpiles, unless protected, can be almost slurry-like, on the surface at least.

Not only do the material characteristics directly impact on the shiploader design, they also impact on the design of transfer chutes, valley angles and wear liners and also on the design and operation of the associated feeder equipment. In this case, the decision to use the SAMSON material feeder ensured reliable operation handling even the most difficult materials thanks to the wide apron belt design.

By placing the material feeder at 90° to the shiploader, the associated transfer chute may be very steep ensuring reliable flow to the ongoing conveyor belt. Also, the tracked travelling system ensures the equipment can move over rough and uneven ground, resulting from ore spillage in the loader operating zone, and may be quickly and easily repositioned without risk of getting bogged down.

Similarly, the shiploader with powered travel and steering may move easily between holds for effective vessel trimming. By minimizing the time lost in manoeuvring the equipment, the total vessel-loading period may be reduced giving an effective increase in the 'through-the-ship' average loading rate. Clearly, it is the average loading rate that determines the total vessel loading period and therefore the cost per tonne loaded. With this equipment and efficient loading shovel operation an average rate of around 2,000tph is theoretically reasonable giving a daily (20 hour) rate of 40,000 tonnes which is equivalent to a vessel turnaround of two days providing all else is equal. Using a single feeder only, ArcelorMittal in Liberia achieves an average rate of 800tph in practical operation.

SAMSON has delivered a number of mobile shiploaders in recent years to handle a range of mineral ores and concentrates including copper, gold, nickel and other similar commodities all of which share many common attributes including mainly high material density and high abrasively. Working locations from the Arctic to the Tropics with temperatures ranging from minus –40° to +40° challenge any equipment but with experience the equipment design may be tailored to the particular site demands and, most importantly, to the actual material handling characteristics.

Whilst in this application in Liberia uses wheeled loaders to load to the shiploader from a quayside stockpile, in many applications the availability of material so close to the berth is a luxury and very often truck haulage is required between storage or processor and the berth.

In this situation, the SAMSON material feeder is arranged for direct delivery by truck eliminating double handling at the berth and also eliminating any contamination of the quay by stored material. SAMSON pioneered the 'truck-to-ship' concept, incorporating twin or single Samson feeders integrated to the shiploader chassis allowing the equipment to operate as an autonomous whole.

Of course, the mobile material feeder is not limited to operation in ports and may be equally applied in surface mining operations where a mobile feed point is required loading to an existing overland belt. This permits the best use of flexible short distance truck transfer and the economy of long-distance conveyor haulage, illustrated herein a Material Feeder within integral reject grill being transported by dozer between working locations.

The established range of SAMSON's products for minerals import and inland distribution are now complemented by a new range of standard 'off-the-shelf' products normally available from stock including telescopic stockpiling conveyors, Caterpillar track-mounted mobile link conveyor and stackers but most importantly a new range of 'boom feeders' with tracked undergear, integral feeder and radial boom. The boom feeder is a universal materials handling tool designed for stockpiling, barge loading, loading rail wagons and as an emergency feed point for yard belts during stacker/reclaimer rebuilds.

High flexibility in operation and low cost per tonne loaded are clearly substantial benefits with mobile solutions at any point in the minerals logistics chain but also fast track availability is a clear critical benefit. SAMSON has invested heavily in new products and new designs aimed specifically at the mining section and in particular the feeding and ship loading or stockpiling of heavy mineral ores using predominately mobile solutions offering flexibility combined with performance and reliability. DCi

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VERACHTERT

Verachtert Netherlands

'new kid in town' comes good

Full service provider for work tools

Netherlands-based company Verachtert has become a market leader for work tools, for all types of excavators and wheel loaders. It also offers a wide variety of grabs.

The company has been in business for 60 years, and in that time, it has gained a reputation for reliability, innovation and customization, and for always putting the customer first.

What sets Verachtert apart from many other companies is its dedication to the needs of the customer. Its strength lies in getting to know the customer's application, and making the best tool for the job. Many of its products are custom-made, ensuring that productivity and efficiency are maximized.

The company's products are used daily and intensively by a large group of international customers in earth moving, road and water engineering, demolition, scrap metal processing, recycling, construction, demolition, scrap processing, industry and transshipment.

Verachtert assembles its products itself, using parts that are manufactured out-of-house. In this way, it is able to implement strict quality control measures, and also to focus its expertise on the development of the equipment it sells.

Of particular interest to the bulk and breakbulk industry are Verachtert's wheel loader attachments, as well as its grabs. In ports, its wheel loader attachments are widely used by very large coal and ore handling companies. The attachments are employed in ships' holds, on the quay and in the stockyard, and are widely used to load trains as well as to move piles of material around the premises of the customer.

Coal buckets

Verachtert has designed very large coal buckets which are comparatively light. It is therefore possible to attach larger buckets to wheel loaders, and to carry greater volumes of coal, significantly increasing the customer's productivity. This also fits in with Verachtert's focus on 'green' production — the lighter the bucket, the larger it can be, and less fuel overall is consumed. The smart design of the buckets, and the attention paid to the way material enters the buckets, also serve to strengthen their productivity, and to reduce the customer's CO_2 footprint.

Standing out from the competition

Verachtert strives to put intelligence into all its products, to maximize their potential in every way. It is constantly looking to find ways to improve its equipment — to search for innovation; to try and make the products lighter, simpler and more efficient. It looks closely at daily operations, and tries to position the component parts in a piece of equipment so that it can reduce welding if necessary, make the construction strong but also light,

Verachtert expands its grab offering

In January 2013, Verachtert Netherlands acquired DCC-Grabs, enabling it to expand its grab portfolio significantly. Prior to the acquisition, Verachtert offered only hydraulic grabs. By absorbing DCC-Grabs, it can now offer mechanical and electro-hydraulic grabs.

Verachtert has worked hard to ensure a seamless integration of DCC-Grabs within its organization. It has had to incorporate the expertise, processes and systems of DCC-Grabs, as well as combining two different knowledge bases.

Verachtert designs, develops and manufactures grabs for the dry bulk cargo, dredging and recycling industry. It can guarantee innovative design and product development, and

prides itself in its ability to solve specific problems for its clients. It ensures an excellent price-quality ratio of its grabs, as well as low maintenance costs.

Verachtert grabs are particularly popular in the dry cargo and dredging industries, due to the strength, low empty weight and excellent quality of each grab. Therefore the grabs are guaranteed to achieve high returns on investment, and save valuable time.

Each grab is thoroughly inspected and tested prior to delivery to the customer. Grabs are manufactured with a relatively low weight, and assure customers high productivity. All are manufactured from high quality and durable, wear-resistant materials.

and to make important components accessible. All of this is done with the needs of the customer in mind.

Market position

Verachtert specializes in selling and renting new and used work tools. It also offers service and repair services, and holds a large stock of spare parts — most of which it can ship to the customer within 24 hours. The product range includes quick couplers, buckets for excavators and wheel loaders, grabs and demolition tools including shears and hammers. Verachtert's work tools all come with an extensive service package containing everything, from advice in selecting the right equipment to after-sales and support in maintenance and repairs. It has an excellent workshop maintenance and repair facility, and also has field mechanics that it can send out to the customer's site if necessary.

Verachtert has a strong position within the European market, strengthened by being located in the Netherlands. It aims to maintain and increase its position in Europe. Its philosophy is one of long-term relationships with customers, evidenced by the many repeat orders that it receives from long-standing clients. It has the same approach to its suppliers — longer relationships and trust lead to better results all round.

The acquisition in January 2013 of DCC-Grabs (see box, above) has helped Verachtert increase its presence in the local and the global markets. Recently, the company has won business in Africa and in the rest of Europe. Verachtert is ambitious — it wants to have a wider range, not just of products but also in terms of the geography of its customers.

Staying strong

Verachtert has been able to face out the global economic crisis by continuing to offer a strong, stable service to its customers. It knows the importance of reliability, good service and honesty. It hopes to benefit from the recent improvements in the global economy, and views the future with cautious optimism. It is always working on new markets, and has recently moved into the harbour cranes arena. It plans to remain innovative in its approach, and to continue to look at new grounds and innovation.

DSH Systems enables dust controlled loading

DSH Systems produces award-winning loading spouts which ingeniously contain the dust within the product stream when discharging dry bulk materials.

The DSH System cleverly avoids the need for the more complicated systems currently used in applications.

the hopper for variable product weights.

The DSH System is designed for dry, granular (or gritty), free-running products.

Due to international customer demand, DSH Systems Ltd is constantly researching and developing its system to enable the

How does the DSH System work?

The DSH (Dust Suppression Hopper) System is installed under a feed point where it can be suspended above the target and kept at operating level. A small degree of natural agitation as the hopper is filled helps exclude air from the material being transferred. At the point of loading, or transferral, the DSH system concentrates the discharge of dry goods as a solid column through free air into any target repository including trucks, rail cars, barge, stock piles, storage containers or bags.

The standard models require no utilities and have no internal moving parts while the PFC (Programmable Feed Control) system automatically configures

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DSH SYSTEMS LOADED PRODUCT LIST

Fertilizers
- Blue T super
- Bourucaa rock
- DAP
- MAP
- Feed phosphate
- Keserite
- Potsulf

Superphosphates
- Dolomite lime
- Lime (granular)
- Potash
- RPR fertilizer
- Serp super
- Togo Rock

Grains & stock foods
- Barley
- Barley Moultings
- Canola meal
- Corn
- Corn Germ
- Corn Gluten
- Corn gluten feed
- Corn gluten meal
- Corn gluten pellets
- Cotton seed meal
- DDGs (dried distillers grains)
- Pepsoygen
- Rapeseed meal
- Sorghum
- Soyabeans
- Soybean meal
- Soybean hulls
- Soybean pellets
- Wheat

Foodstuffs
- Revel A
- Salt - coarse
- Salt - plain table
- Raw sugar
- Refined sugar

Minerals and quarry products
- Bauxite
- Gravel
- Kaolin
- Magnesite
- Olivine
- Sands
- Salt — deicing
- Soda ash

efficient transfer of a wider range of products.

Previously, trucks taking on a load literally disappeared in the dust cloud. Uncomplicated to install and easy to operate and maintain, the DSH System reduces hazards, health risks, dust and wastage.

While the company's loading systems are used for a wide variety of commodities (see 'Loaded Product List' table left), its key markets are grain, feed, fertilizer and sands.

Its main customers are product based such as Cargill, Bunge, ADM, Carmeuse and such, and it sells to these clients globally.

DSH Systems is driven by its customers' requests — the main ones relate to a desire for bigger units for larger operations, and to use different materials so that the spouts can be used for different applications. This is why DSH Systems has already progressed from units that are capable of loading grain trucks at 200tph (tonnes per hour) to shiploaders offering capacities of 2,000tph.

Customer trial of DSH (dust suppression hopper) systems vs. existing technology

Trial Location: *New South Wales, Australia*
Location Type: *Port loading facilities*
Date of Trial: *February 2013*

Phase 1

The DSH hopper was installed on Unloader A to be used in the discharge of 28,000 tonnes of soybean meal from a vessel.

Unloader B is also being used in the discharge of the soybean meal but it still has the original truck loading chute — the same chute that was removed from Unloader A.

As soybean meal is a dusty cargo and both A & B are to be used at the same time in the discharge, it was an ideal time to compare the new DSH Systems dustless hopper in operation against the original truck loading chute in the same operation.

At this setting, it took Unloader A approximately 6 minutes to load one truck and there was minor spillage occurring over the top of the hopper — at the same time Unloader B was taking approximately 2 minutes 40 seconds to load a truck.

After lowering the hopper height to increase the spout opening size and adjusting the unloader slide gate that controls the flow rate into the dustless hopper, the truck loading rate was reduced to an acceptable 3 minutes and there were no spillages from the dustless hopper (Unloader A).

Figure 1: This is the initial height the hopper was installed prior to loading the first truck.

Figure 2: Unloader A (DSH Hopper) loading the first truck after adjustments.

Figure 3: In comparison at approximately the same time, Unloader B loading trucks.

Figure 4: Unloader A DSH Hopper in operation loading a truck after further adjustments.

Figure 5: Unloader B truck loading in comparison at approximately the same time.

Phase 2

DSH Systems' dustless hopper has now been used on the discharge of four different cargoes.

- Soybean meal — 28,000 metric tonnes
- DAP — 500 metric tonnes
- MAP — 5,422 metric tonnes
- MES10 — 2,350 metric tonnes

It has shown to be most effective on the dusty soybean meal cargo with a significant reduction in dust during truck loading and only minimal time difference compared to the truck loading rate using the original truck loading chute.

The truck loading rate of fertilizers MAP, DAP and MES10 showed an increase in time to complete a load compared with the original loading chute.

THE TRUCK LOADING RATE VARIED SIGNIFICANTLY:

	Approx. truck loading rates	Original truck loading rates
Soybean meal	3 min	2 min 30 sec
Dap fertilizer	1 min 30 sec	1 min
MAP fertilizer	3 min	1 min
Mes 10 fertilizer	2 min 30 sec	2 min

The loading rate is controlled by the unloader slide gate positioned directly above the DSH hopper and is set to enable the maximum amount of cargo fed into the DSH hopper without overflowing out of the hopper.

To enable a quicker loading rate the DSH hopper was modified to provide a larger spout opening.

The height of the installed DSH System is perfect to give adequate clearance from the top of the truck trailers.

Figure 6: Soybean meal Unloader A.

Figure 7: DAP Fertilizer Unloader A.

Conclusions of test

1) During Phase 1 only soybean meal was loaded. On first installation, the hopper loading was slower than the traditional chute, but after adjustment loading time was very similar. Significant dust reduction was observed by using the DSH System.

2) During Phase 2 further soybean meal was loaded as well as a variety of fertilizer products. Again significant dust reduction was achieved by using the DSH System on all products. Loading time on soya bean meal was very similar with both systems. Loading time of the fertilizer products was slower with the DSH due to different bulk densities of this product over the soybean meal.

3) Based on the significant dust reductions achieved, the DSH hopper on Unloader A was replaced with a modified model and the same unit was also installed on Unloader B. All products are now being loaded at the same speed as the traditional unit, but with massive dust reductions. DC

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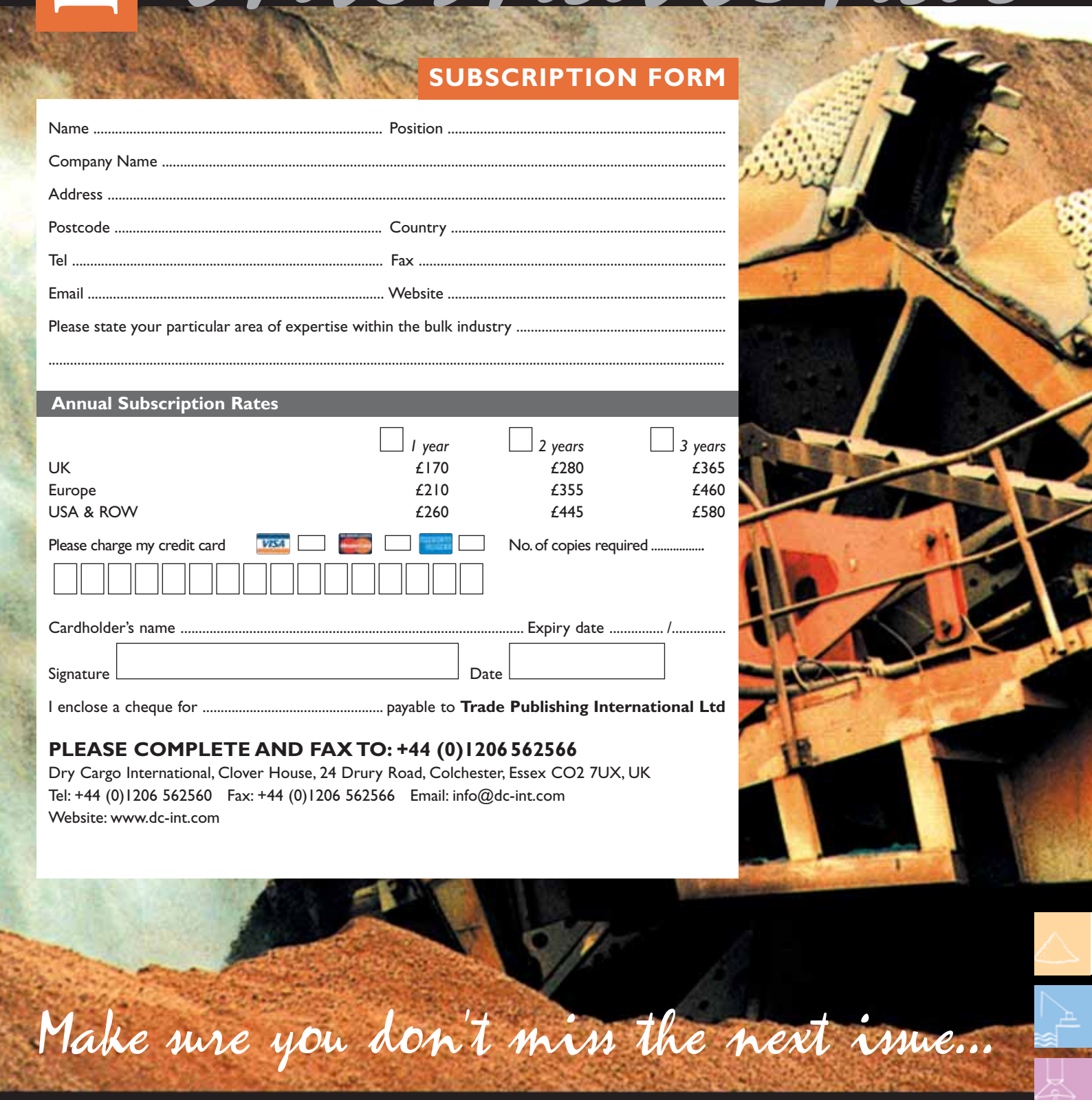

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Atchison Topeka transfers powdered foods from bulk bags to tanker trucks dust free

Atchison Topeka improved the efficiency of its UK operations by consolidating multiple food distribution centres into a single facility that transfers powdered food ingredients from bulk bags into bulk tanker trucks.

The plant's new closed-loop bulk transfer system consists of a bulk bag discharger integrated with pneumatic conveying equipment that blows bulk material into the trucks, while recirculating displaced air and recovering dust from the airstream.

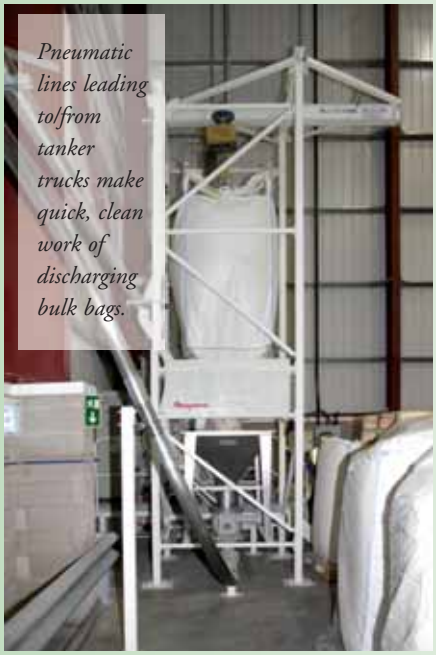
To meet food industry standards, the process was required to comply with BRC (British Retail Consortium) requirements in three areas: bulk tankers, warehousing and palletized distribution. While the facility would be handling a variety of food ingredients, analysis showed that most exhibited bulk densities of approximately 650kg/m³. Most were also free-flowing or semi-free flowing, with an angle of repose of 40° to 60°. One of the ingredients, however, was relatively hygroscopic and prone to bridging, so the equipment needed to prevent cavitation.

At the heart of the bulk transfer system (manufactured by Flexicon) is a BULK-OUT™ Model BFC bulk bag discharger configured with a cantilevered I-beam, electric hoist and trolley, flow promotion devices and a hopper equipped with a rotary airlock valve. The dilute phase pneumatic conveying portion of the system consists of a positive displacement pressure blower, pneumatic conveying line and a filter receiver located downstream from the bulk tanker truck. Automated controls orchestrate operation of the flow promotion devices, rotary airlock valves, blower and filter receiver.

All material contact surfaces throughout the system are of 304 stainless steel finished to food standards.

To start the process, a forklift or pallet jack is used to place a bulk bag in front of the discharge frame, where an operator attaches four bag loops to clips on the unit's bag lifting frame and, using a pendant, activates the hoist to raise the bag, and the trolley to move it into the frame, and after which it is lowered onto the spout connection point.

A Spout-Lock™ clamp ring, which is mounted atop a Tele-Tube™ telescoping tube, securely connects the clean side of the bag spout to the clean side of the equipment, after which the telescoping tube exerts continuous downward tension on the bag spout. The operator then releases the bag spout's drawstring, allowing material to fall freely into the hopper with no dusting.



Pneumatic lines leading to/from tanker trucks make quick, clean work of discharging bulk bags.

Flow Flexer™ plates raise opposite bottom edges of the bag into a steep 'V' shape, loosening compacted material, while constant downward tension exerted by the telescoping tube as the bag empties/elongates promotes complete discharge from the bag.

Material in the hopper is fed through a rotary airlock valve and pneumatic pick-up adapter into a pneumatic line that runs horizontally for 1m and at an incline before penetrating the exterior wall of the building to discharge material into a tanker trailer.

The air stream provides sufficient force to blow the material the full length of the trailer's interior. A return line vents displaced air and dust to the filter receiver that collects any carry-over material for later reintroduction to the pneumatic conveying system.

Raw material is gravity fed from the hopper through a rotary airlock with a pick-up adapter for discharge into a pneumatic line leading to a tanker truck loading bay.

Looking forward

The design of the bag-to-truck solution utilizes modular components that will allow the distributor to re-purpose its process for other applications, such as transferring powders from trailers to bulk bags, or new materials with varied handling characteristics.

Along with consolidating operations, the dust-tight bulk bag discharger with totally enclosed pneumatic conveying prevented contamination of the product and plant environment, eliminated the need for a clean room, and simplified quality control procedures.

The Droitwich facility builds on the distributor's 20-year record for clean, safe handling of food materials and maintaining rigorous standards for public health and safety.

One pneumatic line discharges into the tanker's inlet port, while a second line vents an outlet port, leading to a filter receiver where dust is separated from clean air vented to the atmosphere.

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US Steel plant resumes limited operations

Satellite imagery of the ice over Lake Superior.

US Steel says its largest mill is on limited production, after a shortage of vital iron ore due to the ice covering Lake Superior had temporarily shut down its furnaces.

US Steel had temporarily halted all steelmaking at its massive northwestern Indiana mill because the ice-covered Great Lakes have cut off the mill's access to vital iron ore, stating in a letter to customers that it had idled the Gary Works complex's blast furnaces and steelmaking due to "unprecedented ice conditions on the Great Lakes."

However, on 7 April, company spokeswoman Courtney Boone said that ships were able to bring ore to the sprawling Gary Works on Sunday 6 April, despite lingering ice from the frigid winter. She would not specify the level of production or estimate the cost of the shutdown. She said US Steel hoped to get more ore to the mill in the course of the same week.

The mill, which feeds steel to big industries, was shut down for about a week.

A spokesman for the Great Lakes shipping industry says iron ore stockpiles are running low in many places and coal shipments are down 70% from a year ago.

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RHB Stevedoring boosts capacity with world's most powerful mobile harbour crane

RHB Stevedoring & Warehousing has purchased the world's most powerful mobile harbour crane. This crane, purchased in 2008, has a lifting capacity of 208 tonnes, and is designed for safe and fast handling of industrial break bulk, project cargo, heavy lifts and general cargo. Savings in transshipment time of up to 50% can also be realized, a big advantage in light of today's high costs for seagoing vessels and barges.

Besides its own heavy lift crane, RHB Stevedoring & Warehousing uses partner floating cranes for the handling of heavies up to 1,800 tonnes single weight.

208-TONNE CRANE SPECIFICATIONS

Type	Liebherr LHM 600-S
Lifting capacity	208 tonnes at 21 metres 50 tonnes at 58 metres
Radius	58 metres max.
Lifting height	45 metres max.
Built	2008

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Speakers

• Susan Oatway, Senior Consultant, Drewry Shipping Consultants Ltd • Jeffrey Landsberg, President, Commodore Research & Consultancy • RA Dr. Erich Schmitz - Managing Director - Verein der Kohlenimporteure e.V. • Jonathan Challacombe, Associate Professor in Maritime Studies & International Logistics Plymouth Business School • Peter Sand, Chief Shipping Analyst, BIMCO • Christian Ingerslev, Vice President, Head of Business Development Desk, NORDEN A/S • David Peel, European Manager, RightShip • Ulrich Koester, Managing Owner, Maritime Tecnet GmbH • Capt. Giordano Scotto d'Aniello, Commercial Director, Coeclerici S.P.A • Teus van Vianen, Delft University of Technology • Brian Pittenger, Director Business Development, Jenike & Johanson, Inc. • Ian Adams, Executive Director, International Dry Bulk Terminals Group • Professor Mike Bradley, Greenwich University • Han Ozturk, Managing Director, Nectar • Johan Pruisken, Royal HaskoningDHV • David Trueman, DBIS • Micha de Jong, General Manager, Wuvio Chemicals

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Grindrod Terminals' facilities in Richards Bay provide a route to market for junior miners. The Freight Services division also provides a range of rail services, port & terminal operations, road transportation, intermodal solutions, warehousing, storage, stevedoring, seafreight, ships agency services and all facets of traditional logistics for dry bulk, liquid bulk, containerised cargo and vehicles. Grindrod's other divisions are: Shipping, Trading and Financial Services.

Grindrod Terminals Head Office
Grindrod Mews, 106
Margaret Mncadi Avenue,
Durban 4001
T: +27 (31) 302 7111
E: grindrod@grindrod.co.za
W: www.grindrod.co.za

AUSTRALIA

BRISBANE
North Queensland Bulk Ports Corporation Limited

GPO Box 409
Brisbane
Queensland
4001
Australia
Contact: Mr Brad Fish
CEO
T: + 61 7 3011 7900
F: + 61 7 3011 7997
E: info@nqbp.com.au
W: www.nqbp.com.au
Export: Yes
Location: Port Authority for Weipa, Abbot Point, Mackay, Hay Point & Maryborough
Vessel Size limitation: 220,000 DWT
Additional information: Abbot Point is Australia's most northerly coal port.

BRISBANE
Queensland Bulk Handling Coal Export Terminal

3 Bulk Terminals Drive
Port of Brisbane
Brisbane
Queensland
4178
Australia
Terminal Manager
T: + 61 7 3895 6500
F: + 61 7 3895 1170
E: qbhlogistics@qbh.com.au
W: www.qbh.com.au
Export: Yes
Location: Australia, East Coast, Queensland, Brisbane
Ownership: Queensland Bulk Handling Pty Ltd
Name of Port Authority: Port of Brisbane Corporation
Throughput Capacity: 8 million tonnes potential per annum
Total Storage: 377,000 tonnes
Vessel Size limitation: 90,000dwt, length 317m, draught 13.5m

CARRINGTON
Port Waratah Coal Services Limited (PWCS)

PO Box 57
Carrington
New South Wales
2294
Australia
Contact: Mr Hennie du Plooy
Chief Executive Officer
T: + 61 2 4907 2000
F: + 61 2 4907 3000
E: contact_us@pwcs.com.au
W: www.pwcs.com.au
Export: Yes
Location: New South Wales, Australia
Ownership: Coal Industry & Japanese Customers
Name of Port Authority: Newcastle Port Corporation (NPC)
Throughput Capacity: 145 Mtpa
Total Storage: Kooragang: 560,000 sqm
Carrington: 164,000 sqm
Vessel Size limitation: Kooragang: Max LOA 300m, Max Beam 50m, 40,000 – 232,000 dwt.
Carrington: Max LOA 300m, Max Beam 47m, 20,000 – 180,000 dwt.
Additional information: PWCS operates Kooragang and Carrington Coal Terminals in the Port of Newcastle, Australia.

DARWIN
P&O Automotive and General Stevedoring

PMB 23
Berrimah
Darwin
Northern Territory
0828
Australia
Contact: Mr Michael Van Brederode
Regional Manager
T: + 61 8 8922 2300
F: + 61 8 8941 0604
E: craig.doudle@poags.com.au
W: www.poags.com.au

GLADSTONE
Barney Point Coal Terminal

Central Queensland Ports Authority
PO Box 259
Gladstone
Queensland
QLD 4680
Australia
Contact: Mr Peter O'Sullivan
T: + 61 74 976 1471
F: + 61 74 972 3045
E: osullivanp@cqpa.com.au
W: www.gpa.org.au
Export: Yes
Ownership: Central Queensland Ports Authority (CQPA)
Name of Port Authority: Central Queensland Ports Authority (CQPA)
Throughput Capacity: 4 million tonnes per annum (2004/05)
Vessel Size limitation: DWT 90,000 (fully loaded)

GLADSTONE
Gladstone Ports Corporation

PO Box 259
Gladstone
Queensland
4680
Australia
Contact: Ms Dayna Burns
Media & Communications Officer
T: + 61 7 4976 1624
F: + 61 7 4976 3045
E: burnsd@gpcl.com.au
W: www.gpcl.com.au
Export: Yes
Location: Australia
Ownership: Government Owned Corporation
Name of Port Authority: Gladstone Ports Authority
Throughput Capacity: 80mtpa
Vessel Size limitation: 220,000dwt

HAY POINT
Hay Point Coal Terminal (HPCT)

MS 283
Hay Point Road
Hay Point
Queensland
4740
Australia
Contact: Mr Peter Hanrahan
General Manager
T: + 61 7 4943 5201
F: + 61 7 4956 3421
E: peter.f.hanrahan@bhpbilliton.com
W: www.bhpbilliton.com
Export: Yes
Location: 40km South of Mackay, Central Queensland, Australia
Ownership: Hay Point Services
Name of Port Authority: Ports Corporation of Queensland
Throughput Capacity: 44 million tonnes per annum
Additional information: Wharves 1.8km offshore serviced by conveyor systems supported on jetties. 2 shiploaders.

KOORAGANG ISLAND
Newcastle Coal Infrastructure Group

Locked Bag 6003
Hunter Region Mail Centre
Kooragang Island
NSW
2310
Australia
Contact: Mr Paul Beale
General Manager
T: + 61 2 4920 3900
E: enquiries@ncig.com.au
W: www.ncig.com.au
Export: Yes
Location: Kooragang Island, Australia
Throughput Capacity: May 2010 - Jan 2011: 8.4Mt
Additional information: 1st stage opened in May 2010 with export capacity of 30Mtpa. 2nd stage due for completion August 2011 - boosting capacity to 53Mtpa.

MACKAY
Dalrymple Bay Coal Terminal (DBCT)

Martin Armstrong Drive
Hay Point
Mackay
QLD
4740
Australia
Contact: Mr Gavin Springorum
Media & Corporate
T: + 61 7 4943 5645
F: + 61 7 4943 8466
E: andrew.garratt@dbct.com.au
W: www.dbct.com.au
Export: Yes
Location: 40km South of Mackay, Queensland, Australia
Ownership: Queensland Government - leased by Prime Infrastructure (private company)
Name of Port Authority: Ports Corporation of Queensland
Throughput Capacity: 85 million tonnes
Vessel Size limitation: Max draught 17.5m, Max dwt 230,000
Additional information: Services 18 Bowen Basin Coal mines. Wharves 3.8km offshore serviced by conveyor system supported on jetties. 3 shiploaders.

MACKAY
North Queensland Bulk Ports Corporation (NQBP)
Registered Office
Level 1 Wellington House
181 Victoria Street
Mackay
Queensland
4740
Australia
Contact: Mr Rob Watkins
Commercial Manager
E: rwatkins@nqbp.com.au
W: www.nqbp.com.au
Export: Yes
Location: North East Coast of Australia
Ownership: Terminal (HPCT) is owned by BHP Billiton Mitsubishi Alliance-owned and operated by Hay Point Services.
Dalrymple Bay Coal Terminal (DBCT) is leased from the State Government by DBCT Management Pty Ltd.
Name of Port Authority: North Queensland Bulk Ports Corporation (NQBP)
Throughput Capacity: 85mtpa
Vessel Size limitation: DBCT: Design Vessel minimum 20,000t, maximum 220,000t
Minimum depth at berth 1; 18.0m
Minimum depth at berth 2; 18.1m
Minimum depth at berth 3; 18.7m
Minimum depth at berth 4; 18.6m
HPCT:
Berth 1: 16.5m depth; 180,000dwt
Berth 2: 16.7m depth; 20
Additional information: Both terminals have purpose-built, rail inloading facilities, onshore stockpile yards and offshore wharves. The offshore wharves are serviced by conveyor systems, supported on jetties, which run out to sea and allow loading in deep water.

WOLLONGONG
Port Kembla Coal Terminal Limited
Port Kembla Road
Wollongong
New South Wales
NSW 2520
Australia
Contact: Mr Peter Green
General Manager
T: + 61 2 4228 0288
F: + 61 2 4228 7605
E: peter.green@pkct.com.au
W: www.pkct.com.au
Export: Yes
Location: Port Kembla is located 80 km south of Sydney on the East Coast of Australia
Name of Port Authority: Port Kembla Port Corporation
Throughput Capacity: Nameplate = 17.5 Mtpa
Total Storage: Coal stockyard 850,000sqm
Bulk Products stockyard 250,000sqm
Vessel Size limitation: Up to and including Cape size (nominally 190,000 DWT). The air draught of 22.4 m
Max LOA 285m
Additional information: Port Kembla Coal Terminal serves the Southern and Western coalfields of New South Wales Australia.

BELGIUM

ANTWERPEN
Antwerp Bulk Terminal (ABT)
Haven 750, Delwaidedok
Nieuwe Westweg 14
Antwerpen
B-2040
Belgium
Contact: Mr Michel Moons
Manager ABT
T: + 32 9 255 02 51
F: + 32 9 259 08 94
E: michel.moons@sea-invest.be
W: www.sea-invest.com
Import: Yes
Export: Yes
Location: Port of Antwerp, Belgium.
Ownership: SEA-invest NV
Name of Port Authority: Antwerp Port Authority, www.portofantwerp.be
Throughput Capacity: 40 million mt (in and out)
Total Storage: 126 ha
Vessel Size limitation: LOA is limited by the Zandvliet and the Berendrecht locks. Their length is 500 m, and vessels with LOA of 360 can enter the port. For vessels with a LOA exceeding this, an authorisation is possible. Maximum draught : 15,56 m F.W.. 2 Capesize bulk termina
Additional information: Antwerp Bulk Terminal handles, on its 5 bulk terminals in Antwerp, everything which can be handled by grab, ranging from ores, solid combustibles, minerals, to agribulk. It offers covered storage in dedicated bulk warehouses of more than 83.000 m2.

GENT
Arcelor Steel Belgium NV
Arcelor Gent
John Kennedylaan 51
Gent
9042
Belgium
Contact: Mr Koen De Coster
Maintenance manager railway and locomotives
T: + 32 9347 2670
F: + 32 9347 4916
E: info.sidmar@arcelormittal.com
W: www.sidmar.be
Import: Yes
Location: Ghent, Belgium
Ownership: Privately owned port, serving Sidmar Steelworks.
Name of Port Authority: Sidmar
Throughput Capacity: 2.6 mtpa
Total Storage: 1.15 mt
Vessel Size limitation: Panamax. Max DWT 65,000t, Max LOA - 265m, Max beam - 34m, Max draft - 13.5m

GENT
Ghent Coal Terminal NV - GCT
Skaldenstraat 1
Gent
9042
Belgium
Contact: Mr Bart Laureys
T: + 32 9 255 02 11
F: + 32 9 259 08 94
E: Bart.Laureys@sea-invest.be
W: www.sea-invest.com
Import: Yes
Export: Yes
Location: Alongside the sea canal in the Port of Ghent at berth 2320.
Ownership: GCT, 100% daughter of Sea-invest with head office in the Port of Ghent.
Name of Port Authority: Ghent Port Company AMC
John Kennedylaan 32
9042 Gent - Belgium
Throughput Capacity: 2*25 metric tonnes cranes + 1 ship's loader
Total Storage: 85 ha – 3 million tonnes storage capacity.
Vessel Size limitation: LOA 265m, Draught 12,50m (FW), Beam 37m.
Additional information: GCT is the biggest solid fuel terminal in Belgium with open air and covered storage facilities, equipped with several screening, crushing, blending and drying installations.

LIEGE
Terval S.A.
Ile Monsin, Route 10
Liege
B-4020
Belgium
Contact: Mr Dirk Schmidt-Holzmann
Administrator
T: + 32 4256 9340
F: + 32 4264 0835
E: dsh@terval.com
W: www.terval.com
Import: Yes
Export: Yes
Location: Liège is situated in the crossing of Belgium, Germany , The Netherlands and France.
Ownership: Privately owned
Name of Port Authority: Port Autonome de Liège
Throughput Capacity: 1.5 mio tonnes
Total Storage: 14 hectares
Vessel Size limitation: Barges 3.000 mt

OOSTENDE
Ter Polder
Zwaaidok 2
Oostende
B-8400
Belgium
Contact: Mr Steven Verhelst
Shipping Manager
T: + 32 59 331 133
F: + 32 59 331 433
W: www.verhelstlogistics.be

SERAING
CTB Logistics SA
Rue du Pont du Val
Seraing
B-4100
Belgium
Contact: Mrs Muriel Baugnee
Marketing
T: + 32 4240 7802 / +32 424 7814
F: + 32 4337 1008
W: www.ctblogistics.com

BRAZIL

ITAGUAÍ
CSN – Terminal de Carvão e Minério TECAR
Estrada da Ilha da Madeira
s/no, Porto de Itaguaí
Ilha de Madeira
Itaguaí
Rio de Janeiro
23826-600
Brazil
Contact: Mr Luiz Renato Torres
TECAR General Manager
T: +55 21 8111 9066
F: +55 21 2688 9209
E: renato.torres@csn.com.br
W: www.csn.com.br/tecar
Import: Yes
Location: Sepetiba´s Bay, Madeira island, Itaguaí, RJ
Name of Port Authority: Companhia Docas do Rio de Janeiro
Throughput Capacity: 4 million MT per year
Total Storage: 3 stockyards. Year capacity: 8 million tonnes
5 Stockyards. Year capacity: 5.2 millions tonnes
Vessel Size limitation: Depth 18.5 m – Panamax (until 75,000 tpb) – Cape Size (until 180,000 tpd)

SANTOS
Companhia Docas do Estado de São Paulo - CODESP
Avenida Conselheiro Rodrigues Alves, s/nº - Macuco
Santos
São Paulo
CEP 11015-900
Brazil
Contact: Mr José Di Bella Filho
Director-President
T: + 55 13 3222 5485
F: + 55 13 3222 3068
E: di_bella@uol.com.br
W: www.portodesantos.com.br
Import: Yes
Location: East Coast of South America
Name of Port Authority: Companhia Docas do Estado de São Paulo - CODESP
Total Storage: 1,000,000 sqm storage patios. 500,000 sqm warehouses.
Length of received ships, 270m. Ship capacity 70t. The canal of the Port of Saints has depths that vary from 5 to 14 metres.

SANTOS
Tropical Agencia Maritima Ltda.
4th floor
Rua do Comercio, 55
Santos
Sao Paulo
11010-141
Brazil
Contact: Mr Francisco Garcia
CEO
T: + 55 13 3213 8842
F: + 55 13 3219 2550
E: tropical@tropmar.com.br
W: www.tropmar.com.br

BULGARIA

BOURGAS
Bulk Terminal 2A
Port of Burgas JSC
1 Al. Battenberg Str.
Bourgas
8000
Bulgaria
Contact: Mr Dimitar Terziev
Manager
T: + 359 56 822 400
F: + 359 56 822 156
E: headoffice@port-burgas.com
W: www.port-burgas.com
Import: Yes
Location: South East of Bulgaria - south part of Bulgarian Black sea coast.
Ownership: Bulgarian state owned company
Name of Port Authority: Burgas Port Administration Agency
Throughput Capacity: 6,000,000 tpa
Total Storage: 108,000 sqm
Vessel Size limitation: Draught - 15.5m

CANADA

BELLEDUNE
Port of Belledune
112 Shannon Drive
Belledune
New Brunswick
E8G 2W2
Canada
Contact: Mr Rayburn Doucett
President & CEO
T: + 1 506 522 1203
F: + 1 506 522 0803
E: info@portofbelledune.ca
W: www.portofbelledune.ca
Import: Yes
Location: South shore of the Chaleur Bay in northeastern New Brunswick, Canada.
Vessel Size limitation: The wharf is capable of accomodating "Cape Size" ships up to 100,000 DWT. However, due to the KONE ship loader limitations, and from operational experience, mostly 80,000 DWT Panamax ships are serviced.
Additional information: Terminal 2 allows for the import of coal to supply the adjacent NB Power Belledune Generating Station.

CONTRECOEUR
Terminal Maritime Contrecoeur Inc
1920 Marie Victorin
Contrecoeur
Quebec
JOL 1CO
Canada
Contact: Mr Norman Desjardins
General Manager
T: + 1 450 587 2073
F: + 1 450 587 8570
E: ndesjard@logistec.com
W: www.logistec.com

DELTA
Westshore Terminals
1 Roberts Bank
Delta
British Columbia
V4M 4G5
Canada
Contact: Mr Denis Horgan
Vice President and General Manager
T: + 1 604 946 3400
F: + 1 604 946 1388
E: horgan@westshore.com
W: www.westshore.com
Export: Yes
Location: Vancouver, British Columba, Canada
Ownership: Westshore Terminals Limited Partnership
Name of Port Authority: Vancouver Fraser Port Authority
Throughput Capacity: 33 million tpa
Total Storage: 315,000 sqm
Vessel Size limitation: Berth 1: 350m long, 22.9m draught, 260,000 dwt
Berth 2: 263m long, 20.8m draught, 180,000 dwt

MONTREAL
Federal Marine Terminals
Suite 3500
1000 de la Gauchetiere Street West
Montreal
Quebec
H3B 4W5
Canada
Contact: Mr Mike Kirkpatrick
Vice President Sales & Marketing
T: + 1 905 528 8741
F: + 1 905 528 9332
E: mkirkpatrick@fedmar.com
W: www.fmtcargo.com

MONTREAL
Logistec Corporation
360 St Jacques

Suite 15000
Montreal
Quebec
H2Y 1P5
Canada
Contact: Mr George di Sante
Vice-President, Market Development
T: + 1 514 844 9381
F: + 1 514 842 1262
E: gdisante@logistec.com
W: www.logistec.com
Import: Yes
Name of Port Authority: Various ports in eastern North America
Additional information: Logistec provides close to 60 years of experience in stevedoring and terminal operations at its facilities located in 26 ports.

Montreal
Strudes Inc
1440 Sainte Catherine St
Suite 905
Montreal
Quebec
Canada
Contact: Mr Henry Nowodworski
President
T: + 1 514 731 6951 x 123
F: + 1 514 737 4146
E: h.nowodworski@strudes.com
W: www.strudes.com

North Vancouver
Neptune Bulk Terminals (Canada) Ltd
PO Box 86367
North Vancouver
BC V71 4K6
Canada
Contact: Mr Tony Nardi
VP Marketing & Transportation
T: + 1 604 985 7461
F: + 1 604 985 8941
E: tnardi@nbtcl.bc.ca
W: www.neptuneterminals.com
Export: Yes
Location: West Coast of Canada, Southwest Coast of the Province of British Columbia in the Port of Vancouver
Ownership: Canpotex Bulk Terminals Limited (50.17%), Elk Valley Coal Partnership (46.35 %), Bunge Canada (3.48%)
Throughput Capacity: 9,000,000 MTPA Coal
Total Storage: 625,000 MT
50,000 metres squared
Vessel Size limitation: Max LOA 285 Metres
Draft 16.7 Metres
DWT 175,000 MT
Beam 45 metres
Can accept larger to 295 LOA, 50 Beam but not load to full DWT

Prince Rupert
Ridley Terminals Inc
2110 Ridley Island
PO Bag 8000
Prince Rupert
BC
V8J 4H3
Canada
Contact: Mr Dennis Blake
Senior Manager
T: + 1 250 624 9511
F: + 1 250 624 2389
E: dblake@rti.ca
W: www.rti.ca
Export: Yes
Location: North Coast of British Columbia, Canada
Ownership: Canadian Government
Name of Port Authority: Ridley Terminals Inc.
Throughput Capacity: 20 million tonnes per year
Total Storage: 2 million tonnes
Vessel Size limitation: LOA - 325 metres, Draught - 22 metres, DWT - 250,000
Additional information: Terminal has blending capabilities and is known for its fast loading rates and rapid turnaround of vessels.

Quebec City
St Lawrence Stevedoring
Div of Quebec Stevedoring Company Ltd
961 Boulevard Champlain
Quebec City
Quebec
G1K 4J9
Canada
Contact: Mr Geoff Lemont
Vice-President
T: + 1 418 522 4701
F: + 1 418 522 9770
E: glemont@qsl.com
W: www.qsl.com
Import: Yes
Export: Yes
Location: 1300 km from Atlantic Ocean along the St.Lawrence River
Ownership: Quebec Stevedoring Company Ltd
Name of Port Authority: Québec Port Authority
Total Storage: Unlimited open storage and warehouse space
Vessel Size limitation: 200,000 dwt. 15m of water at low tide.
Additional information: 1055 metres of berth space with a water depth alongside of 15.5 metres. Equipped with bridge, revolving and mobile cranes, as well as ship loaders, automated conveyors and stackers.

Sept-Iles
Sept-Îles Port Authority
1 Quai Mgr- Blanche
Sept-Iles
Quebec
G4R 5P3
Canada
Contact: Ms Patsy Keays
Director of Corporate Affairs
T: + 1 418 961 1235
F: + 1 418 962 4445
E: pkeays@portsi.com
W: www.portsi.com

Sept-Iles
Porlier Express Inc
315 Ave Otis
Sept-Iles
Quebec
G4R 1K9
Canada
Contact: Mr Denis Gagnon
General Manager
T: + 1 418 962 3073
F: + 1 418 962 3067
E: dgagnon@porlier.com
W: www.porlier.com
Location: Quebec, North Shore, St-Lawrence River
Name of Port Authority: Port of Sept-Îles, Port of ArcelorMittal in Port-Cartier
Throughput Capacity: 3.0 Mtons/year
Total Storage: Upon request
Vessel Size limitation: 14 meter draught, 16 meter draught
Additional information: We are a stevedore and bulk material handler. We provide multimodal tailor made solutions for any special cargo projects for the mining industry.

Thunder Bay
Thunder Bay Terminals Ltd
McKellar Island
PO Box 1800
Station 'F'
Thunder Bay
Ontario
P7C 5J7
Canada
Contact: Mr John Kepes
T: + 1 807 625 7800
F: + 1 807 623 5749
E: j_kepes@tbaytel.net
W: www.portauthority.thunder-bay.on.ca
Export: Yes
Location: At the head of the Great Lakes/St. Lawrence Seaway System
Name of Port Authority: Thunder Bay Port Authority
Throughput Capacity: 12 million tonnes.
Additional information: A 262 metre berth is available for ships. The site is serviced by road and CP Rail, with CN Rail access for all commodities.

Valleyfield
Valport Maritime Services Inc
Port de Valleyfield
Boul. Cadieux
Valleyfield
Quebec
J6T 6L4
Canada
Contact: Mr Frank Dunn
Partner
T: + 1 450 377 6686
F: + 1 450 337 2521
E: frank@valport.ca
W: www.valport.ca

Chile

Castilla
Tocopilla
c/o Servicios Integrales de Transitos y Transferencias
Arturo Prat No 1060
Castilla
Tocopilla
2098
Chile
Contact: Mr D Daniel Zarzosa
Captain Port Authority
T: + 56 55 813 279
E: cptocopilla@directemar.cl

Concepcion
Neuling Graneles SA
San Martin
553 Oficina
Concepcion
805
Chile
Contact: Mr Sergio Ulloa
General Manager
T: + 56 41 2254 205
E: sergio.ulloa@neulingsa.cl

Mejillones
Terminal Graneles del Norte S.A. ,
Calle Puerto Uno N°7100
Barrio Industrial
Mejillones
Antofagasta
Chile
Contact: Mr Boris Behrens S.
Terminal Manager
T: + 56 055 2883761
E: bbehrens@puertotgn.cl
W: www.puertotgn.cl
Import: Yes
Location: North of Chile, Pacific Coast
Ownership: See website www.puertotgn.cl
Name of Port Authority: Capitanía de Puerto de Mejillones
Throughput Capacity: 2,120tph
Total Storage: 15,000,000sqm
Vessel Size limitation: LOA: 250m, Beam: 32.5m, Draught: 14.4m, DWT: 95,000 total loaded

Tocopilla
Central Termoelectrica Tocopilla
Avda Dr Leonardo Guzman 0780
Tocopilla
Casilla 1999
Chile
Contact: Mr Andres Tornquist Fernandes
T: + 56 55 813279
F: + 56 55 813279

China

Dalian
Dalian Bay Coal Terminal
1 Gangwan Street
Zhongshan District
Dalian
Liaoning Province
116004
China
Contact: Mr Zang Feng Chiang
T: + 86 411 8263 7873
F: + 86 411 8280 7148
W: www.chinaports.com.cn/dalian.htm
Export: Yes

Dalian
Ganjingzi Coal Terminal
1 Gangwan Street
Zhongshan District
Dalian
116004
China
Contact: Mr Zang Feng Qiang
T: + 86 411 8263 7873
F: + 86 411 8280 7148

Fangcheng
Fangcheng Harbour Administration
Port Administration Office
22 Youyi Road
Fangcheng
Guangxi Province
China
Contact: Mr Ye Shixiang
Director General
T: + 86 770 289 8141
F: + 86 770 282 2663
W: www.infomarine.gr/china/fangcheng
Export: Yes
Location: Guangxi Province, China
Ownership: Fangcheng Harbour Administration
Throughput Capacity: 4 million tpa
Total Storage: 0.5 Mt
Vessel Size limitation: Max draught: 11.4m, Max LOA 180m, Max Beam 30m, 70,000dwt

Hong Kong
CLP Power HK Limited
Castle Peak Power Station
Tuen Mun
Hong Kong
China
Contact: Mr Alex Ho Sau Fan
Fuel & Material Handling Manager
T: + 852 2678 5636
F: + 852 2441 2719
E: alexho@clp.com.hk
W: www.clp.com.hk/Pages/home.aspx
Import: Yes
Location: Located 15 km from Victoria Harbour, at western edge of New Territories of Hong Kong
Ownership: Castle Peak Power Company Limited (CAPCO)
Name of Port Authority: Hong Kong Marine Department
Throughput Capacity: 8 million mt coal
Total Storage: 0.8 million mt coal (120,000 meters square)
Vessel Size limitation: LOA 280m (Trial 305m), Draught 16.8m, Beam 50m

Hong Kong
The Hongkong Electric Company Ltd
44 Kennedy Road
Hong Kong
China
Contact: Mr Francis C. Y. Cheng
General Manager (Generation)
T: + 852 2982 6201
F: + 852 2982 1654
E: mail@hkelectric.com
W: www.hkelectric.com
Import: Yes
Location: West of Lamma Island, Hong Kong
Ownership: The Hongkong Electric Company, Limited
Name of Port Authority: Lamma Power Station
Throughput Capacity: Maximum unloading rate of 3,000 tph
Total Storage: 63,000 sqm
Vessel Size limitation: Max LOA : 260m
Max Draught : 14.6m
Max dwt : 100,000 MT
Additional information: Two berths available for two coal vessels to be unloaded simultaneously.

Hualien
Hualien Harbour Bureau
No.66 Hai-Ann Road
Hualien
Taiwan
97059
China
Contact: Mr Chung-Hsiung Wang
Director
T: + 886 38 325 131
F: + 886 38 333 757
E: dttpd100@mail.hlhb.gov.tw
W: www.hlhb.gov.tw
Import: Yes
Location: East Coast of Taiwan
Name of Port Authority: Hualien Harbour Bureau

Qingdao
Port of Qingdao Coal Terminal
Gang Qing Road 6
Qingdao
Shadong Province
266011
China
Contact: Mr Chang Dechuan
President
T: + 86 532 298 2011
F: + 86 532 292 2878
E: kefu@qdport.com
W: www.qdport.com/en
Location: In the YellowRiver basin on the Western Pacific Rim
Ownership: Qingdao Port (Group) Co., Ltd
Name of Port Authority: Port of Qingdao
Vessel Size limitation: Max draft 13.5m.
Additional information: 3 Coal

Berths

SHANGHAI
Shanghai Port Luojing Bulk Terminals
8 Shi Gang Road
Baoshan District
Shanghai
China
Contact: Mr Shao Xue Kang
Managing Director
T: + 86 21 6323 1871
F: + 86 21 6323 0184

SHIJIAZHUANG
Hebei Port Group Co, Inc
35 Yuhuadong Road
Shijiazhuang
Heibei
050019
China
Contact: Mr Edward Wong
Chief, Public Relations
T: + 86 311 8780 0528/+ 86 335 309 4924
F: + 86 311 8790 0111
E: wangcong@portqhd.com
W: www.porthebei.com
Export: Yes
Location: East Coast of China
Ownership: State-owned
Name of Port Authority: Hebei Port and Shipping Management Authority
Throughput Capacity: Loading rate: 20,000 tpd per loader
Discharging rate: 650,000 tpd
Total Storage: 10 million ton capacity for Coal
Vessel Size limitation: 150,000 dwt
Additional information: We are the world's largest bulk cargo operator, according to World Port Development, UK.

ZHOUSHAN
Zhoushan Port Haitong Transhipment & Storage Co Ld
Loatangshan Port Area
Dinghai
Zhoushan
316043
China
Contact: Ms Li Yading
General Manager
T: + 86 580 801 0202
E: zsport@zhoushan.gov.cn
W: www.zsport.com.cn
Location: North-West of Zhoushan main island
Name of Port Authority: Port of Zhoushan
Throughput Capacity: 4 million tonnes per annum
Total Storage: 38,000 sqm open storage

COLOMBIA

BARRANQUILLA
Sociedad Portuaria Regional de Barranquilla SA
Carrera 38
Calla 1a Orilla del Rio
Terminal Maritimo y Fluvial de Barranquilla
Barranquilla
Colombia
Contact: Mr Pablo Riveira
Operations Manager
T: + 575 37 16200
F: + 575 37 16310
E: priveira@puertodebarranquilla.com
W: www.sprb.com.co
Export: Yes
Location: 22 km from the mouth of the Magdalena River, Colombia's largest inland waterway
Name of Port Authority: Port of Barranquilla
Throughput Capacity: 175,000 tonnes
Total Storage: 57,378 sqm enabling 180,000 tons capacity
Vessel Size limitation: 30,000 dwt
Additional information: Maritime Pier: 1,058 m length, minimum depth 30 feet

BARRANQUILLA
Compas SA
Via 40 Las Flores
Former Cementos Argos SA
Barranquilla
Atlantico
575
Colombia
Contact: Mr Uriel Duarte
Terminal Manager
T: + 575 3322 020 Ext 5400
F: + 575 3619 222
E: uduarte@compas.com.co
W: www.compas.com.co
Export: Yes
Location: Colombian North Coast
Ownership: First Colombia network terminals
Name of Port Authority: Private terminal
Throughput Capacity: 1.5 mtpa
Total Storage: 45,000 sqm
Vessel Size limitation: Max LOA 190m, 9.2m FW draught
Additional information: Fixed shiploader, direct loading system.

BARRANQUILLA
Port of Puerto Bolivar
International Colombia Resources Corporation
Apartado Aero 52499
Barranquilla
Colombia
Contact: Capt Steve C Catton
Port Superintendent
T: + 57 53 799545
F: + 57 53 502121
E: oprpbv@navescolombia.com
W: www.navescolombia.com/ports/pbolivar.htm

BARRANQUILLA
Sociedad Portuaria Del Norte
Calle 2
No. 41N - 28
Barrio Villanueva
Barranquilla
Atlantico
Colombia
Contact: Mr Carlos Rosado
General Manager
T: + 575 344 57 37
F: + 575 344 6814
E: crosado@spdelnorte.com
W: www.spdelnorte.com
Export: Yes
Location: Lat. 11º 15' North. Long. 74º 14' W
Name of Port Authority: Carbosan Ltda
Throughput Capacity: 3 million tons per year
Vessel Size limitation: 75,000 DWT. Max draft 50ft.

BARRANQUILLA
Tolu
c/o Tolcementos
Carrera 58 Nos 75-78
Barranquilla
Colombia
Contact: Mr Enrique Olarte
T: + 57 58 451 288
F: + 57 58 454 548
W: www.navescolombia.com/ports/tolu.htm

BOGOTA
Santa Marta Coal Terminal
Carbanandes
Transv 19 No 122-42
Bogota
Colombia
Contact: Mr Jairo Caicedo
T: + 57 1 248 7034
F: + 57 3 310 2544330
E: jairoca@cc-net.net
Export: Yes
Location: Atlantic coast of Colombia
Throughput Capacity: 3 million tons/year
Vessel Size limitation: 75,000 DWT

SANTA MARTA
Puerto Prodeco
Centro Comercial Prado Plaza
Cra 4 Cl26A Esq 3er
Santa Marta
Colombia
Contact: Mr Andrew Lyons
T: + 57 5 4 21 4400
F: + 57 5 4 21 4698

SANTA MARTA
Port of Santa Marta
Carrera 1 No. 10 A – 12
Santa Marta
Magdalena
AA655
Colombia
Contact: Mr Rodolfo Schmulson
Commercial Director
T: + 57 5 4217970 ext 103
F: + 57 5 4212161
E: comercial@spsm.com.co
W: www.spsm.com.co

SOCEIDAD PORTUARIA SANTA MARTA
CTS de Colombia
Crra. La. #10A-12
Muelle 6
Soceidad Portuaria Santa Marta
Colombia
Contact: Mr Scott Harcourt
Project Manager
T: + 57 54 211 754
F: + 57 54 233 369
E: scott.harcourt@coopertsmith.com

CROATIA

PLOCE
Port of Ploce Authority
Trg Kralju Tomoslava 21
Ploce
20340
Croatia
Contact: Captain Ivan Maric
Assistant to Executive Director
T: + 385 20 414 541
F: + 385 20 670 271
E: pfso-maric@port-authority-ploce.hr
W: www.port-authority-ploce.hr

RIJEKA
Terminal Bakar
LUKA Rijeka dd
Riva 1
Rijeka
51000
Croatia
Contact: Mr Alen Sikic
Terminal Manager
T: + 385 51 496 000 / 4969 40
F: + 385 51 332 203
E: info@lukarijeka.hr
W: www.lukarijeka.hr

CUBA

ANTILLA
Nicaro
c/o Agencia de Antilla
Avenida 28 de Enero No 65
Apartado No 33
Antilla
Prov de Holguin
Cuba
Port Manager
T: + 53 24 88248
F: + 53 24 88127

DENMARK

AABENRAA
Ensted Transit Harbour I/S
Flensborgvej 185
Aabenraa
Sydjylland
DK-6200
Denmark
Contact: Mr Chresten Nissen
Harbour Master
T: + 45 99 55 6689
F: + 45 74 62 0500
E: chrni@dongenergy.dk
W: www.dongenergy.dk
Import: Yes
Export: Yes
Location: Denmark, East coast of Jutland
Ownership: Dong Energy A/S; Vattenfall AB
Throughput Capacity: 2,000tph
Total Storage: 155,000sqm
Vessel Size limitation: LOA 350m, Draught 18m, DWT 170,000

AARHUS
Cargo Service A/S
Oceanvej 13
Aarhus
DK 8000
Denmark
Contact: Mr Lars Krabbe
Managing Director
T: + 45 8730 8000
F: + 45 8730 8101
E: info@cargoservice.dk
W: www.cargoservice.dk

KALUNDBORG
Asnaes Power Station
Asnaes Port Authority
Asnaesvej 16
Kalundborg
4400
Denmark
Contact: Mr Arne Krogh
Manager
T: + 45 59 55 0600
F: +45 9955 0699
E: ark@e2.dk
W: www.e2.dk

DOMINICAN REPUBLIC

SANTO DOMINGO
Maritima Dominicana SA
PO Box 1301
Carretera Sanchez Km 12 1/2
Santo Domingo
Dominican Republic
Contact: Mr Karsten Windeler
President
T: + 1 809 539 6000
F: + 1 809 539 7200
E: info@mardom.com
W: www.mardom.com
Import: Yes
Location: Itabo Terminal off the Port of Rio Haina, Dominican Republic, South Coast. Port of Barahona, Dominican Republic, South Coast. Port of Manzanillo, Dominican Republic, North Coast
Ownership: Itabo-EGE Itabo\Barahona EGE Haina
Name of Port Authority: Dominican Port Authority - Autoridad Portuaria Dominicana
Throughput Capacity: Combined 2,000,000 MT
Vessel Size limitation: Itabo max 800 FT LOA, Draught 13.3m, 43.64 FT SW. Barahona max 600 FT LOA, 26 FT SWAD. Manzanillo max LOA 600 FT, 30 FT SWAD

ESTONIA

TALLINN
Muuga (Novotallinskiy)
Maardu tee 57
Tallinn Eesti Vabarifk
Tallinn
EE 0030
Estonia
Contact: Mr Anatoliy Kanaev
Port Director
T: + 372 6 319 205
F: + 372 2 234 313
E: tk@tk.ee

TALLINN
AS Coal Terminal
4a, Joe Street
Tallinn
10151
Estonia
Contact: Ms Nadia Manzhos
Office Manager
T: + 372 626 36 52
F: + 372 630 36 53
E: info@coalterminal.ee
W: www.coalterminal.ee
Export: Yes
Location: Eastern part of the largest port in Estonia, Muuga; 210 km from the Russian border
Ownership: Private company
Name of Port Authority: Coal Terminal Operator AS
Throughput Capacity: 5 mln tpa
Total Storage: 350,000 tonnes, 48,000 sqm
Vessel Size limitation: 120,000 dwt

TALLINN
PETROMAKS SPEDIITORI AS
Nolva 9A
Tallinn
10416
Estonia
Contact: Mr Mitrofan Pototski
Ship Agent
T: + 372 6507 612
F: + 372 6507 601
E: pototski@petromaks.com
W: www.petromaks.com
Location: Eastern shore of Baltic Sea
Name of Port Authority: Tallinn port – Paljassaare South
Vessel Size limitation: Quay No. 31, length 100m, depth 4.5m;
Quay No. 32, length 266m, depth 6.5m;
Quay No. 33, length 176m, depth 8.7m
Additional information: One of the two terminals of Paljassaare port. Specializes in offering the stevedoring services on reloading of bulk and general cargoes from the vessels directly to the railcars and back

Viimsi Vald
AS Stivis
1 Koorma Street
Viimsi Vald
74115
Estonia
T: + 372 600 3872
F: + 372 600 3873
E: stivis@stivis.ee
W: www.stivis.ee
Location: Eastern shore of Baltic Sea
Name of Port Authority: Port of Tallinn
Total Storage: 540,000 sqm
Vessel Size limitation: Berth 5: 6.8m draft, 100m length
Berth 6: 9.5m draft, 160m length

France

Bassens
Sea-invest Bordeaux
Rue Richelieu 1
Bassens
33530
France
Contact: Mr Franck Humbert
T: + 33 557 77 49 51
F: + 33 557 77 82 11
E: franck.humbert@sea-invest-france.com
W: www.sea-invest.be
Location: South West coast of France
Name of Port Authority: Sea-invest Bordeaux
Throughput Capacity: 10,000 MT from 06.00 to 22.00 hrs
Total Storage: 50,000 sqm
Vessel Size limitation: Max LOA 250m, Max draft 10.50m

Dunkerque
Sea-Bulk Terminal
Route du Quai à Pondéreux Ouest
Loon-Plage
Dunkerque
59279
France
Contact: Mr Philippe Bertonèche
Terminal Manager
T: + 33 328 28 79 40
F: + 33 328 28 79 15
E: philippe.bertoneche@sea-invest-france.com
W: www.sea-invest.be
Import: Yes
Location: North of France
Ownership: Sea-invest
Name of Port Authority: Sea-Bulk Terminal
Throughput Capacity: 8.6 MT in 2005
Total Storage: 301,500 sqm
Vessel Size limitation: Max draft 21m. DWT 180,000

Le Havre
Le Havre Multi-Bulk Terminal
BP 1142
CIPHA Centre of Commerce Intl
quai George V
Le Havre
76063
France
Contact: Ms Miugendit
T: + 33 232 74 24 80
F: + 33 235 21 38 15
E: lechevallier@shgt.fr
W: www.cipha.com
Import: Yes
Export: Yes
Location: Southern bank of the Grand Canal du Havre
Ownership: CIPHA
Name of Port Authority: Port of Le Havre Authority
Throughput Capacity: 1.58 million tonnes (2004)

Port of Dunkerque.

Total Storage: 1 million tonnes
Vessel Size limitation: 180,000 dwt, Max length 300m
Additional information: Screening and crushing facilities

Le Havre
Coal Terminal
Port of Le Havre Authority
Terre Plein de la Barre
PO Box 1413
Le Havre
Cedex
76067
France
Contact: Mr Eric Esneu
Bulk Traffic Manager
T: + 33 2 32 74 76 05
F: + 33 2 32 74 76 09
E: eric.esneu@havre-port.fr
W: www.havre-port.net
Import: Yes
Export: Yes
Location: North of France
Name of Port Authority: Port of Le Havre Authority
Throughput Capacity: 3 MT per annum
Total Storage: 700,000 tonnes with a storage gantry crane 30t
Vessel Size limitation: 170,000 dwt, Max draught 17.5m
Additional information: 2 gantry quayside cranes of 30t, 30,000 t/day

Marseille
Port Autonome de Marseille/Fos
23 Place de la Joliette
Hotel de la Direction du Port
Marseille
Cedex 02
13226
France
Contact: Mr Vincent Mutel
Public Relations
T: + 33 0491 395320
F: + 33 0491 394024
E: gpmm@marseille-port.fr
W: www.marseille-port.fr

Martigues
Carfos
13, Boulevard Maritime
Martigues
13500
France
Contact: Mr Xavier Hauterat
T: + 33 424 06 71 82
F: + 33 424 06 34 94
E: xavier.hauterat@sea-invest-france.com
W: www.sea-invest.be
Location: Fos-sur-Mer, France
Name of Port Authority: Carfos
Total Storage: 250,000 sqm
Vessel Size limitation: Cape size - Max draft 17m, Max DWT 150,000 MT
Additional information: 1,400,000 MT bauxite
150,000 MT clinker

Montoir-de-Bretagne
Sea-invest Montoir
Rue de la Goélette - BP 36
Montoir-de-Bretagne
44550
France
Contact: Mr Pascal Vialard
T: + 33 240 17 31 71
F: + 33 240 17 31 79
E: pascal.vialard@sea-invest-france.com
W: www.sea-invest.be
Location: South East coast of French Brittany
Name of Port Authority: Sea-invest Montoir
Throughput Capacity: 3,000,000 Mtpa
Total Storage: 160,000 sqm
Vessel Size limitation: Max LOA 290m, Max beam 45m, Max draught 15.5m
Additional information: Due to restriction for Capesize vessel, please contact us prior fixing

Nantes
Port Atlantique-Montoir Agri-Bulk Terminal
18 quai Ernest Renaud
BP 18609
Nantes
Cedex 4
44186
France
Contact: Mr Pascal Freneau
Communication Manager
T: + 33 2 40 44 20 06
F: + 33 2 40 44 21 81
E: p.freneau@nantes.port.fr
W: www.nantes.port.fr

Nantes
Montoir Coal Terminal
Port Atlantique Nantes Saint-Nazaire
18 quai Ernest Renaud
BP 18609
Nantes
44186
France
Contact: Mr Pascal Freneau
Marketing & Advertising Manager
T: + 33 2 40 44 2113
F: + 33 2 40 44 20 01
E: p.freneau@nantes.port.fr
W: www.nantes.port.fr
Import: Yes
Location: Atlantic coast of France. It stretchs 60 kms along the Loire estuary.
Name of Port Authority: Port Atlantique Nantes Saint-Nazaire
Vessel Size limitation: Max LOA 280m, Max draught 16m, Max DWT 165,000

Port De Montoir
Sea-invest France (Stocaloire)
Terminal Agro Alimentaire
Port De Montoir
44550
France
Contact: Mr Florent Massart
T: + 33 232108516
F: + 331 55 66 81 50
E: trampset@sea-invest-france.com

Rouen
Sogema
Boulevard Maritime - BP 3
Grand-Couronne Terminal
Rouen
76530
France
Contact: Mr Robert Goudon
Director
T: + 33 232 11 51 01
F: + 33 232 11 51 25
E: r.goudon@sea-invest.fr
W: www.sea-invest.be
Import: Yes
Location: Rouen, West France on Seine river
Ownership: Sogema
Name of Port Authority: Port of Rouen
Throughput Capacity: 700.000 MT
Total Storage: 100,000 sqm
Vessel Size limitation: Max LOA 280m, DWT 70,000 MT, Max draft 11m
Additional information: Discharge rate : 20,000 MT/day

Sète
Sea-invest Sète
Z.I. portuaire Darse 2
B.P. 68
Sète
Cedex 34201
France
Contact: Mr Pierre de Boutray
T: + 33 467 51 63 10
F: + 33 467 48 30 85
E: p.boutray@sea-invest-france.com
W: www.sea-invest.be
Location: South east of France on Mediterranean Sea
Name of Port Authority: Port of Sète
Throughput Capacity: 800,000 MT/year
Total Storage: 30,000 sqm
Vessel Size limitation: Max draft 13.50m, Max LOA 225m
Additional information: Project to double storage capacit

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mail@duisport.com
www.duisport.com

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Germany

Bremen
Weserport GmbH
Huettenstrasse 20
Bremen
28237
Germany
Contact: Mr Michael Appelhans
Managing Director
T: + 49 421 643 0182
F: + 49 421 643 0164
E: mappelhans@weserport.de
W: www.weserport.de

Bremerhaven
bremenports GmbH & Co. KG
Am Strom 2
Bremerhaven
27570
Germany
Contact: Mr Ronald Schwarze
Marketing
T: + 49 421 30901 612
F: + 49 421 30901 624
E: ronald.schwarze@bremenports.de
W: www.bremenports.de

Duisburg
Rhenus AG & Co. KG
August-Hirsch-Strasse 3
Duisburg
North Rhine-Westphalia
47119
Germany
Contact: Mr Stefan Schwarzkopf
T: + 49 203 8009 317
F: + 49 203 8009 263
E: stefan.schwarzkopf@de.rhenus.com
W: www.rhenus.com

Emden
EVAG Emder Verkehrs und Automotive
Gesellschaft mbH
Schweckendieckplatz 1
Emden
Lower Saxony
26721
Germany
Contact: Mr Torsten Meinke
Area Manager
T: + 49 4921 895 150
F: + 49 4921 895 5150
E: torsten.meinke@evag.com
W: www.evag.com

Hamburg
HANSAPORT
Hafenbetriebsgesellschaft mbH
Am Sandauhafen 20
Hamburg 21129
Germany
Contact: Mr Erhard Meller
T: + 49 40 74003 201
F: + 49 40 74003 222
E: info@hansaport.de
W: www.hansaport.de
Import: Yes
Location: Northern Germany
Ownership: 51% belongs to Salzgitter AG, Salzgitter and 49% to Hamburger Hafen- und Lagerhaus-AG, Hamburg
Name of Port Authority: HANSAPORT Hafenbetriebsges mbH
Throughput Capacity: up to 15 mio tpa
Total Storage: 400,000 sqm
Vessel Size limitation: max. draft 15,1 m at high tide, 760m long berth

Hamburg
Rhenus Midgard Hamburg GmbH
2. Hafenstr. 4
Hamburg
21079
Germany
Contact: Mr Helge Behrend
T: + 49 40 766 003 27
F: + 49 40 766 003 29
E: helge.behrend@de.rhenus.com
W: www.rhenus.com
Location: Germany

Hamburg
H J M (H Jürgen Müller GmbH)
1 Hafenstrasse 12-14
Hamburg
21079
Germany
T: + 49 40 725 86 90
F: + 49 40 725 86 929
E: info@hjm-hamburg.de
W: www.hjm-hamburg.de

Leer
Rhenus AG & Co. KG
Hafenstrasse 14
Leer
26789
Germany
Contact: Mr Heiner Voskuhl
T: + 49 491 92512 29
F: + 49 491 92512 66
E: heiner.voskuhl@de.rhenus.com
W: www.rhenus.com
Location: Germany

Nordenham
Rhenus Midgard GmbH & Co. KG
Midgardstr. 50
Nordenham
26954
Germany
Contact: Mr Norbert Schrewe
T: + 49 4731 81 222
F: + 49 4731 81 228
E: norbert.schrewe@de.rhenus.com
W: www.rhenus.com
Import: Yes
Export: Yes
Location: Nordenham, on the mouth of the River Weser (Germany)
Ownership: Rhenus Midgard GmbH & Co. KG
Name of Port Authority: Rhenus Midgard GmbH & Co. KG
Throughput Capacity: 2.5 Million tons/a coal
Total Storage: 500,000 tons coal - up to 120,000sqm
Vessel Size limitation: Fully laden panamax and/or partly laden cape size
special permission for more than 270 m loa
arrival draught up to 13,10m (43`) fw
Additional information: Well connected to the hinterland by barge and rail;
The Rhenus Group operates barges and rail and offers the whole logistics to final destinations.

Nuremberg
Hafen Nürnberg-Roth GmbH
Rotterdamer Str 2
Nuremberg
Bavaria
90451
Germany
Contact: Mr Harald Leupold
Managing Director
T: + 49 911 6429 418
F: + 49 911 6429 410
E: h.leupold@gvz-hafen.com
W: www.gvz-hafen.com

Rostock
Bulk Terminal Rostock GmbH
Liebherrstraße 3
Rostock
D-18147
Germany
Contact: Mr Günter Fett
Managing Director
T: + 49 381 6662 120
F: + 49 381 6662 575
E: guenter.fett@portofrostock.de
W: www.portofrostock.de
Import: Yes
Location: German Baltic coast.
Ownership: SHRU Holding GmbH & Co. KG
Name of Port Authority: Hafen-Entwicklungsgesellschaft Rostock mbH
Throughput Capacity: 3.0 Million tonnes
Total Storage: 240,000 tonnes
Vessel Size limitation: Max 100,000 dwt
Additional information: 20,000 t of coal can be handled daily.

Wilhelmshaven
Rhenus Midgard Wilhelmshaven GmbH & Co. KG
Lüneburger Str. 6
Wilhelmshaven
Lower Saxony
26384
Germany
Contact: Mr Jürgen Kleemeyer
Coal Logistics Projects / Marketing & Sales
T: + 49 4421 936 135
F: + 49 4421 936 104
E: juergen.kleemeyer@de.rhenus.com
W: www.rhenus.com
Import: Yes
Location: Coalterminal Niedersachsenbrücke in Wilhemshaven on the Jade Bay (Germany).
Ownership: Rhenus Midgard Wilhelmshaven GmbH & Co KG
Name of Port Authority: Niedersachsen Ports, NL Wilhelmshaven
Throughput Capacity: 2.5 Million tpa coal (under construction for up to 10 Million tpa)
Total Storage: 900,000 tons coal (160.000 sqm) - extension up to 3,000,000 tons
Vessel Size limitation: Fully laden cape size up to 250.000 t; without special permission loa up to 290m; beam up to 45m, draught up to 18.50m sw
Additional information: Under construction for a discharging rate > 50.000 tpd and storage capacity of abt. 3 Million tons of coal.

Ghana

Takoradi
Takoradi Port Authority
Ghana Ports Authority
PO Box 708
Takoradi
Ghana
Contact: Mr J E Quanash
Port Manager
T: + 233 31 24073
F: + 233 31 22814
E: takoradi@ghanaports.net
W: www.ghanaports.gov.gh

Greece

Attica
Milaki Port-East Mediterranean Coal Terminal
49-51 Sof Venizelou Str
Lycovrissi
Attica
14123
Greece
Contact: Mr Andrew Healey
General Manager
T: + 30 1 2898 111
F: + 30 1 2840 021

Thessaloniki
Thessaloniki Port Authority SA
1st Pier
Port of Thessaloniki
Thessaloniki
Central Macedonia 54110
Greece
Contact: Mr Stylianos Aggeloudis
Chairman & CEO
T: + 30 2310 593 105
F: + 30 2310 510 500
E: secretariat@thpa.gr
W: www.thpa.gr
Import: Yes
Export: Yes
Location: Northern Greece
Ownership: 75% of the shares belong to the Greek state, 25% to private investors.
Name of Port Authority: Thessaloniki Port Authority SA
Throughput Capacity: 15 million tonnes/ 4 million dry bulk cargo
Total Storage: 600,000 sqm
Vessel Size limitation: Max LOA: 300 m, Max draught : 12m

Additional information: The Port of Thessaloniki is the major gateway port for the Southern Balkans. The port facilitates all types of cargoes. There is a specialization in handling dry bulk cargoes.

India

Adyar
Subarnarekha Port Private Ltd

New No.84, Old No.50
"Dakshin", 1st Ave, Indranagarr
Adyar
Chennai
600020
India
Contact: Mr Ramani Ramaswamy
Joint Managing Director
T: + 914424431900
F: + 914442607368 - Ext 18
E: subarnarekha.port@gmail.com
W: www.creativeports.com

Chennai
Ennore Port Limited

No.23, First Floor,
P.T. Lee Chengalvaraya Naicker Maaligai
Rajaji Salai,
Chennai
600 001
India
Contact: Mr Shri S. Velumani
Chairman
T: + 91 44 25251666 / 1
F: + 91 44 25251665
E: svm@epl.gov.in
W: www.ennoreport.gov.in

Haldia
TM International Logistics Ltd.

Finger Jetty Road
Chiranjibpur
Haldia
East Midnapore(WB)
721604
India
Contact: Mr K.L Bhowmick
Chief of Port Operations
T: + 91 3224 252150
E: kb_hal@tmilltd.com
W: http://www.tmilltd.com/

Hyderabad
Gangavaram Port Limited

Hansa Crest, 1st Floor
Plot No.62, Road No.1
Jubilee Hills
Hyderabad
Andhra Pradesh
500 033
India
Contact: Mr Sanjay Gupta
Director - Commercial
T: + 91 40 4434 9999
F: + 91 40 4434 9990
E: sgupta@gangavaram.com
W: www.gangavaram.com
Import: Yes
Location: 6 Nautical Miles South West of Visakhapatnam Port, on East Coast of India
Ownership: Consortium Led by Mr. DVS Raju
Name of Port Authority: Gangavaram Port Limited
Throughput Capacity: 30 MMT in Phase -I (with 5 berths: 1 Coal Berth and 1 Iron Ore Berth with along side depth of 20 m, 3 General Cargo Berth with along side depth of upto 15.5 m), Planned Capacity of 200 MMT
Total Storage: Total backup area 2800 acres (11 331 197 sqm) Stackyard area in Phase -I for Coal = 1,55,800 sqm, for Iron Ore = 64,000 sqm , Covered Storage =48,000 sqm
Vessel Size limitation: For Coal Berth and Iron Ore Berth - Max LOA - 280m , Along Side depth 20m , 200,000dwt
Additional information: GPL has the deepest , most advanced Coal Terminal in India. It has installed, completely mechanized Material Handling System and has ample backup area for storage of Coal and other cargoes.

Karnataka State
New Mangalore Port Trust

Panamburg
Karnataka State
Mangalore
575 010
India
Contact: Mr Shri P. Tamilvanan
Chairman
T: + 91 824 240 7300
F: + 91 824 2408390
E: nmptchairman@sify.com
W: www.newmangalore-port.com

Kolkata
Riverine Group

5 A , N . C. DUTTA SARANI
3rd Floor
Kolkata
West Bengal
700001
India
Contact: Mr Shrey Tayal
Director
T: + 91 33 4005 4949
F: + 91 33 4005 4909
E: shreytayal@riverinegroup.co.in
W: www.riverine-group.com

Mumbai
J.M. Baxi & Co

Sapt Building
2nd Floor
18 J.N. Heredia Marg
Ballard Estate
Mumbai
400 001
India
Contact: Mr John C. Alexander
Senior VP Business Development
T: + 91 22 2270 3779 / 82
F: + 91 22 2210 3629
E: jca@jmbaxi.com
W: www.jmbaxi.com

Mumbai
Seacrest Marine Services Pvt. Ltd.

201, Remi Biz Court A Wing
Plot - 9, Shah Industrial Estate,
Veera Desai Road,
Andheri (w)
Mumbai
400053
India
Contact: Captain Sanjay Kumar
T: + 91 22 27 566 813
F: + 91 22 27 566 815
E: operations@crestsea.com
W: www.crestsea.net

Indonesia

Bandar Lampung
PT. Bukit Asam (Persero) Tbk

Jl. Soekarno Hatta Km. 15
Tarahan
Bandar Lampung
DKI Jakarta
Indonesia
Contact: Mr Ansyori Akhmad
Tarahan Coal Terminal General Manager
T: + 62 721 31545/31686
F: + 62 721 31577
E: aakhmad@bukitasam.co.id
W: www.ptba.co.id
Export: Yes
Location: South West of Indonesia on the South Coast 05-31-40 South Latitude and 105-20-40 East Longitude
Ownership: The composition of shareholders by ownership on December 31, 2009 are 65,02% owned by the state and 34,98% owned by Public.
Name of Port Authority: Tarahan Coal Terminal
Throughput Capacity: 12 million tpa
Total Storage: 560,000t
Vessel Size limitation: 80,000dwt
Additional information: PT Bukit Asam (Persero) Tbk. (PTBA) markets 5(five) different coal types – BA 55, BA 59, BA 63, BA 67, dan BA 70.
Export coal to China, Japan, Malaysia, Taiwan, Vietnam, Thailand and several countries in Europe.

Banjarmasin
Port of Banjarmasin

PT (Persero) Pelabuhan Indonesia III Banjarmasin
Jl Barito Hilir No 6
Banjarmasin
70117
Indonesia
Contact: Mr Anton Tri Agung
Shipping Superintendent
T: + 62 51 153 670
F: + 62 51 152 552
E: inaport3@pp3.co.id
W: www.pp3.co.id

Jakarta
Balikpapan Coal Export Terminal

PT Dermaga Perkasapratama
The Landmark Centre Tower B
29th Floor
Jl Jend Sudirman No1
Jakarta
14310
Indonesia
Contact: Mr Edward Djumali
T: + 62 21 570 155
F: + 62 21 570 145
Export: Yes
Location: Balikpapan Coal Export Terminal
Ownership: PT Dermaga Perkasapratama
Throughput Capacity: 9 million tpa
Total Storage: 0.52Mt
Vessel Size limitation: Max draught 13.3m, Max LOA 230m, Max beam 43m, 80,000dwt

Jakarta
Pulau Laut

World Trade Centre 7 Floor
JL Send
Surdiman Kav 31
Jakarta
12920
Indonesia
Contact: Mr B T Kuan
General Manager
T: + 62 21 522 9250
F: + 52 21 522 4341

Jakarta
P T Indominco Mandiri

Ventura Building
8th Floor
J1 RA Kartini No 26 Cilandak
Jakarta
12430
Indonesia
Contact: Mr Suriya
President Director
T: + 62 021 750 8376
F: + 62 021 750 8380
E: dharmasubur@cbn.net.id

Jakarta
North Pulau Laut Coal Terminal

PT Arutmin Indonesia
Mid Plaza 2, 9th Floor
Jalan Jenderal Sudirman Kav. 10-11
Jakarta
10220
Indonesia
T: + 62 21 5720012
F: + 62 21 5741689
E: marketing@arutmin.com
W: www.arutmin.com
Export: Yes
Location: Kalimantan, Indonesia
Ownership: PT Arutmin Indonesia
Throughput Capacity: 11 mt yearly
Additional information: Designed to receive 4 barges simultaneously.

Jakarta
PT Indonesia Bulk Terminal

Jl. HR Rasuna Said
Blok X-5, Kav. 1-2
Menara Karya, 23rd Floor
Jakarta
12950
Indonesia
Contact: Mr Bram Surjadi
Marketing
T: + 62 21 5211 265 / + 62 21 25533000 ext 3244
F: + 62 21 522 4341
E: marketing@ibt.co.id
W: www.ptibt.com

Jakarta
PT. Terminal Batubara Indah

World Trade Centre, 07th floor
Jl. Jend Sudirman Kav. 29-31
Jakarta
12920
Indonesia
Contact: Mrs Lilly
T: + 62 21 5712579
F: + 62 21 571 2597
W: www.pttbi.co.id

Jakarta
PT MIANG BESAR COAL TERMINAL

Ventura Building
5th Floor Suite 503
Jl. R. A. Kartini No. 26
Cilandak Barat
Jakarta
12430
Indonesia
Contact: Mr Jim Dracopoulos
Commercial and Marketing
T: + 62 21 765 2544
F: + 62 21 765 2627
W: http://www.mbct.co.id

Kotabaru
PT Indonesia Bulk Terminal

Pulau Laut Coal Terminal
PO Box. 118 Kalsel
Kotabaru
Kalimantan Selatan
72111
Indonesia
Contact: Mr Wan Yazid
Terminal Manager
T: + 62 5183 8800
F: + 62 5183 8822
W: www.ptibt.com
Export: Yes
Location: Southern tip of Pulau Laut Island, South Kalimantan, Indonesia
Ownership: PT Indonesia Bulk Terminal
Throughput Capacity: 12mtpa, 3,000tph barge discharge
Total Storage: 1.6 million tonnes. 800,000t stockpile capacity
Vessel Size limitation: 80,000dwt, max LOA 230m, max Beam 36m, max draught 14.5m

Lampung
Pelabuhan Panjang

Dit Jen Perhubungan Laut
Pelabuhan Panjang
Lampung
Indonesia
Contact: Mr Prayitno
Port Manager
T: + 62 721 31098
F: + 62 721 33237

Padang
Teluk Bayur Coal Terminal

PT Tambang Batubara Bukit Asam (PTBA)
Jl Tanjung Priok
No 01 Teluk Bayur
Padang
West Sumatra
Indonesia
Contact: Mr Muztav Sjab
Taluk Bayur Coal Terminal Manager
T: + 62 734 4510 96
F: + 62 21 525 4002
E: corsec@bukitasam.co.id
W: www.ptba.co.id
Location: Padang, West Sumatra
Throughput Capacity: 2.5M tpa
Total Storage: 90,000t
Vessel Size limitation: 40,000dwt

Palembang
Kertapati Coal Terminal

PT Tambang Batubara Bukit Asam (PTBA)
Jl Stasiun Kerata Api
Palembang
South Sumatra
Indonesia
Contact: Mr Dadan Ruswandana
Coal Terminal Manager
T: + 62 711 512 617
F: + 62 711 511 388
W: www.bukitasam.co.id

Ireland

Cork
Port of Cork Company

Custom House Street
Cork
Munster
Ireland
Contact: Mrs Sara Mackeown
Marketing Executive
T: + 353 21 427 3125
F: + 353 21 427 6484
E: smackeown@portofcork.ie
W: www.portofcork.ie
Import: Yes
Location: South Coast of Ireland
Ownership: Private Commercial Company with Commercial Entity.
Name of Port Authority: Port of Cork Company
Total Storage: See our webpage www.portofcork.ie
Vessel Size limitation: See our webpage www.portofcork.ie

Dundalk
Dundalk Harbour Commissioners
Harbour Office
40 Quay Street
Dundalk
Co Louth
Ireland
Contact: Captain Frank Allen
Harbour Master
T: + 353 42 9334096
F: + 353 42 35481
E: dundalkport@eircon.net

Turvey
Moneypoint
Electricity Supply Board
Moneypoint Generating Station
Unit 19, Turvey Business Centre
Turvey
County Dublin
Ireland
Contact: Mr Paul Dunne
T: + 353 1 8900466
F: + 353 1 8900575

Israel

Ashkelon
The National Coal Supply Corporation (N.C.S.C)
Ashkelon Coal Terminal
Ashkelon
Israel
T: + 972 3625 7000
F: + 972 3625 7001
E: ncsc@ncsc.co.il
W: www.ncsc.co.il
Import: Yes
Location: South part of Israel's Mediterranean coast
Ownership: Israel Electric Co. (I.E.C)
Name of Port Authority: Eilat Ashkelon Pipeline Co (E.A.P.C)
Throughput Capacity: About 6 million MT per annum
Total Storage: About 900,000 MT.
Vessel Size limitation: Max LOA: 312m, Max Beam: 50m, Max Draught: 18m,
No DWT/Displ restrictions. Max vertical distance from waterline until the Breastlines panamas is 15m.
Additional information: No wires are allowed for head/Sternlines (total 6). For Breast/Springlines (total 12): if mooring lines are steel-wires they must have long nylon-tails of at least 80m long each.

Hadera
Port of Hadera
PO Box 314
Hadera
38102
Israel
Contact: Mr Yoram Nachshol
Managing Director
T: + 972 4 622 5577
F: + 972 4 634 3034

Hadera
The National Coal Supply Corporation ltd (NCSC)
Hadera Coal Terminal
Hadera
Israel
T: + 972 3625 7000
F: + 972 3625 7001
E: ncsc@ncsc.co.il
W: www.ncsc.co.il
Import: Yes
Location: Mid/north part of Israel's Mediterranean coast
Ownership: Israel Electric Co. (I.E.C)
Name of Port Authority: Ministry of Transport
Throughput Capacity: About 6.5 million MT per annum
Total Storage: About 950,000 MT.
Vessel Size limitation: Max LOA: 312m, Max Beam: 48m, Max Draught: 18m sw
Maximum Deadweight on arrival Hadera is 200,000 MT.
Displacement: No restrictions.
Max vertical distance from waterline until the Brestlines panamas is 14.7m.
Additional information: No wires are allowed for Headlines, Sternlines and Breastlines (total 12). Springlines (total 4): If Springlines are still wires, they must have long nylon-tails of at least 80m long each.

Italy

Ancona
Ancona Coal Terminal
Ancona
Italy
Contact: Mr Paolo Galli
T: + 39 071 2071664
F: + 39 071 2077736
E: operativo@anconamerci.it

Gaeta & Civitavecchia
Intergroup S.r.l.
Lungomare Caboto 110
Gaeta & Civitavecchia
Rome area 04024
Italy
Contact: Mr Giovanni Migliaccio
General Manager
T: + 39 771 310 077
F: + 39 771 472 114
E: info@intergroup.it
W: www.intergroup.it
Import: Yes
Export: Yes
Location: Central Italy
Ownership: Family-owned company
Name of Port Authority: Port of Rome and Lazio
Throughput Capacity: 9,000 tpd discharge
Total Storage: Up to 110,000 tonnes of coal
Vessel Size limitation: Gaeta: current draught 10m (increasing to 13m from July 2011)
Civitavecchia: 15m draught.
Additional information: In the warehouse, 5m-high cement walls protect the product and allow creation of different zones dedicated to single clients. Automated dust-control system and filtering/recycling system for water are installed.

Genova
Terminal Rinfuse Genova SpA
Palazzina Uffici
Calata Rubattino
Genova
16126
Italy
T: + 39 010 248 8620
E: vittorio.barzilai@terminalrinfuseitalia.it
W: www.porto.genova.it
Import: Yes
Location: Mediterranean Sea
Ownership: The Genoa Port Authority
Vessel Size limitation: Max draft 9/11.5m

Piombino
TOP - Terminal Offshore Piombino
(subsidiary of Coeclerici SpA)
Uff. Circondariale Marittimo
P. Le Premuda 19
Piombino
Livorno
57025
Italy
Contact: Mr Giordano Scotto d'Aniello
Head of Commercial Department (logistics division)
T: + 39 02 624 69451
F: + 39 02 624 69444
E: newprojects@coeclerici.com
W: www.coeclerici.com
Import: Yes
Location: North West Coast Italy
Ownership: TOP - Terminal Offshore Piombino
Name of Port Authority: Piombino Port Authority
Throughput Capacity: 500,000 tpa
Total Storage: N/A
Vessel Size limitation: Max beam 42, Max Airdraught 15
Additional information: The self propelled Floating Transfer Station Bulk Irony is utilized since 2003 by Lucchini Steel Mill to overcome Piombino's draught restrictions . Bulk Irony was designed for lighterage part of the raw materials shipment (both coal and iron ore) offshore

Savona
Port Authority of Savona
Via Gramsci, 14
Savona
17100
Italy
Contact: Ms Renato Pastorino
T: + 39 019 85 541
F: + 39 019 827399
E: authority@porto.sv.it
W: www.porto.sv.it

Vado Ligure (SV)
Terminal Rinfuse Vado
Via Montegrappa 1
Vado Ligure (SV)
17047
Italy
Contact: Mr Vittorio Barzilai
Marketing and Sales
T: + 39 019 216 06253
F: + 39 019 216 06299
E: vittorio.barzilai@terminalrinfuseitalia.it

Japan

Chiyoda-ku
Idemitsu Bulk Terminal-Chiba
c/ Industrial Energy Dpt. IIdemitsu Kosan
1-1 Marunouchi 3-chome
Chiyoda-ku
Tokyo
100-8321
Japan
Contact: Mr T Nio
T: + 81 3 3746 8721
F: + 81 3 3746 3645
W: www.idemitsu.co.jp

Hiroshima
Port of Takehara No 1P/S
3035-13 Nagahama
Tadami-cho
Takehara-shi
Hiroshima
729-23
Japan
Contact: Captain Yamada
T: + 81 846 27 0211
F: + 81 846 24 1506

Hokkaido
Tomato Coal Center
622 Aza-Hamaatsuma
Atsuma-cho
Hokkaido
059-17
Japan
Contact: Mr Masatoshi Machida
T: + 81 1452 83121
F: + 81 1452 83123

Kitakyushu City
Yawata Hibikinada
Port/Harbour Bureau of Kitakushu City
2-7 Nishikaigan
1-Chrome
moji-ku
Kitakyushu City
801
Japan
T: + 81 93 331 1331
F: + 81 93 321 5915

Minatoku
Niihama Coal Centre
Sumitomo Coal Mining
204, 3-Chrome
Nishi-Shimbashi
Minatoku
Tokyo
Japan
Contact: Mr Yoshitoyo Nakayama
Deputy General Manager
T: + 81 3 5404 0410
F: + 81 3 5404 0447

Mubanti
Shukuzu Coal Centre
Koowan-Bu
Hokkaido Muroran-shi
Kaigan-Choo
1-Chrome
Mubanti
Japan
Contact: Mr T Nakamura
Manager
T: + 81 143 244466
F: + 81 143 240011

Toyama City
Toyama-Shinko Public Berths
Fushiki Kairiku Unso
Toyamashinko Branch
4-2 Nagonoe
Shinminato-shi
Toyama City
Japan
T: + 81 766 82 1118
F: + 81 766 84 3335

Ube City
Port of Ube, Okinoyama Coal Terminal
12-32 Nishihon-machi
1-Chrome
Ube City
Yamaguchi Pref
Japan
Contact: Mr Masayoshi Wanishi
General Manager
T: + 81 335 31 5971
F: + 81 838 31 5885

Wakayama City
Smikin Transport Service
1850 Minato
Wakayama City
Hokkaido Pref
Japan
Contact: Mr Tutomu Oonishi
T: + 81 734 51 5168
F: + 81 734 51 5150

Korea

Gwang Yang-City
Posco Terminal Co., Ltd
Gwang Yang CTS Yard, 861
Geumbo-dong
Gwang Yang-City
Jeonam
Korea
Contact: Mr Woo Sun-Moon
CEO
T: + 82 61 793 7412
F: + 82 61 790 6386
W: www.poscoterminal.co.kr

Latvia

Riga
Riga Fertilizer Terminal LLC
15 k-1 Eksporta Street
Riga
LV-1045
Latvia
Contact: Ms Kristine Vizule
Marketing and PR Manager
T: + 371 673 29816
F: + 371 673 26501
E: Kristine.vizule@rto.lv
W: www.rto.lv
Import: Yes
Export: Yes
Location: Riga, Latvia
Ownership: RIGA COMMERCIAL PORT, LLC
Name of Port Authority: Free Port of Riga
Throughput Capacity: 10 million tonnes per year
Total Storage: 50,000sqm
Vessel Size limitation: 110,000dwt, top-up draught 15m, LOA – 260m
Additional information: Freight forwarding services and port logistics for dry-bulk cargo including value-added services.

Ventspils
JSC BALTIC COAL TERMINAL
39B Dzintaru Street
Ventspils
LV-3602
Latvia
Contact: Mr Ilya Sokolov
Member of the Board
T: + 371 636 34 000
F: + 371 636 34 001
E: info@balticcoal.com
W: www.balticcoal.com
Export: Yes
Location: Latvia , Ventspils, The Baltic Sea
Name of Port Authority: Ventspils Free Port
Throughput Capacity: 6 mln. coal per year (start at 2008)
Total Storage: 220 000 tonnes
Vessel Size limitation: 120,000dwt
Max draught 15m
Additional information: Enclosed storage for coal for all clients,.
Service of sorting, crushing and magnetic cleaning of coal.

Ventspils
AS Ventspils Tirdzniecibas Osta
22 Dzintaru Street
Ventspils
LV3602
Latvia
Contact: Ms Julianna Svedenko
Secretary

T: +371 63668706
F: + 371 36 68870
E: Julianna.Svedenko@vto.lv
W: hhttp://www.vto.lv

Luxembourg

Luxembourg
Euroports Holdings S.a.r.l.
4th floor
6, rue Jean Monnet
Luxembourg
Luxembourg
L-2180
Luxembourg
Contact: Mr Richard Jennings
Chief Commercial Officer
T: + 352 621 555 866
F: + 352 26 75 41 05
E: Richard.jennings@euroports.com
W: www.euroports.com
Import: Yes
Export: Yes
Location: Pietarsaari Finland, Rostock Germany, Liege Belgium, Tarragona Spain, Vado Italy, Genoa Italy, Venice Italy (these are the facilities where we handle coal – we have other port locations in Rauma, Antwerp, Le Havre, Changshu)
Ownership: Individual terminals are all owned by Euroports
Name of Port Authority: Various
Throughput Capacity: 15 mill tonnes pa (of coal)
Total Storage: 1.2 mill sq.m (dedicated to coal across our portfolio from a total of nearly 5 mill sq.m)
Vessel Size limitation: Varies at each port – Handy in Finland to Cape in Spain
Additional information: EUROPORTS is Europe's most diversified port operator. Operating with 16 terminals in 7 countries EUROPORTS is one of the largest port operators in Continental Europe.

Malaysia

Kuantan
Kuantan Port Consortium Sdn Bhd
Wisma
PO Box 199
Tanjung Gelang
Kuantan
Pahang
25720
Malaysia
Contact: Mr Haji Khasbullah Bin A. Kadir
Chief Operating Officer
T: + 60 9 586 3888
F: + 60 9 583 9393
E: irpkho.kuantanport@ijm.com
W: www.ijm.com/infrastructure/port/KuantanPort/

Pulau Indah
Westports Malaysia Sdn Bhd
P O Box 266
Pulau Indah
Port Kelang
42009
Malaysia
Contact: Mr Sohan Singh
Conventional Marketing
T: + 60 3 3169 4047
F: + 60 3 3169 4119
E: info@westportmalaysia.com.my
W: www.westportsmalaysia.com/

Seri Manjung
Lumut Maritime Terminal Sdn Bhd
Lekir Bulk Terminal (LBT)
Pulau Lekir 1
Jln Teluk Rubiah
Seri Manjung
Perak
32040
Malaysia
Contact: Mr Amin Bin Halim Rasip
Chief Executive Officer
T: + 60 3 2141 7728
F: + 60 3 2141 2995
E: aminrasip@integrax.com.my
W: www.lumutport.com
Import: Yes
Location: On a reclaimed island, South East of Pangkor Island, Perak, West Malaysia (Off the Straits of Malacca)
Ownership: Lekir Bulk Terminal Sdn Bhd
Name of Port Authority: Lumut Maritime Terminal Sdn Bhd
Throughput Capacity: 12.0 million tonnes
Total Storage: About 80 acres (approx 323,752 sqm)
Vessel Size limitation: Max size - Capemax vessel (LOA 290m, DWT 200,000mt.) Minimum natural depth of 20m alongside the berth.
Additional information: 2 Grab Ship Unloaders with rated capacity of 1500 tph each and 2 import conveyors lines with rated capacity of 3800 tph each. Currently planning to construct a load out facility (Phase 2 - to be ready by 2009).

Mexico

Altamira
Cooper/T. Smith De Mexico SA de CV
Mar Negro KM 0.380
Puerto Industrial
Col. Puerto De Altamira
Altamira
Tamaulipas
89603
Mexico
Contact: Mr Arturo Encinas
General Director
T: + 52 833 260 45 00
F: + 52 833 260 10 82
E: arturo.encinas@coopertsmith.com
W: www.coopertsmith.com

Lazaro Cardenas
Terminales Portuarias Del Pacifico, S A P I de C V
Recinto Portuario Lazaro Cardenas
Canal Oriente s/n, Av. Los Ríos Interior
Isla del Cayacal, Apartado Postal 83
Lazaro Cardenas
Michoacan
60950
Mexico
T: + 52 753 533 0090
F: + 52 753 533 0090
E: cargo.tpp@tpp.com.mx
W: http://www.tpp.com.mx/
Import: Yes
Location: Mexican Pacific coast on the Port of Lazaro Cardenas
Throughput Capacity: 3.5 million metric annually tons on its phase I
Total Storage: 10,000 M2 of open yards
Vessel Size limitation: Cape Size vessels up to 173,500 metric tons of dwt, LOA of 305 meters, and a draft of 16.5 meters (54.13 feet).
Additional information: This Terminal is equipped with 2 mobile grab cranes reaching a performance of 40,000 tons/day and amiability of bonded storage yards.

Morocco

El Jadida
Jorf Lasfar Power Station
Jorf Lasfar Energy
8P 99
Sidi Bouzid
El Jadida
Morocco
Contact: Mr Boutaib Said
T: + 212 3 34 5371
F: + 212 3 34 5375
E: jlec@jlec.co.ma

Mozambique

Beira
Largo dos CFM-C
Porto da Beira
PO Box 236
Beira
Sofala
Mozambique
Contact: Mr Carlos Mesquita
General Director
T: + 258 23 345276
F: + 258 23 322636
E: ccfb-trafego@teledata.mz
W: www.cfmnet.co.mz

Maputo
Grindrod Terminals - Maputo
Praca dos Trabalhadores
Porto de Maputo
Maputo
Mozambique
Contact: Mr Mark Flynn
Terminal Operations Manager
T: + 258 21 720 350
F: + 258 21 720 180
E: markf@grindrod.co.mz
W: www.grindrod.co.za
Export: Yes
Location: Maputo Harbour Mozambique
Name of Port Authority: MPDC—Maputo Port Development Company
Throughput Capacity: 210,000mt pm
Additional information: Refurbishment /rehabilitation of facility presently being carried out by Grindrod Terminals.

Namibia

Walvis Bay
Grindrod Terminals - Walvis Bay
1st Floor Grindrod House
174 Third Street East
Walvis Bay
9000
Namibia
Contact: Mr Shakespeare Masiza
Regional Manager
T: + 264 271 270
F: + 264 271 280
E: shakespeare@grindrod.com.na
W: www.grindrod.co.za
Export: Yes
Location: West coast of Africa, in Namibia
Name of Port Authority: Walvis Bay Port Authority

New Zealand

Lyttelton
Lyttelton Coal Terminal
Private Bag 501
Norwich Quay
Lyttelton
Canterbury
New Zealand
Contact: Mr Peter Davie
Chief Executive
T: + 64 3328 8198
F: + 64 3328 7828
E: peter.davie@lpc.co.nz
W: www.lpc.co.nz
Export: Yes
Location: Mid point of the east coast of the South Island of New Zealand
Ownership: LPC is a publicly listed company.
Name of Port Authority: Lyttelton Port Company Ltd
Throughput Capacity: 4,000,000 tpa. Vessel load rate: 25,000 tpd
Total Storage: 50985 m2 (approx 5 hectares); Can stockpile up to 250,000 tonne
Vessel Size limitation: Length 230m, Beam 36.5m, Max draught on departure 12.4m
berth pocket depth 13m at chart datum (zero tide), air draught 15m
Additional information: New Zealand's largest coal export facility. Loading achieved through a combination of Bucket Wheel Reclaimer and mobile plant feeding via belt conveyor a jetslinger shiploader.

New Plymouth
Port Taranaki Limited
PO Box 348
New Plymouth
4340
New Zealand
Contact: Mr Roy J Weaver
Chief Executive
T: + 64 6 751 0200
F: + 64 6 751 0886
E: rweaver@porttaranaki.co.nz
W: www.porttaranaki.co.nz

Tauranga
C3 Limited (previously Toll Owens Ltd)
Maritime House
10 Rata Street
Mount Maunganui
Private Bag 12501
Tauranga
Bay of Plenty
3143
New Zealand
Contact: Mr Dean Camplin
Chief Executive
T: + 64 7572 8972
F: + 64 7575 2000
E: Dean.Camplin@C3.co.nz
W: www.c3.co.nz
Location: New Zealand

Pakistan

Karachi
Pak Shaheen Group
36-A/2, Lalazar, Opposite Beach Luxury Hotel
Off M.T. Khan Road
Karachi
74000
Pakistan
Contact: Mr Yussuf Farrukh
COE - Services
T: + 92 21 3285 1800
F: + 92 21 561 2230
E: yfarrukh@pakshaheen.com.pk
W: www.pakshaheen.com.pk

Peru

Callao
ENAPU SA
Port Terminal of Callao
Callao
1No260
Peru
Contact: Mr Luis Vargas Caballero Cooban
President and Chief Executive
T: + 51 1429 9210
F: + 51 1469 1011
E: principal@enapu.gob.pe
W: www.enapu.com.pe

Moquegua
ILO Port Terminal
Jr Matara
Moquegua
104 100
Peru
Contact: Mr Julio Zamorano Calvo
Ofice Manager
T: + 51 1429 9210
F: + 51 1 465 6717
E: info@enapu.gob.pe
W: www.enapu.com.pe/

Trujillo
ENAPU SA
Salaverry Port Terminal
Calle Cordova s/n
Salaverry
Trujillo
Peru
Contact: Ms Eufrosina Hilda Santa Maria Rubio
Manager
T: + 51 4443 7359
F: + 51 4443 7359
E: tpsalaverry@enapu.com.pe
W: www.enapu.com.pe

Philippines

Makati City
Wilhelmsen-Smith Bell Shipping, Inc.
2294 Pasong Tamo Extension
Makati City
1231
Philippines
Contact: Mr Fausto R Preysler Jr
President & Chairman
T: + 63 2 8167851 to 58
F: + 63 2 8150199 / + 63 2 8136949
E: preysler@smithbell.com.ph
W: www.smithbell.com.ph

Poland

Gdansk
PPS Port Polnocny Co Ltd
23 Budownicych Portu Polnocnego Str
Gdansk
80-601
Poland
Contact: Mr Andrzej Kasprzak
President
T: + 48 58 737 60 52
E: polnocny@portgdansk.pl
W: www.portgdansk.pl
Export: Yes
Location: North West of Poland on central part of sourthern section of Baltic Sea coast.
Ownership: Port of Gdansk Authority SA
Total Storage: 600,000 tons
Vessel Size limitation: Max length 280m, Max draft 15m

Gdynia
Maritime Bulk Terminal Gdynia Ltd
ul. Weglowa 4
Gdynia
81-341
Poland
Contact: Mr Andrzej Grubalski
Account Manager
T: + 48 508 375 146
F: + 48 586 215 354
E: marketing@mtmg.gdynia.pl
W: www.mtmg.gdynia.pl
Import: Yes
Export: Yes
Location: North of Poland on the Baltic Sea
Name of Port Authority: Port of Gdynia Authority
Throughput Capacity: about 4 million tonnes per year
Total Storage: 70,866 sqm
Vessel Size limitation:
- Dutch quay: LOA 300m, Depth 13.0m
- Swedish quay: LOA 300m, Depth 9.5m
- Silesian quay: LOA 250m, Depth 8.5m
- Southern Pier of the Danish Quay: LOA 170m, Depth 9.50m
- Liquid Fuels Reloading Post: LOA 210m (min 100m), Depth 11.

Additional information: Multipurpose terminal handling:
- dry bulk cargoes (coal and coke, grain and feed, biomass, aggregates and other minerals)
- liquids (petrol and chemicals)
- general cargo

Swinoujscie
Port Handlowy Swinoujscie Sp. z o.o.
ul. Bunkrowa 1
Swinoujscie
Zachodniopomorskie
72-602
Poland
Contact: Mr Lukasz Przyszlak
Trade & Marketing Director
T: + 48 91 32 77 524
F: + 48 91 32 77 520
E: lukasz.przyszlak@phs.com.pl
W: www.phs.com.pl
Import: Yes
Export: Yes
Location: North West of Poland on the Baltic Sea Coast, on the border with Germany.
Ownership: Private Stevedoring Company
Name of Port Authority: Port Handlowy Swinoujscie
Throughput Capacity: 6 million tonnes per year
Total Storage: 175,000sqm for up to 1,200,000 tonnes
Vessel Size limitation: 13.2m draught, vessels up to 270 metres in length, 42m beam
Additional information: The largest dry bulk cargo centre handling, storing nearly 50% of the country's coal exports and nearly 90% of import. Only Port in Poland that accepts Panamax Size Vessels with coal. Perfect railroad, barge connection with Germany, Czech and Slovakia.

Szczecin
Szczecin and Swinoujscie Seaports Authority
ul Bytomska 7
Szczecin
70-603
Poland
Contact: Mrs Katarzyna Malinowska
Manager of Marketing Division
T: + 48 914 308 139
F: + 48 914 624 145
E: k.malinowska@port.szczecin.pl
W: www.port.szczecin.pl
Export: Yes
Location: South Coast of the Baltic Sea
Name of Port Authority: 1) Bulk Cargo Port Szczecin Sp. z o.o.
Gdanska 21
70-661 Szczecin
www.bulkcargo.com.pl
2)Port Handlowy Swinoujscie Sp.z o.o.
Bunkrowa 1
72-602 Swinoujscie
www.phs.com.pl
Throughput Capacity: Bulk Cargo Port Szczecin - 1,0-2,0 mio tonnes per year
Port Handlowy Swinoujscie - 5,0-6,0 mio tonnes per year
Total Storage: Bulk Cargo Port Szczecin -35,000 s.q.m for up to 170,000 tonnes
Port Handlowy Swinoujscie - 150,000 sq.m for up to 700,000 tonnes
Vessel Size limitation: Bulk Cargo Port Szczecin - 9.15 m draught, vessels up to 210 metres in length
Port Handlowy Swinoujscie - 13,2 m draught, vessels up to 270 metres in length
Additional information: The port complex of Szczecin and Swinoujscie is the largest dry bulk cargo centre of a crucial significance for Polish economics, handling nearly 50 % of the country's coal exports.
Coal handling and storage services are provided at a wide range of dedi

Szczecin
Bulk Cargo - Port Szczecin Sp. z.o.o.
Gdanska 21
Szczecin
Zachodniopomorskie
70-661
Poland
Contact: Mr Bogdan Walczak
Marketing Director
T: + 48 91 4 307 112
F: + 48 91 4 307 115
E: bwalczak@bulkcargo.com.pl
W: www.bulkcargo.com.pl
Import: Yes
Export: Yes
Location: South Coast of the Baltic Sea, North West of Poland
Ownership: Private
Name of Port Authority: Szczecin and Swinoujscie Seaports Authority
Throughput Capacity: 4.0-5.0 mio tpa
Total Storage: 45,000 sqm for up to 250,000 tonnes
Vessel Size limitation: 9.15 m draught, vessels up to 210 metres in length
Additional information: In our company exported and imported coal can be reloaded in a dedicated handling area, equipped with a new wagon tippler and a 1,000tph shiploader.

Portugal

Aveiro
Socarpor (Aveiro) SA
Av. Dr. Lourenço Peixinho, 15-5B
Apartado 593
Aveiro
3801-901
Portugal
Contact: Capt Ferreira Jorge
Managing Director
T: + 351 234 378 790
F: + 351 234 378 791
E: socarpor@socarpor-aveiro.pt
W: www.socarpor-aveiro.pt

Barreiro
Barreiro Terminal - Atlanport
Sociedade de Exploração Portuária, S.A
Largo Alexandre Herculano
Complexo Industrial da Quimiparque
Apartado 5109
Barreiro
2831-904
Portugal
Contact: Eng Ramalho de Nascimento
Executive Director
T: + 351 21 206 6610/11/12
F: + 351 21 206 6629
E: atlanport@atlanport.pt
W: www.ete.pt/Grupo/Empresas/Atlanport_E.htm

Lisbon
Poço Bispo Multipurpose Terminal - TMPB
ETE - Empresa de Tráfego e Estiva, S.A.
Largo do Corpo Santo, 21
Lisbon
1200-129 Lisboa
Portugal
Contact: Cmdte. Pedro Virtuoso
T: + 351 211 128 039
F: + 351 211 128 045
E: tmpb@ete.pt
W: www.ete.pt/Grupo/Empresas/Ete_E.htm
Import: Yes
Export: Yes
Location: Lisbon, Portugal
Ownership: ETE - Empresa de Tráfego e Estiva, S.A.
Name of Port Authority: Port of Lisbon
Throughput Capacity: 1mtpa including Coal
Total Storage: 20,000t warehousing

Lisbon
Silopor - Empresa de Silos Portuários, S.A
(Beato Bulk Foodstuffs Terminal)
Av. Infante D.Henrique
Terminal Portuário do Beato
Lisbon
1900 Lisboa
Portugal
Contact: Mr Carlos Silva
Trade Manager
T: + 351 21 392 32 61
F: + 351 21 392 32 69
E: carlos.silva@silopor.com
W: www.silopor.pt
Location: Port of Lisbon (West Coast of Portugal)
Name of Port Authority: APL - Administracia do Porto de Lisbon
Throughput Capacity: Unload up to 9,000tpd
Total Storage: 100,000t vertical storage
Vessel Size limitation: LOA: 180m, Draught 7.5m

Sines
Porto de Sines SA
Apartado 16
Sines
750-953
Portugal
Contact: Ms Anna-Rita Rosa
Marketing
T: + 351 269 860 600
F: + 351 269 860 790
E: ana.rosa@portodesines.pt
W: www.portodesines.pt

Puerto Rico

San Juan
Port of Ponce
Port of the Americas Authority
PO Box 362350
San Juan
00936-2350
Puerto Rico
T: + 1 787 765 2900
F: + 1 787 753 6874
W: www.portoftheamericas.com
Import: Yes
Location: South Coast of Puerto Rico
Ownership: Public
Throughput Capacity: 62,000 short tonnes
Total Storage: 4,000 cubic metres approx
Vessel Size limitation: Max LOA 1200 ft, Max Draught 50 ft

Romania

Constanta
Comvex SA
Incinta Port Dana 80-84
Constanta
900900
Romania
Contact: Mr Viorel Panait
Terminal Manager
T: + 40 241 639 016
F: + 40 241 639 010
E: viorelpanait@comvex.ro
W: www.comvex.ro

Constanta
SC MINMETAL SA Constanta / Romania
Incinta Port
Berth 64
Constanta
900900
Romania
Contact: Mr Ghebaur Liviu
General Director
T: + 40 241 639 035
F: + 40 241 639091
E: office@minmetal.ro
W: www.minmetal.ro
Import: Yes
Export: Yes
Location: South–East of Europe; South-East of Romania; Black Sea Port – Constanta; Berth 45, 46, 64, 65, 66, 85.
Ownership: S.C. North Star Shipping S.R.L.
Name of Port Authority: Constanta Maritime Port Administration
Throughput Capacity: 4,000,000 tpa
Total Storage: 251.716 m2
Vessel Size limitation: Max LOA - no restriction, Max draught - 13.5m, DWT - accordingly
Additional information: The main domestic beneficiaries of Minmetal.are : Arcellor Mittal , Lafarge , Energy Coal , Tenaris , Holcim , Voest Alpine , etc

Russia

Tuapse
Port of Tuapse Authority
8 Gorkogo Street
Tuapse
352800
Russia
Contact: Mr Oleg Antonov
General Director
T: + 7 86167 76 4 00
F: + 7 86167 76 4 03
E: map@tuapseport.ru
W: www.tuapseport.ru

Vanino
Vanino Commercial Sea Port, PJSC
1 Zheleznodorozhnaya Str.
Vanino
Khabarovsk Territory
682860
Russia
Contact: Mr Apollon Shengeliya
General Director
T: + 7 421 37 5 09 23
F: + 7 872 140 26 10
E: market@vcsp.ru
W: www.vcsp.ru

Slovenia

Koper
Luka Koper d.d., European Energy Terminal
Vojkovo Nabrežje 38
Koper
SI-6501
Slovenia
Contact: Mr Bojan Tomisic M. Sc.
Terminal Manager
T: + 386 5 6656 631
F: + 386 5 6395 027
E: bojan.tomisic@luka-kp.si
W: www.luka-kp.si
Import: Yes
Export: Yes
Location: Northen part of Adriatic Sea; SLOVENIA
Name of Port Authority: Luka Koper
Throughput Capacity: Year 2013; 4,000,000 tonnes Coal, 2,000,000 tonnes Iron Ore
Total Storage: 400,000 tonnes Coal, 350,000 tonnes Iron ore
Vessel Size limitation: Limit is arrival draught of 17.2m

South Africa

Durban
Transnet Port Terminals Head Office
Kingsmead Office Park
Stalwart Simelane/Stanger Street
Durban
KwaZulu Natal
4001
South Africa
Contact: Ms Mbali Mathenjwa
T: + 27 31 308 8310
F: + 27 31 308 8336
E: Mbali.Mathenjwa@transnet.net
W: www.transnetportterminals.net

Durban
Grindrod Terminals
PO Box 1
Durban
KwaZulu Natal
4000
South Africa
Contact: Mr Sean Rowan
CEO Grindrod Terminals
T: + 27 31 302 7700
F: + 27 31 302 7701
E: seanr@grindrod.co.za
W: www.grindrod.co.za

Richards Bay
Richards Bay Coal Terminal
PO Box 56
Richards Bay
KwaZulu Natal
3900
South Africa
Contact: Mr Ronald Llale
Acting Corporate Affairs Manager

T: + 27 35 904 4015
F: + 27 35 907 7200
E: rllale@rbct.co.za
W: www.rbct.co.za
Export: Yes
Location: North east coast of South Africa.
Ownership: Privately owned
Name of Port Authority: National Ports Authority of South Africa
Throughput Capacity: 72 million tons pa
Total Storage: 6.7 million tons
Vessel Size limitation: 17.5m draft

Richards Bay
Transnet Port Terminals

Dry Bulk Terminal
Customer Services Department
PO Box 1793
Richards Bay
KwaZulu Natal
3900
South Africa
Contact: Mr Warren Vickers
Customer Services Manager
T: + 27 35 905 3105
F: + 27 35 905 3216
E: Warren.Vickers@transnet.net
W: www.transnet.net
Import: Yes
Location: The port of Richards Bay is located approximately 160 km north-east of Durban and 465 km south of Maputo on the eastern seaboard of South Africa.
Ownership: Import coking coal: Mittal Steel SA (previously Iscor) Import met coke: Xstrata & Assmang
Name of Port Authority: Dry Bulk Terminal, S A Port Operations, Port of Richards Bay
Throughput Capacity: Two import berths, discharging a variety of dry bulk products such as coking coal, sulphur, salt, fertilizer, met coke, zinc.
A third import berth is dedicated to discharge of alumina & petcoke for BHP Billiton
Capacity per import berth: 3mt (9 mt
Total Storage: Coking coal shed: 25 000m2 (operated by DBT)
Vessel Size limitation: Draft: berth 609 & 701 = 14.0m; berth 702 = 17.5m
LOA: Coking coal = 270m; others = 240m
Additional information: DBT is a unique terminal that handles a variety of dry bulk commodities. Deep water and fast vessel turnaround ensure that this is one of the world's leading bulk ports.

Richards Bay
Grindrod Terminals

PO Box 10744
Meerensee
Richards Bay
KwaZulu Natal
3901
South Africa
Contact: Mr Christo Coetzer
Executive - Terminals
T: + 27 35 797 9092
F: + 27 35 797 9033
E: christoc@grindrod.co.za
W: www.grindrod.co.za
Export: Yes
Location: Richard's Bay, South Africa
Throughput Capacity: 3 million tpa via Navitrade Terminal

Saldanha
Saldanha Bulk Terminal

Private Bag X8
Saldanha
4395
South Africa
Contact: Mr Christopher Gomez
Communications Manager
T: + 27 22 703 4204
F: + 27 22 703 4828
E: christopherg@saportops.co.za

South Korea

Pohang
Port of Pohang

Pohang District Maritime & Port Authority
58-7 Hangku-dong
Pohang
South Korea
T: + 82 562 421 812
F: + 82 562 422 122

Ulsan
Port of Ulsan Public Piers 1&2

Ulsan District Maritime and Port Authority
139-9 Maeam-dong
Ulsan
South Korea
Contact: Mr Jeong Chang-won
T: + 82 52 228 5500
F: + 82 52 228 5549
W: www.ulsan.mltm.go.kr

Spain

Alicante
Port of Alicante

Muelle de Poniente 11
Alicante
03001
Spain
Contact: Mr Sergio Campos
Port Director
T: + 34 9 6 5230 544
F: + 34 9 6 5146 329
E: alicanteport@alicanteport.com
W: www.alicanteport.com

Almeria
Carboneras

c/o Autoridad Portuaria de AlmeriaMotril
Muelle de Levante s/n
Almeria
04071
Spain
Contact: Mr Muelle Levante
Port Director
T: + 34 9 50 23 60 33
F: + 34 9 50 23 29 49
E: almeria@apalmeria.com
W: www.apalmeria.com/

Gijón
EBHI - European Bulk Handling Installation

Muelle Marcelino León s/n
El Musel
Gijón
Asturias
33212
Spain
Contact: Mr Laureano Lourido
Managing Director
T: + 34 985 308 507
F: + 34 985 308 123
E: llourido@ebhi.es
W: www.ebhi.es
Import: Yes
Location: North coast of Spain.
Ownership: EBHI
Name of Port Authority: Gijón Port Authority
Throughput Capacity: 5,000 tph , 18 million/year
Total Storage: 150,000 sqm
Vessel Size limitation: No LOA / DWT limitation . 18m draught (59 feet)
Additional information: Recent upgrades to our facilities: Monitored distance unloading and automatic unloading system and unloading simulator (BAT project).

La Coruña
Muelle del Centenario

Autoridad Portuaria de la Coruna
Avda de la Marina 3
La Coruña
15002
Spain
Contact: Mr Luis Felipe Fernandez Rueda
T: + 34 981 22 74 02
F: + 349 81 205 862
E: explotacion@puertocoruna.com
W: www.puertocoruna.com
Import: Yes
Export: Yes
Location: North West of Spain
Name of Port Authority: A Coruña
Throughput Capacity: 150,000t
Total Storage: 25,000sqm
Vessel Size limitation: Max. Draught 15.5m

La Coruña
T.M.G.A. SL

Cuesta de la Palloza
1-Entlo
La Coruña
15006
Spain
Contact: Mr Juan Ibanez
Managing Director
T: + 34 981 175690
F: + 34 981 227556
E: jibanez@mconsiflet.com
W: www.tmga.es

La Coruña
Terminales Maritimos de Galicia, S.L.

Muelle Calvo Sotelo S/N
La Coruna
15006
Spain
Contact: Mr Iago Mallo Sanz
Technical Manager
T: + 34 981 12 61 69
F: + 34 981 12 22 35
E: imallo@tmga.es
W: www.tmga.es
Import: Yes
Location: North West of Spain
Name of Port Authority: La Coruña
Total Storage: 8,500sqm
Vessel Size limitation: Max draught 14m

Los Barrios
Endesa

PO Box 11
Los Barrios
Cadiz
11370
Spain
Contact: Mr Francisco Aamoros
Commercial Department
T: + 34 6256 04 167
F: + 34 956 6782 11
E: info@unesa.es

Pto. Alcudia
Transportes Maritimos Alcudia, SA

Teodoro Canet No 26
Pto. Alcudia
Mallorca-Baleares
07400
Spain
Contact: Mr Miguel Oliver
Managing Director
T: + 34 971 545 932/28
F: + 34 971 547 356
E: moliver@tmalcudia.com
W: www.portsdebelears.com
Import: Yes
Location: Eastern Mediterranean Sea
Ownership: Transportes Marítimos Alcudia
Name of Port Authority: Transportes Marítimos Alcudia
Throughput Capacity: 1.316.211.- tn / year (2005)
Total Storage: 3,200 sqm
Vessel Size limitation: Max LOA 101m, Max Draught 5.9m, Max DWT 6000.
Additional information: Coal imported from Namibia or South Africa via Tarragona, Spain.

Santa Cruz de Tenerife
Port Authority of Tenerife

Avenida Francisco La Roche No 49
Santa Cruz de Tenerife
Canary Islands
Spain
Contact: Mr Manuel Fernandez del Castillo
Port Director
T: + 34 9 22 605400
F: + 34 9 22 605479
E: comercial@puertosdetenerife.org
W: www.puertosdetenerife.org

Santander
Puerto de Santander

Autoridad Portuaria de Santander
Muelles de Maliaño s/n
Santander
Cantabria
E390 09
Spain
Contact: Mr Manuel Martin Ledesma
T: + 34 942 314 060
F: + 34 942 314 904
E: info@puertosantander.com
W: www.puertosantander.com

Tarragona
Euroports Iberica TPS

Aptdo. Correos 839
Tarragona
Tarragona
43080
Spain
Contact: Mr Javier Herrera
Commercial Manager
T: + 34 977 22 22 19
F: + 34 977 22 04 59
E: jherrera@europortsiberica.com
W: www.euroports.com
Import: Yes
Export: Yes
Location: North Mediterranean coast of Spain, 60 miles south of Barcelona
Ownership: www.euroports.com
Name of Port Authority: Tarragona Port Authority
Throughput Capacity: 7.5M ttpa
Total Storage: 140,000sqm
Vessel Size limitation: Max draught 18.5m, fit for Capesize vessels
Additional information: 5 gantry cranes 750 – 2,500 t/h; 3.5Km conveyor belts; shiploader 1,600tph; Installations for transshipment. Railway connection.

Sweden

Helsingborg
Helsingborg Coal Terminal

PO Box 821
Helsingborg
S-25108
Sweden
Contact: Mr Andreas Eriksson
Information Officer
T: + 46 4210 6300
F: + 46 4212 4374
E: andreas.eriksson@port.helsingborg.se
W: www.port.helsingborg.se

Karlstad
Vänerhamn AB

Stuvargatan 1
Karlstad
652 21
Sweden
Contact: Mr Tobias Uhn
Sales Manager
T: + 46 54 14 48 60
F: + 46 54 21 33 16
E: tobias.uhn@vanerhamn.se
W: www.vanerhamn.se

Oxelsund
Oxelosunds Hamn AB

Box 1200
Oxelsund
SE-61324
Sweden
Contact: Mr Bo Ytterstrom
Marketing Manager
T: + 46 155 258 000
F: + 46 1553 4321
E: bo.ytterstrom@oxhamn.se
W: www.oxhamn.se

Västerås
Mälarhamnar AB

Box 3013
Västerås
720 03
Sweden
Contact: Mr Magnus Johansson
Sales Manager
T: + 46 21 150100
F: + 46 21 150145
E: magnus.johansson@malarhamnar.se
W: www.malarhamnar.se
Location: In the lake of Mälaren we have two ports, one in Köping and one in Västerås, Sweden.
Total Storage: 155,000sqm
Vessel Size limitation: 7 Berths. Recieving ships up to 7000 tons net weight.
Additional information: Cranes, loaders, Rechstackers, trucks, etc.
Ongoing investments to receive 13 000 tons. Reaching 1/3 of Swedens population within 200 km radius (3 million people.)

Switzerland

Basel
Port of Switzerland

Hochbergerstrasse 160
Basel
CH-4019
Switzerland
Contact: Ms Carmen Koller
T: + 41 61 639 9577
F: + 41 61 639 9514
E: carmen.koller@portof.ch
W: www.port-of-switzerland.ch
Import: Yes
Location: North East of Switzerland, at the banks of the Rhine river
Ownership: Port area is owned by the community and leased to private companies for operation

Name of Port Authority: Schweizerische Rheinhäfen/ Port of Switzerland
Throughput Capacity: 7 mio tpa
Total Storage: Open storage: 180,000 sqm
Vessel Size limitation: L 135 m, W 23 m, Draught 3.20 m Airdraught 7.00 m
Additional information: 132,642 t coal imported in 2010.

Basel
Ultra-Brag AG
Südquaistrasse 55
Basel
CH-4019
Switzerland
Contact: Mr Beat Heydrich
CEO
T: + 41 61 639 72 00
F: + 41 61 639 72 10
E: info@ultra-brag.ch
W: www.u-b.ch

Birsfelden
BIRS Terminal AG
Hafenstrasse 54
Postfach
Birsfelden
CH 4127
Switzerland
Contact: Ms Sabine Schmid
T: + 41 61 377 8032
F: + 41 61 377 8010
E: sabine.schmid@birsterminal.ch
W: www.birsterminal.ch
Import: Yes
Location: East of Basel, Switzerland
Name of Port Authority: Port of Birsfelden
Total Storage: 30,000 sqm open storage

Thailand

Bangpli
S.P. Intermarine Co., Ltd
150/90 Moo 3 Soi Wongsepad
Teparak Road (Km.10)
Bangpli Yai
Bangpli
Samutprakarn
10540
Thailand
Contact: Mr Krithep Suwajanakorn
Marketing Department
T: + 662 385 5335
F: + 662 385 5910
E: info@spintermarine.co.th
W: www.spintermarine.co.th

The Netherlands

Amsterdam
Maja Stuwadoors Rotterdam
PO Box 57196
Amsterdam
1040 BB
The Netherlands
Contact: Mr Arie Holleman
T: + 31 20 684 2194
F: + 31 20 684 7024
E: info@majastuwadoors.nl
W: www.majastuwadoors.nl
Import: Yes
Location: Port of Amsterdam, Rotterdam, Netherlands
Ownership: Privately owned
Name of Port Authority: Maja
Throughput Capacity: approx. 4 million tons a year
Vessel Size limitation: Capesize vessels discharging on the buoys
Additional information: Floating operation with floating cranes in the ports of Amsterdam and Rotterdam. Operating with 8 floating cranes with capacities upto 1.000 mtph.

Amsterdam
Rietlanden Terminals BV
PO Box 59191
Amsterdam
1040KD
The Netherlands
Contact: Mr Karl Schot
Managing Director
T: + 31 20 506 1144
F: + 31 20 613 0724
E: karl.schot@rietlanden.com
W: www.rietlanden.com
Import: Yes
Location: The Netherlands, Europe
Ownership: LBH Group
Name of Port Authority: Reitlanden Stevedores

Amsterdam
OBA - Bulk Terminal Amsterdam
Westhavenweg 70
Amsterdam
1042 AL
The Netherlands
Contact: Mr Hans Fijlstra
Managing Director
T: + 31 20 587 3700
F: + 31 20 611 6908
E: directie@oba-bulk.nl
W: www.oba-bulk.nl
Import: Yes
Export: Yes
Location: IJmuiden & Amsterdam Westhaven with good access via the Amsterdam Rhine canal to the river Rhine.
Ownership: 50% HES Beheer / 50% Ovet Holding
Name of Port Authority: Port of Amsterdam
Throughput Capacity: Total handling capacity more than 100.000 tonnes per day
Total Storage: 600,000 sqm open storage (space for 2.5 million tonnes of coal), 25,000 sqm covered storage.
Vessel Size limitation: Max draught – 17.8m, 180,000dwt, max beam - 45m
Additional information: Annual volume of coal handled approx. 20 million tonnes. Unrivalled de-ironing possibilities through installed magnets on transport belts.

Badhoevedorp
IGMA
Schipholweg 337 D
Badhoevedorp
1171 PL
The Netherlands
Contact: Mr Rob Hansen
General Manager
T: + 31 20 5808 600
F: + 31 20 5808 606
E: info@igma.nl
W: www.igma.nl

Dordrecht
BV Zeehavenbedrijf Dordrecht (ZHD Stevedoring)
PO Box 12
Dordrecht
3300 AA
The Netherlands
Contact: Mr Leo Lokker
Commercial Director
T: + 31 78 61 11 009
F: + 31 78 63 32 815
E: leo.lokker@zhd.nl
W: www.zhd.nl
Import: Yes
Location: Rotterdam Area (Rotterdam, Dordrecht, Moerdijk)
Ownership: Bornet Group Rotterdam (BGR)
Name of Port Authority: Rotterdam Port Authority (location Dordrecht and Rotterdam) Havenschap Moerdijk (location Moerdijk)
Throughput Capacity: Depending on cranes and location. Floating cranes and shore cranes in Dordrecht can achieve up to 20.000 tons / 24h
Total Storage: 18 hectares terminal in Dordrecht (expansion plan of 10 hectares greenfield)
Vessel Size limitation: Dordrecht / Moerdijk terminals: 200 m. Loa, 32,5 m. beam and 9,45 m. draught in Dordrecht and 8,40 m. in Moerdijk. (lightering in Rotterdam by means of floating cranes can be arranged) Rotterdam (board-board) : up to Panamax size vessels.
Additional information: ZHD is a family owned private company, with terminals in Dordrecht and Moerdijk. ZHD is also active with self-propelled floating cranes (16, 25 and 50 tons !) in Rotterdam for direct transhipment. ZHD can provide a 24/7 service at all their locations.

Europoort - Rt
Ertsoverslagbedrijf Europoort C.V. (EECV)
Markweg 131
Europoort - Rt
Zuid-Holland
3198 NB
The Netherlands
Contact: Mr Sven Wappler
Management Assistant
T: + 31 181 25 77 02
F: + 31 181 25 77 03
E: Info.eecv@thyssenkrupp.com
W: www.eecv.nl
Name of Port Authority: Ertsoverslagbedrijf Europoort C.V. (EECV)
Throughput Capacity: 5.5 million tons
Total Storage: 750,000 tons
Vessel Size limitation: 180,00 DWT

Ijmuiden
Nebam BV
PO Box 512
Ijmuiden
1970 AM
The Netherlands
Contact: Mr Marcel Botterhuis
Manager Agency Dept
T: + 31 251 495521
F: + 31 251 470279
E: marcel.botterhuis@nebam.nl
W: www.NEBAM.nl

Rotterdam
European Bulk Services (EBS) BV
Elbeweg 117, Port number 5820
3198 LC Europoort-Rotterdam
P.O. Box 1204
180 AE Rozenburg
Rotterdam
Zuid Holland
3180 AE
The Netherlands
Contact: Mr Taco de Vries
Managing Director
T: + 31 181 258 147
F: + 31 181 258 154
E: sales@ebsbulk.nl
W: www.ebsbulk.nl
Location: Rotterdam, The Netherlands
Europoort Terminal and Laurenshaven Terminal
Ownership: HES Beheer
Name of Port Authority: Port of Rotterdam
Throughput Capacity: 16 million tons per year (inc. coal)
Total Storage: Covered storage capacity 430,000 m3. Open-air storage capacity 1,000,000 tons.
Vessel Size limitation: Depth 13.85m Laurenshaven Depth 18.50m Europoort
Additional information: Two dedicated terminals situated at strategic points to provide a fast, efficient and flexible service. For the cleaning of (Russian) coal, Magnet separators have been installed at the Laurenshaven terminal.

Rotterdam
Europees-Massagoed Overslagbedrijf (EMO) BV
PO Box 9000
Maasvlakte RT
Rotterdam
3199 XA
The Netherlands
Contact: Mr Sjaak Roukema
Commercial Manager
T: + 31 181 371113
F: + 31 181 371222
E: j.c.roukema@emo.nl
W: www.emo.nl
Location: Rotterdam-Maasulante
Throughput Capacity: 60 mio tons
Total Storage: 170 ha of storage, maximum storage capacity of 7 mio tons
Vessel Size limitation: Draught 23m, max vessel size 360,000 dwt
Additional information: EMO ensures an important part of the supply chain of iron ore and coal needed for the European steel and electricity industry.

Rotterdam
Van Uden Stevedoring
Gustoweg 68
(Port number 385)
Rotterdam
3029 AS
The Netherlands
Contact: Mr Gerard de Jong
T: + 31 10 476 0171
F: + 31 10 476 1927
E: g.dejong@vanudenstevedoring.nl
W: www.vanuden.nl
Location: Rotterdam, The Netherlands
Throughput Capacity: 1.7 million tonnes per year (including coal)
Total Storage: 50,000 sqm
Vessel Size limitation: Maximum draft facilities are 10.2 meters at high tide and 9.65 meters at low tide

Rotterdam
Marcor Stevedoring BV Rotterdam
Dodewaardstraat 14
(Port Number 2175)
Rotterdam
3087 BA
The Netherlands
Contact: Mr Aad Groenenboom
Director
T: + 31 10 299 21 21
F: + 31 10 299 21 22
E: a.groenenboom@marcor.nl
W: www.marcor.nl
Import: Yes
Location: Rotterdam, The Netherlands
Throughput Capacity: 6 million tonnes (including coal)
Total Storage: Unique floating storage capacity that handles about 40,000 tonnes.
Vessel Size limitation: No limitations, due to flexibility of the equipment to handle any vessel throughout the port of Rotterdam
Additional information: 4 floating cranes with capacity up to 36 mton and 2 floating weighing towers; handling all dry bulk commodities.

Rotterdam
Oxbow Coal B.V.
PO Box 51060
Rotterdam
3007 GB
The Netherlands
Contact: Mr Ewould Colenbrander
Director of International Operations
T: +31104419200
F: +31104360692
E: Ewoud.Colenbrander@oxbow.com
W: www.oxbow.com

Rozenburg
EP Shipping & Trading BV
PO Box 1050
Rozenburg
3180 AB
The Netherlands
Contact: Mr Eddy Van de Wijngaart (snr)
T: + 31 181 402 788
F: + 31 181 402 689
E: eps@epship.nl
W: www.epship.nl

Schiedam
Nieuwe Waterweg Silo BV
Nieuwe Waterwegstraat 55
(Port 542)
Schiedam
3115 HE
The Netherlands
Contact: Mr Jan Maasdam
Managing Director
T: + 31 10 427 12 30
F: + 31 10 473 75 73
E: info@nwsilo.nl
W: www.nwsilo.nl
Location: Rotterdam, The Netherlands
Total Storage: 5,000 tonnes
Vessel Size limitation: Draught: 8-8.5m, width: 20-25m, length: 200m

Terneuzen
Zeeland Seaports
PO Box 132
Terneuzen
4530 AC
The Netherlands
Contact: Mr Francesco Faes
Commercial Manager - Dry Bulk
T: + 31 115 647 400
F: + 31 115 647 500
E: francesco.faes@zeelandseaports.com
W: www.zeelandseaports.com
Import: Yes
Export: Yes
Location: South West of the Netherlands, at the entrance of the Westerschelde River, with open access to the Northsea.
Name of Port Authority: Zeeland Seaports
Throughput Capacity: Throughput solid fuels in 2013: 11 mio tonnes

EMO – 40 years fully equipped to meet your expectations

Please visit 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 transhipment 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 transhipment in the coming decades.

EMO

energising your business

Vessel Size limitation: Max draught 17,5 LAT
Additional information: Terminal operator for coal: OVET B.V. www.ovet.nl

Terneuzen
Ovet BV - Terneuzen Terminal
Mr F.J. Haarmanweg 16 d
Terneuzen
Zeeland
NL-4538 AR
The Netherlands
Contact: Mr Sander ven der Veeke
Account & Planning Manager
T: + 31 115 676 741
F: + 31 115 620 316
E: info@ovet.nl
W: www.ovet.nl
Import: Yes
Export: Yes
Location: The Netherlands, South-West Area (River Scheldt)
Ownership: 1/3 Hes Beheer ; 2/3 Manufrance
Name of Port Authority: Zeeland Seaports
Throughput Capacity: 12 MTA
Total Storage: Terneuzen 160,000 sqm; Flushing: 315,000 sqm
Vessel Size limitation: Terneuzen - loa 265m, width 34m, draught 12.50m fresh water, type panamax
Vlissingen - loa 310m, no beam restrictions, draught 16.5m salt water, type capesize
Additional information: 4 floating cranes / mobile crane(s) / screening plants / weighbridge / mobile conveyor belt system

Vlaardingen
Rotterdam Bulk Terminal (R.B.T.) B.V.
Schiedamsedijk 16
(Harbour no. 610)
Vlaardingen
South Holland
3134 KK
The Netherlands
Contact: Mrs Carola Broers-Keuning
Director
T: + 31 10 234 35 55
F: + 31 10 234 21 85
E: info@rbtrotterdam.com
W: www.rbtrotterdam.com
Import: Yes
Location: Rotterdam, The Netherlands
Name of Port Authority: Port of Rotterdam
Throughput Capacity: 3.2 million tonnes of dry bulk (2007), 26% coal-cokes
Total Storage: Open storage: 36,000 sqm
Covered storage facilities:
6 x 12,000 cbm steel silos
2 x 3,800 cbm concrete bunkers
4 x 1,900 cbm concrete bunkers
5 x 1,250 cbm concrete bunkers
1 x 2,250 cbm steel silo
1 x 3,000 cbm steel silo
22,000 cbm / 3,700 sqm s
Vessel Size limitation: Draught: 11.35m. (High tide 12m)
Quaylength: 525m
Additional information: Storage & handling for all bulk commodities
with a 24 hour service.

Vlissingen
Ovet BV - Vlissingen Terminal
Mr F.J. Haarmanweg 16 d
Terneuzen
Zeeland
NL-4538 AR
The Netherlands
Contact: Mr Sander van der Veeke
Account & Planning Manager
T: + 31 115 676 700
F: + 31 115 620 316
E: info@ovet.nl
W: www.ovet.nl
Import: Yes
Export: Yes
Location: The Netherlands, South-West Area (River Scheldt)
Ownership: 1/3 Hes Beheer ; 2/3 ATICs
Name of Port Authority: Zeeland Seaports
Throughput Capacity: 12 MTA
Total Storage: Terneuzen 160,000 sqm; Flushing: 315,000 sqm
Vessel Size limitation: Terneuzen - loa 265m, width 34m, draught 12.50m fresh water, type panamax
Vlissingen - loa 310m, no beam restrictions, draught 16.5m salt water, type capesize
Additional information: 4 floating cranes / mobile crane(s) / screening plants / weighbridge / mobile conveyor belt system/ trainloading station 1500 t/h.

Turkey

Istanbul
Toros Tarim Sanayi ve Ticaret A -TOROS Ceyhan Term
Buyukdere Caddesi
Tekfen Tower, 19th Floor
4 Levent
Sisli
Istanbul
Marmara
34394
Turkey
Contact: Mr Aydin Erdemir
Vice President - Terminal & Port Activities
T: + 90 212 357 02 02 ext. 284/286
F: + 90 212 357 02 31
E: aydin.erdemir@toros.com.tr
W: www.toros.com.tr
Import: Yes
Ownership: TEKFEN HOLDING.(www.tekfen.com.tr)
Name of Port Authority: BOTAS
Throughput Capacity: 17 million ton
Total Storage: 750.000 sqm
Vessel Size limitation: 300 m - 13.50 m - 110.000 DWT
Additional information: Toros Ceyhan Terminal is one of the biggest coal import facilities in Turkey. Equipped with deep-sea berthing facilities, it is supported by high capacity loading/ unloading equipment able to handle bulk materials up to 30,000 mtpd at each of its two mai

Tekkeköy/Samsun
Toros Tarım San. ve Tic. A.
Samsun Ordu Karayolu 14.km
Sanayi Mah
Tekkeköy/Samsun
55300
Turkey
Contact: Mr Ismail Turan
Toros Terminal Opr. Man
T: + 90 2123570202
F: + 90 2123570231
E: ismail.turan@toros.com.tr
W: www.toros.com.tr

UK

Ayr
Ayr
ABP Port Office
Ayr
Ayrshire
KA8 8AH
UK
Contact: Mr P Creswell
Port Manager
T: + 44 1292 281 687
F: + 44 1292 287 787
E: ayr@abports.co.uk
W: www.abports.co.uk

Bootle
E-ON UK Liverpool
Bulk Terminal
Gladstone Dock
Bootle
Merseyside
L20 1BE
UK
Contact: Mr Ken Jones
T: + 44 151 933 0860
F: + 44 151 933 0867
E: ken.jones@eon-uk.com

Bristol
The Bristol Port Company
St Andrews House
St Andrews Road
Avonmouth
Bristol
Avon BS11 9DQ
UK
Contact: Mrs Jullie Gough
Commercial Executive
T: + 44 117 982 0000
F: + 44 117 982 0698
E: julie.gough@bristolport.co.uk
W: www.bristolport.co.uk
Import: Yes
Location: South West England
Ownership: Private - Bristol Port Company
Name of Port Authority: The Bristol Port Company
Throughput Capacity: 11 million Coal
Total Storage: 700,000 tonnes of Coal
Vessel Size limitation: LOA 290m
Draught 14.5m
Beam 41m

Cardiff
ABP South Wales
(Ports of Newport, Cardiff, Barry, Port Talbot & Swansea)
Queen Alexandra House
Cargo Road
Cardiff
South Glamorgan
CF10 4LY
UK
Contact: Mr Matthew Kennerly
Port Director
T: + 44 870 609 6699
F: + 44 2920 835001
E: mkennerly@abports.co.uk
W: www.abports.co.uk
Import: Yes
Export: Yes
Location: South Coast of Wales, UK
Ownership: Borealis 33.34%, GIC 33.33%, Goldman Sachs 23.33%, Infracapital 10%
Name of Port Authority: Associated British Ports
Throughput Capacity: > 20 million tonnes (all cargo)
Total Storage: Extensive development land available
Vessel Size limitation: Up to 170,000 dwt at Port Talbot

Glasgow
Clydeport Operations
16 Robertson Street
Glasgow
Ayrshire
G2 8DS
UK
Contact: Mr David Jerome
Marketing
T: + 44 141 221 8733
E: david.jerome@clydeport.co.uk
W: www.clydeport.co.uk
Import: Yes
Location: Located in Fairlie, near Largs on the Ayrshire coast of Scotland
Name of Port Authority: Clydeport
Total Storage: 1.3 million tonnes
Vessel Size limitation: Outer Berth: DWT 350,000, Max draft 23m
Inner Berth: DWT 95,000, Max draft 19.8m
Additional information: Hunterston has one of the deepest sea entrance channels in northern Europe, which can accommodate the largest cape size vessels afloat. Discharging rates are the fastest in the UK, ensuring efficient and cost effective movement of materials.

Grangemouth
Leith Docks
Forth Ports PLC
Carron House
Central Dock Road
Grangemouth
Scotland
SK38TY
UK
Contact: Mr Alan C Burns
T: + 44 131 555 8750
F: + 44 131 555 1212
E: alan.burns@forthports.co.uk
W: www.forthports.co.uk

Grangemouth
Casper Shipping Ltd
2nd Floor
5 Kerse Road
Grangemouth
FK3 8HQ
UK
Contact: Mr Douglas Couser
Office Manager
T: + 44 1324 486486
F: + 44 1324 486444
E: dcouser@casperltd.com
W: www.casperltd.com
Location: Scotland - Serving: Clydeport Hunterston Coal Terminal
Ownership: Privately Limited Company
Name of Port Authority: Clydeport
Throughput Capacity: 3000 tonnes per hour
Total Storage: 50 Hectare
Vessel Size limitation: Max Length 380m
Max Draught 26m
Up to 350,000dwt

Grimsby
Associated British Ports - Grimsby & Immingham
Port Office
Cleethorpe Road
Grimsby
North East Lincolnshire
DN31 3LL
UK
Contact: Mr John Fitzgerald
Port Director
T: + 44 1472 359 181
F: + 44 1472 242 488
E: jfitzgerald@abports.co.uk
W: www.abports.co.uk
Import: Yes
Export: Yes
Location: Central Coast of England, Humber International Terminal
Ownership: Associated British Ports
Throughput Capacity: Phase 1 capacity 7.5 million tonnes. Work has commenced on the second phase of the terminal.
Total Storage: Open storage areas for 500,000 tonnes plus 10,000sqm of general purpose warehousing.
Vessel Size limitation: LOA: 275m (suitable vessels up to 290m accepted with Dock Master's approval)
Beam: 45m
Draught: 14.2m (subject to tidal / siltation conditions)
Approx DWT: 200,000 (partly laden)
Additional information: The first phase of Humber International Terminal is capable of handling vessels carrying cargoes in excess of 100,000 tonnes. The rail-connected terminal offers 24-hr fully flexible working and is supported bv four 100-tonne mobile harbour cranes.
Work o

Immingham
Casper Shipping Ltd
Riverside House
East Riverside
Immingham
NE Lincolnshire
DN40 2LZ
UK
Contact: Mr David Healey
T: + 44 1469 575 246
F: + 44 1469 575 589
E: immingham@casperltd.com
W: www.casperltd.com
Import: Yes
Ownership: Private Limited Company
Name of Port Authority: ABP
Throughput Capacity: 7.2 m in 2004
Total Storage: Unlimited
Vessel Size limitation: LOA 295m – Beam 45m – Max Draught 14.20m
Additional information: Draught depending on tidal conditions, draught planner available on request.

Liverpool
Mersey Docks & Harbour Company
Maritime Centre
Port of Liverpool
Liverpool
Merseyside
L21 1LA
UK
Contact: Mr Vic Brodrick
Business Development Manager
T: + 44 151 949 6303
F: + 44 151 949 6300
E: vic.brodrick@peelports.co.uk
W: www.merseydocks.co.uk

Middlesbrough
Casper Shipping Ltd
Cleveland Business Centre
1 Watson Street
Middlesbrough
Cleveland
TS1 2RQ
UK
Contact: Mr Michael Shakesheff
Managing Director
T: + 44 1642 233 570

F: + 44 1642 243 936
E: mshakesheff@casperltd.com
W: www.casperltd.com
Location: Redcar, Hull, Immingham, Blyth and Hunterston

Near Hull
Hull Agency (Goole)

Casper Shipping Ltd
Saltend Office DL1 (Upper Floor)
Saltend Hedon
Near Hull
East Yorkshire
HU12 8DS
UK
Contact: Mr Don Mussett
T: + 44 1482 891533
F: + 44 1482 891186
E: hull@casperltd.com
W: www.casperltd.com
Import: Yes
Location: Humberside
Ownership: Private limited company
Name of Port Authority: Hull Bulk Handling (Fernwood group)
King George Dock Hull
Throughput Capacity: 2,000,000 tonnes 2004 estimated
Total Storage: 17 hectares
Vessel Size limitation: Beam 25.50m max, Loa 199m (can be exceeded with special permission), Draft 10.4m max (the dock is impounded to 11.3m)
On certain neap tides max draft of vessels entering can be as poor as 9.5m due to water levels in the River Humber

Newport
ABP - Port of Newport

Dock Office
Alexandra Dock
Newport
Gwent
NP20 2UW
UK
Contact: Mr Clive Thomas
Deputy Port Manager
T: + 44 870 609 6699
F: + 44 1633 221285
E: cjthomas@abports.co.uk
W: www.abports.co.uk
Import: Yes
Export: Yes
Location: South-East Wales
Ownership: Port is owned and operated by Associated British Ports
Name of Port Authority: Associated British Ports
Throughput Capacity: Currently circa 2 million tonnes. 1.4 million tonnes imported in 2006.
Total Storage: Circa 100,000 sq m
Vessel Size limitation: Handymax vessels up to circa 40,000 dwt
LOA- 244m
Beam - 30.1m
Draught - 10.4m
Additional information: Dedicated terminal able to accommodate two vessels of up to 40,000 dwt simultaneously with rail facility for re-loading/discharge to/from South-Wales, the Midlands and beyond. Coal washing, screening and blending available on port estate.

Newport
Newport Stevedores Ltd

Eastway Road, North Dock
Alexandra Dock
Newport
Gwent
NP9 2NP
UK
Contact: Mr Matthew Kennerley
Port Director
T: + 44 1633 220969
F: + 44 1633 221371
E: info@abports.co.uk

Nottingham
Hull Bulk Handling Ltd

Fernwood House
Fernwood Drive
Main Road
Watnall
Nottingham
NG16 1LA
UK
Contact: Mr Charles Holehouse
Managing Director
T: + 44 11 593 893 78
F: + 44 1482 784 895
E: charles.holehouse@fernwood.co.uk
W: www.hullbulk.co.uk
Import: Yes
Export: Yes
Location: East Coast UK, Humber Estuary
Ownership: Privately owned Limited company
Name of Port Authority: Associated British Ports
Throughput Capacity: 3.5 million tonnes per annum
Total Storage: 161880 square metres
Vessel Size limitation: Max LOA: 198m
Max Beam: 25.5m
Max draught including approach channels 10.4m, basis brackish with an SPG of 1016. Draught in approach channel subject to tidal conditions. Average vessel size: 30,000dwt.
Average vessel size: 30,000 dwt.
Additional information: Hull Bulk Handling is road, rail and barge connected for the onward despatch of all bulk products. Mobile screening and washing plants are also available on site along with 5 acres of tarmac bunkered storage.

South Shields
Port of Tyne

Maritime House
Tyne Dock
South Shields
Tyne & Wear
NE34 9PT
UK
Contact: Mr Andy Fulds
Commercial Manager
T: + 44 191 455 2671
F: + 44 191 454 1460
E: andy.fulds@portoftyne.co.uk
W: www.portoftyne.co.uk
Import: Yes
Location: North East of England on the North Coast
Name of Port Authority: Port of Tyne
Throughput Capacity: 2.2 million tonnes in 2007
Total Storage: 334,603sqm
Vessel Size limitation: Length = 750m, Beam = 35m, Depth = 12.1m @ Chart Datum
Additional information: The Port of Tyne is Port Operator of the Year, Lloyd's List London Awards 2008 and is the only UK deep river port to provide total supply chain management in-house.

Swansea
ABP - Port of Swansea

Dock Office
Alexandra Dock
Newport
Gwent
NP20 2UW
UK
Contact: Mr Clive Thomas
Deputy Port Manager
T: + 44 870 609 6699
F: + 44 1633 221285
E: cjthomas@abports.co.uk
W: www.abports.co.uk/swansea
Import: Yes
Export: Yes
Location: Swansea, South Wales
Ownership: Port is owned and operated by Associated British Ports
Name of Port Authority: Associated British Ports
Throughput Capacity: Currently circa 0.5 million tonnes. 20k tonnes imported in 2006 and 80k tonnes exported in 2006
Total Storage: Circa 40,000 sq m with development land for expansion
Vessel Size limitation: Handysize vessels up to circa 30,000 dwt
LOA- 200m
Beam- 26.2m
Draught- 9.9m
Additional information: Two-rail connected terminals for grab discharge/loading as well as specialised soft-loading operation using container-tipping equipment. Adjacent land licensed for storage, screening and blending of coal and other bulk products.

Ukraine

Odessa
Transinvestservice (TIS) Ltd

50 Chapayev Str
Vizirka Village
Kominternovo District
Odessa
67543
Ukraine
Contact: Mr Andrey Stavnitser
Deputy Director
T: + 380 482 300 711
F: + 380 482 300 735
E: mail@tis.ua
W: www.tis.ua

Reni
Port of Reni

188 Dunayskaya Str.
Reni
Odessa
68802
Ukraine
Contact: Mr Sergey Stroya
General Director
T: + 380 4840 43548
F: + 380 4840 41484
E: chief_p@reni.uptel.net
W: www.portreni.com.ua
Import: Yes
Export: Yes
Location: Located within the navigable area of the Danube, between 66.7 and 69.3 miles, at a distance of 63 miles from the estuary (128 km from the Black Sea).
Ownership: Ukraine, Russia, Rumania
Name of Port Authority: Commercial Sea Port of Reni
Throughput Capacity: 3,000 - 4,000 tons
Total Storage: 60,000 sqm
Vessel Size limitation: The Reni Port is capable of handling any vessels with an adequate draught enabling them to pass the Sulinsky Canal (6-8 m), which connects the Danube with the Black Sea.
Additional information: - receiving and dispatching all kinds of cargoes (liquefied gas, oil products included) by sea, river, railway and motor means of transport in any lots.

USA

Arabi
Associated Terminals of St Bernard

8000 St. Bernard Hwy
Reserve
Arabi
Louisiana
70032
USA
Contact: Mr Zeljko Franks
Vice President
T: + 1 504 277 5101
F: + 1 504 279 8353
E: zfranks@associatedterminals.com
W: www.associatedterminals.com

Argo
Kinder Morgan Terminals

Midwest Regional Office
8500 West 68th Street
Argo
Illinois
60501
USA
Contact: Mr William Patterson
T: + 1 708 496 2891
F: + 1 708 496 2540
E: william_patterson@kindermorgan.com
W: www.kindermorgan.com
Location: Cincinnati, OH, USA
Ownership: Kinder Morgan Terminals
Throughput Capacity: 7,500 tons per month
Total Storage: Outside Bulk – 20,000 Tons
Warehouse – 3,000 Tons
Vessel Size limitation: Max Draft - 11 feet
Additional information: Can handle 3 barges at any one time. Barge to truck/ barge to pad to truck. 3rd party storage of coal

Baltimore
Baltimore Terminal

CNX Marine Terminals Inc.
3800 Newgate Avenue
Baltimore
Maryland
MD 21224-6404
USA
Contact: Mr Chris Marsh
Vice President
T: + 1 410 631 6426
F: + 1 410 631 6425
E: chrismarsh@consolenergy.com
W: www.consolenergy.com
Export: Yes
Location: Baltimore, MD 21224
USA
Ownership: CONSOL Energy Inc.
Name of Port Authority: Maryland Port Administration
Throughput Capacity: 18 million net tpa
Total Storage: 1.3 million tons
Vessel Size limitation: Cape size. Dock Length: 1,150 ft., Depth at Dockside: 50 ft., Maximum Draught: 50 ft.
Additional information: Track Accessibility: 4 Inbound - 500 car capacity
Rail Service: NS & CSX

Baton Rouge
Louisiana Mid-Stream Terminals, LLC

8280 YMCA Plaza Drive #2
Baton Rouge
LA
70810
USA
T: + 1 225 324 6038
F: + 1 225 767 9648
E: traffic@lamidstream.com
W: www.cooperconsolidated.com
Export: Yes
Location: CGB LaPlace, Louisiana, USA (LMR MP 133-135 AHP)
Name of Port Authority: Ports of South Louisiana
Throughput Capacity: 6 million tonnes
Total Storage: N/A, mid-stream transfer
Vessel Size limitation: No Restrictions – Governed by SWP Draught
Additional information: Louisiana Mid-Stream One (LMO) - a unique barge-mounted conveying system providing coal and petroleum coke exporters from the Mississippi River with quality control features such as mechanical sampling, magnet, belt scale, and water drainage.

Canonsburg
CONSOL Energy Inc.

CNX Center
1000 Consol Energy Drive
Canonsburg
PA
15317-6506
USA
Contact: Mr Christopher Marsh
General Manager
T: + 1 410 631 6419
E: regispeternel@consolenergy.com
W: www.consolenergy.com

Ceredo
Kanawha River Terminal Inc

Main and River
PO Box 308
Ceredo
West Virginia 25507
USA
Contact: Mr Matt Gaston
Manager
T: + 1 304 526 0753
F: + 1 304 453 5521
Location: Ohio River, Ceredo, WV
Throughput Capacity: 9 million tons

Charleston
Kinder Morgan Terminals - Shipyard River Terminal

Mid Atlantic Regional Office
1801 Milford Street
Charleston
South Carolina 29405
USA
T: + 1 843 843 0543
F: + 1 843 853 3367
W: www.kindermorgan.com
Import: Yes
Location: Charleston, SC, USA
Ownership: Kinder Morgan Terminals
Throughput Capacity: 4,000,000 tons per year
Total Storage: 250,000 Tons Open Storage
50,000 Tons Covered Storage
Vessel Size limitation: Max LOA 750 ft
Max beam 106 feet
Max draft 45 feet
Additional information: Two floating gantry cranes for ship discharge. 20,000 MTPD capacity.

Chicago
KCBX Terminals Company
10730 South Burley Ave.
Chicago
IL
60617
USA
Contact: Mr Tom Kramer
General Manager
T: + 1 773 933 5302
F: + 1 773 933 5309
E: kramert@kochind.com

Conneaut
Pittsburgh & Conneaut Dock Co.
950 Ford Ave
Conneaut
Ohio
44030
USA
Contact: Mr James Rogers
Senior Manager of Dock Operations
T: + 1 440 599 0242
F: + 1 440 599 0245
E: James.Rogers@cnworldwide.com
W: www.cn.ca

Convent
St. James Stevedoring Partners, LLC
9100 Safety Drive
Convent
LA
70723
USA
Contact: Mr John C Crane
Vice President
T: + 1 225 562 3918
F: + 1 225 562 3515
E: jcrane@sjstevedore.com
W: www.sjstevedore.com
Import: Yes
Export: Yes
Location: Lower Mississippi River between New Orleans and Baton Rouge on the East Bank
Ownership: Privately owned
Name of Port Authority: St. James Stevedoring Co., Inc.
Throughput Capacity: 35 million tons per year at midstream
Total Storage: Two parcels of land totaling 350 acres adjacent to the Mississippi River
Vessel Size limitation: Vessels are accepted up to the maximum permitted for transiting the lower Mississippi River.
Additional information: St. James owns and operates 14 floating cranes and 6 unloading anchorage facilities. Proximity to barge operations is the key to our success.
Our marine auger mechanically samples midstream coal.

Convent
IC RailMarine Terminal (ICRMT)
7790 LA, Highway 44
Convent
LA
70723
USA
President
T: + 1 225 562 5201
F: + 1 225 562 9948
E: bruce.conti@cn.ca
Import: Yes
Export: Yes
Location: Mississippi River Milepost 161.0 AHP Left descending bank within Port of South Louisiana Boundaries
Ownership: 100% Wholly-owned subsidiary of CN Railroad
Name of Port Authority: South Louisiana
Throughput Capacity: 5-6 million tonnes depending on product
Total Storage: 135,000 sqm
Vessel Size limitation: Up to Cape size with shifting. Panamax class easily handled. 150' Beam. Over 60' at the dock-access to river controlled by Southwest Pass draught-usually 45'/47'
Additional information: Only lower Mississippi facility that can handle inbound and outbound 110 car unit trains on site. Multi user-product-mode.

Cora
Kinder Morgan Terminals - Cora
Mid Atlantic Regional Office
1801 Milford Street
Charleston
South Carolina
29405
USA
Contact: Mr Brian Feyereisen
T: + 1 843 853 0453
F: + 1 843 853 7971
E: brian_feyereisen@kindermorgan.com
W: www.kindermorgan.com
Location: Cora Terminal, Rockwood, Illinois, USA
Ownership: Kinder Morgan Terminals
Name of Port Authority: Kinder Morgan Terminals
Throughput Capacity: 5MM NT
Total Storage: (3) Warehouses totaling 72,000 NT of storage.
Silo cluster of (16) 3,500 ton silos (12 available).
40 acres open storage
Vessel Size limitation: River Barge Dock. Can accept a 30 barge tow. Can handle 100 barges on site.
Additional information: 3rd party storage of coal

Corpus Christi
Boyd-Campbell Company
210 S.Carancahua
Suite 620
Corpus Christi
Texas
78401
USA
Contact: Mr Sonny Boyd
Manager/Agent
T: + 1 361 884 9321
F: + 1 361 884 9067
E: agency@boyd-campbell.com

Corpus Christi
Port of Corpus Christi - Bulk Terminal
PO Box 1541
222 Power Street
Corpus Christi
TX 78403
USA
Contact: Mr Paul (Skip) Kaup
Bulk Terminal Manager
T: + 1 361 883 1162
F: + 1 361 883 1652
E: paulg@pocca.com
W: www.portofcorpuschristi.com
Import: Yes
Export: Yes
Location: Mid-way along the Texas coast on the Gulf of Mexico
Name of Port Authority: Port of Corpus Christi Authority
Throughput Capacity: 8.2 million tons dry bulk as of 2012
Total Storage: 125 acres of open storage and fabrication sites
Vessel Size limitation: Dry bulk dock 1: Max draught 34ft
Dry bulk dock 2: Max draught 45ft
Additional information: The Port of Corpus Christi has plans drawn to increase capacity within the near future, with new rail loop and rail unloading capacity. Additional loading equipment is also in the future plans. We have acreage available for expansion.

Covington
Cooper/Consolidated
1127 Highway 190
East Service Road
Covington

LA
70433-4929
USA
Contact: Mr Ed K Laurendine
Snr Vice President
T: + 1 251 431 6156
F: + 1 225 473 6161
E: ed.laurendine@coopertsmith.com
W: www.coopertsmith.com
Import: Yes
Export: Yes
Location: Mobile, U.S.Gulf; U.S East Coast; Mexico Gulf Coast
Ownership: Cooper T Smith Corp.
Throughput Capacity: 10,000,000 tpa

Darrow
Burnside Bulk Marine Terminal

4258 Highway 44
Darrow
LA
70725
USA
Contact: Mr Mike Tenchuk
CEO
T: + 1 225 289 5211
F: + 1 225 474 3719
E: mike.tenchuk@ormet.com
W: www.burnsideterminal.com
Import: Yes
Export: Yes
Location: 30º 08'N, 90º 55'W at Mile 170 above Head of Passes at Mississippi River entrance
Ownership: Ormet Primary Aluminium Corporation
Name of Port Authority: Burnside Bulk Marine Terminal
Throughput Capacity: 6.5 mtpa
Total Storage: 500,000 t
Vessel Size limitation: Panamax
Additional information: Barge-mounted Amclyde Model 28 High-Speed Clamshell Crane

Davant
U.S. United Bulk Terminal

14537 Highway 15
Davant
Louisianna
70040
USA
Contact: Mr Brian Miles
T: + 1 504 301 9193
F: + 1 504 834 2772
E: brian.miles@united-mar.com
W: www.unitedbulkterminal.com

Davant
United Bulk Terminals - Davant

14537 Hwy 15
Davant
LA
70040
USA
Contact: Mr Brian Miles
Vice President of Sales & Marketing
T: + 1 504 301 9193
E: brian.miles@unitedbulkterminals.com
W: www.unitedbulkterminals.com
Import: Yes
Export: Yes
Location: US Gulf Coast
Ownership: Oiltanking / Marquard & Bahls
Name of Port Authority: Plaquemine's Port Authority
Throughput Capacity: 12 million tons of dry bulk annually
Total Storage: 4.5 million tons
Vessel Size limitation: No 1 Dock: Max LOA 750', Max beam 106'
No 2 Dock: Max LOA 750', Max beam 103'
Additional information: First inland terminal on the Mississippi (mile marker 55)
Capable of loading two Panamax vessels simultaneously
Fleeting Capacity of 566 barges

Decatur
Kinder Morgan Terminals - Decatur

Lower River Regional Office
7116 Highway 22
PO Box 625
Sorrento
LA
70778-0625
USA
Contact: Mr Hans Luetkemeier
Commercial Director
T: + 1 225 675 0308
F: + 1 225 675 8259
E: hans_luetkemeier@kindermorgan.com
W: www.kindermorgan.com/bulk_terminals/
Location: Lower Mississippi River, USA; Hampton Roads, Virginia, USA.
Name of Port Authority: Kinder Morgan Terminals
Throughput Capacity: Approx. 10,000,000 tpa Lower Mississippi River; Approx. 14,000,000 tpa Hampton Roads
Total Storage: Up to 2.2 million tons, Lower Mississippi River; Up to 1.2 million tons, Hampton Roads.
Vessel Size limitation: Up to mini Capesize vessel, Lower Mississippi River; Up to Capesize vessel, Hampton Roads
Additional information: Kinder Morgan has a number of facilities on several coasts which handle coal. The Kinder Morgan network handled over 31,000,000 tons of coal in 2010, including export and domestic movements.

Decatur
ARTCO

4666 Faries Parkway
Decatur
IL
62526
USA
Contact: Mr Kevin Van Meter
Director
T: + 1 217 424 5556
F: + 1 217 451 4122
E: kevin.vanmeter@adm.com
W: www.admworld.com

Duluth
Krech Ojard & Assoc

227 W 1st St
Suite 200
Duluth
Minnesota
55082
USA
Contact: Mr Kevin Ehrenreich
Director Infrastructure Services
T: +1 218 727 3282
F: +1 218 727 1216
E: kevin.ehrenreich@krechojard.com
W: www.krechojard.com

Evansville
Kinder Morgan Terminals - Evansville

Midwest Regional Office
8500 West 68th Street
Argo
Illinois
60501
USA
Contact: Mr Roy Cook
T: + 1 414 769 1901 ext-120
F: + 1 414 769 1144
E: roy_cook@kindermorgan.com
W: www.kindermorgan.com
Location: Evansville, Indiana, USA
Ownership: Kinder Morgan Terminals
Name of Port Authority: Port of Evansville
Throughput Capacity: 7,500 tons per month
Total Storage: 3,000 tons
130,000 sq. ft. of heated warehouse space
142' Diameter Dome
Vessel Size limitation: Max Draught - 9' 6"
Additional information: Can handle 3 barges at one time. Barge to truck/ barge to storage. 3rd party storage of coal.

Georgetown
Stevedoring Services of America (SSA)

609 Kaminski Street
Georgetown
SC
29442
USA
Contact: Mr Buddy Wiggins
Operations Manager
T: + 1 843 971 2900
F: + 1 843 971 2919
E: buddy.wiggins@ssamarine.com

Georgetown
WSI of the Southeast llc

PO Box 1498
Georgetown
SC
29442
USA
Contact: Mr Perry Collins
General Manager
T: + 1 843 527 2823
F: + 1 843 527 1179
E: perry.collins@wsijason.com
W: www.wsijason.com
Additional information: We offer traveling crane operators for self-sustaining vessels in all U.S. ports.

Grand Rivers
Kinder Morgan Terminals - Grand Rivers

Mid Atlantic Regional Office
1801 Milford Street
Charleston
South Carolina
29405
USA
T: + 1 843 722 2878
F: + 1 843 722 5720
W: www.kindermorgan.com
Location: Grand Rivers Terminal, Grand Rivers, Kentucky, USA
Ownership: Kinder Morgan Terminals
Total Storage: 1,000,000 tons
Vessel Size limitation: Can handle 30' x 200' barges
12' max draft
Can handle up to 70 barges in fleet at one time
Additional information: 3rd party storage of coal

Houston
Tx Tx Corporation

11811 Interstate
10 East
Suite 630
Houston
Texas
77029
USA
Contact: Mr Gary Nixon
T: + 1 713 453 0664
F: + 1 713 453 2756

Houston
Cooper/T. Smith Stevedoring

2315 McCarty Drive
Houston
Texas
77029
USA
Contact: Mr Britton Cooper
Vice President Operations
T: + 1 713 675 0017
F: + 1 713 675 2370
E: britton.cooper@coopertsmith.com
W: www.coopertsmith.com

Houston
Texas Terminals LP

15902 Peninsula Blvd
Houston
Texas
77015
USA
Contact: Mr Robert Schwarz
General Manager
T: + 1 281 457 3131
F: + 1 281 457 3232
E: Info@TexasTerminals.com
W: http://texasterminals.com/

Jacksonville
Jacksonville Electric Authority

21 West Church St
Jacksonville
FL 32202
USA
Contact: Mr Wanyonyi Kendrick
Chief Information Officer
T: + 1 904 665 7217
E: kendwj@jea.com
W: www.jea.com
Import: Yes
Location: South East United States

Kenova
Big Sandy Terminal Inc

Big Sandy River Road
Kenova
West Virginia
25530
USA
Contact: Mr Alan Johnson
President
T: + 1 304 453 4000
F: + 1 304 453 1117
E: alan.johnson@nscorp.com
Location: Neal, WV
Throughput Capacity: 7 million tons
Total Storage: 250,000 tons

Long Beach
Cooper/T. Smith Stevedoring

PO Box 229
Long Beach
California
90801
USA
Contact: Mr Ed Viner
Assistant Vice President/Operations Manager
T: + 1 562 436 2259
F: + 1 562 590 0547
E: ed.viner@coopertsmith.com
W: www.coopertsmith.com

Louisville
Kinder Morgan Terminals - Louisville

Midwest Regional Office
8500 West 68th Street
Argo
Illinois
60501
USA
Contact: Mr William Patterson
T: + 1 708 496 2891
F: + 1 708 496 2540
E: william_patterson@kindermorgan.com
W: www.kindermorgan.com
Location: Louisville, Kentucky, USA
Ownership: Kinder Morgan Terminals
Throughput Capacity: 10,000 tons per month
Total Storage: 132,000 sq ft warehouse
1 acre of outside storage
Vessel Size limitation: Max Draft - 11 feet
Additional information: 2 docks which can each handle 1 barge
35 ton bridge crane
225 ton cable crane.
3rd party storage of coal.

Louisville
Schaefer-Cooper Warehousing

7200 Riverport Drive
Louisville
Kentucky
KY 40258
USA
Contact: Mr Jeff McCord
Sales Manager
T: + 1 317 374 5240
E: jeff.mccord@coopertsmith.com
W: www.coopertsmith.com
Location: Ohio River
Ownership: Jefferson County, KY, and the City of Louisville
Throughput Capacity: 7 million tons
Total Storage: 200,000 tons

Mandeville
Consolidated Terminals & Logistics Company

PO Box 249
Mandeville
LA
70470-0249
USA
Contact: Mr Brent C Mahana
Director of Sales & Marketing
T: + 1 985 871 4403
F: + 1 985 867 3509
E: Brent.Mahana@cgb.com
W: www.ctlconline.com
Import: Yes
Export: Yes
Location: Lower Mississippi River, Arkansas River, Ohio River, Illinois River, Upper Mississippi River
Ownership: Consolidated Terminals & Logistics Company
Name of Port Authority: Ports of S. Louisiana, Ports of Indiana
Throughput Capacity: 20 million tonnes
Total Storage: Various by location
Vessel Size limitation: Inland River Terminals, Mississippi River Stevedoring
Additional information: Consolidated Terminals & Logistics Company is a Division of CGB Enterprises, Inc.

Mandeville
Cooper/Consolidated

PO Box 249
Mandeville
LA
70470-0249
USA
Contact: Mr Brent C Mahana
General Manager - Sales
T: + 1 985 871 4403

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sales@cooper-consolidated.com 985-871-4403

F: + 1 985 867 3509
E: Brent.Mahana@cgb.com
W: www.cooperconsolidated.com
Import: Yes
Export: Yes
Location: US Gulf & Inland River System
Ownership: Cooper T. Smith Stevedoring
Consolidated Terminals & Logistics Company
Name of Port Authority: Ports of S. Louisiana, Ports of Baton Rouge
Throughput Capacity: 20 million tonnes
Total Storage: Various by location
Vessel Size limitation: No Restrictions – Governed by SWP Draught
Additional information: Services offered – Logistic Package Solutions that can be customized to include all or some of the following: Stevedoring, Barging, Fleeting, Vessel Chartering, Inland Terminaling, Trucking, Rail, Warehousing.

Metropolis
AEP/Cook Coal Terminal

PO Box 870 3316 N. US 45 Rd.
Metropolis
IL
62960
USA
Contact: Mr Robert Korte
Plant Manager
T: + 1 618 524 9345
F: + 1 618 524 1968
E: rskorte@aep.com
W: www.aep.com

Milwaukee
Milwaukee Bulk Terminals

1900 S Harbour Drive
Milwaukee
WI
53207
USA
Contact: Mr Roy Cook
President
T: + 1 414 769 1901 x120
F: + 1 414 769 1144
E: mbtrnc@aol.com

Mobile
Alabama State Port Authority

PO Box 1588
Mobile
AL
36633
USA
Contact: Mr James K. Lyons
Director / CEO
T: + 1 334 441 7202
F: + 1 251 441 7216
W: www.asdd.com
Import: Yes
Export: Yes
Location: U.S. Gulf of Mexico, Port of Mobile
Ownership: Own
Name of Port Authority: Alabama State Port Authority
Vessel Size limitation: 45 ft. draught
Additional information: Undergoing an expansion. New import berth. Throughput capacity of 30-32 Million Tons when complete.

Mobile
Cooper/T. Smith Stevedoring

118 North Royal Street
P O Box 1566
Mobile
Alabama
36602
USA
Contact: Mr John Murray III
VP Operations
T: + 1 251 415 7360
F: + 1 251 431 6200
E: john.murray@coopertsmith.com
W: www.coopertsmith.com

Mobile
McDuffie Coal Terminal

Alabama State Port Authority
PO Box 1588
Mobile
Alabama
36633
USA
Contact: Mr Melvin Barnett
Superintendent - Operations
T: + 1 251 441 7675
F: + 1 251 441 7216
E: mbarnett@asdd.com
W: www.asdd.com
Import: Yes
Export: Yes
Location: Gulf coast of America
Name of Port Authority: Alabama State Port Authority
Throughput Capacity: 20 million tonnes
Total Storage: 2.3 million tonnes ground capacity
Vessel Size limitation: Max Draught 45ft ,1 ship loader max LOA 980' Beam 180' Air Dr.64' 2 ship un-loaders max LOA 900' Beam 140' Air Draught 85'
Additional information: 3 berths

Monaca
Colona Terminal Services

1755 Pennsylvania Ave
Monaca
Pennsylvania
15061
USA
Contact: Mr Mark McClymonds
President
T: + 1 724 368 8040
F: + 1 724 368 0550
E: sales@colonatransfer.com
W: www.colonatransfer.com
Location: 23.5 mile marker on the Ohio River
Ownership: McClymonds Supply & Transit Co Inc
Name of Port Authority: Pittsburgh Port Authority
Throughput Capacity: Can offload a unit train (130 rail cars) in under twelve hours and offload barges at a rate of 450 tph.
Total Storage: 120 acres of open storage and 360,000 square feet of covered warehouse space
Vessel Size limitation: Harbor can hold up to 60 barges with 4 barges worked at a time.
Additional information: Colona Transfer serves the greater Pittsburgh area. Our terminal is the northern most point on the Ohio River and we offer access to the bulk commodity markets of the Northeastern United States.

Mount Pleasant
Strachan Shipping Co

950 Houston Northcutt Boulevard
Watermark Plaza, Suite 200
Mount Pleasant
SC 29464
USA
Contact: Mr Bill Adams
T: + 1 843 856 1000
F: + 1 843 856 1013

Myrtle Grove
International Marine Terminals

Myrtle Grove Terminal
18559 HWY 23
Myrtle Grove
LA
70083-9722
USA
Contact: Mr Adam Smith

Coaltrans

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Organised by Coaltrans Conferences

General Manager
T: + 1 504 310 5000
F: + 1 255 656 2071
E: adam_smith@kindermorgan.com
W: www.kindermorgan.com
Export: Yes
Location: US Gulf
Ownership: 2/3 Kinder Morgan 1/3 American Electric Power
Name of Port Authority: Plaquemines Parish Port Harbor & Terminal District
Throughput Capacity: 15 million tons
Total Storage: 80 acres
Vessel Size limitation: 850 LOA, 140 Beam, Draught= to SW Pass
Additional information: The terminal operates 24 hours a day, Sundays and holidays included.

New Haven
New Haven

Gateway Terminal
400 Waterfront Street
New Haven
CT
06512
USA
Contact: Mr Tom Dubno
T: + 1 203 230 0778
F: + 1 203 437 7251

New Orleans
Cooper/T. Smith Stevedoring

One Canal Place
365 Canal Street
Suite 1450
New Orleans
LA
70130
USA
Contact: Mr Eric Hansen
Vice President
T: + 1 504 569 2160
F: + 1 504 569 2188
E: eric.hansen@coopertsmith.com
W: www.coopertsmith.com

Newark
Metal Management NE

Foot Hawkins Street
Newark
New Jersey
NJ 07105
USA
Contact: Mr Mike Henderson Jr.
T: + 1 973 344 5575 / 4570
F: + 1 973 344 8155
E: mhendersonjr@mtlm.com
W: www.mtlm.com

Newport News
Dominion Terminal Associates LLP

600 Harbor Road
Pier 11
Newport News
Virginia
VA-23607
USA
Contact: Mr Rick Cole
President
T: + 1 757 245 2275
F: + 1 757 247 9729
E: rcole@dominionterminal.com
W: www.dominionterminal.com
Export: Yes
Location: Newport News, Virginia, USA
Port of Hampton Roads
Ownership: Alpha Natural Resources (40.6 %); Peabody Energy (37 .5 %); Arch Coal Company (21.9 %)
Name of Port Authority: Dominion Terminal Associates
Throughput Capacity: 22 million tpa (net tonnes)
Total Storage: 243,000 sqm
Vessel Size limitation: 304.8m LOA; 50m beam; 15.24m at MLW

Newport News
Kinder Morgan -Pier IX Terminal

1900 Harbor Access Road
Newport News
Virginia
23607
USA
Contact: Mr Joseph De Matteo
Terminal Manager
T: + 1 757 928 1520
F: + 1 757 928 1560
E: Joseph_DeMatteo@kindermorgan.com
W: www.kindermorgan.com
Import: Yes
Export: Yes
Location: North America East Coast Mid-Atlantic
Ownership: Kinder Morgan Bulk Terminals
Name of Port Authority: Port of Hampton Roads
Throughput Capacity: 12 M tpa
Total Storage: 1.4 MT
Vessel Size limitation: 1000ft LOA, 150ft Beam, 50ft Draught

Norfolk
Norfolk Southern - Lamberts Point

Coal Business Group
110 Franklin Rd
Roanoke
VA
24042-0026
USA
Contact: Mr Mark H Bower
Group VP Export & Metallurgical Coal Marketing
T: + 1 540 985 6711
F: + 1 540 985 6398
E: Mark.Bower@nscorp.com
W: www.nscorp.com
Export: Yes
Location: Norfolk, VA
Ownership: 100% owned by Norfolk Southern
Name of Port Authority: Norfolk Southern
Throughput Capacity: 40 million net tons/year
Total Storage: No ground storage, cargo assembly in rail cars
Vessel Size limitation: Draft 50 feet
Additional information: Norfolk Southern offers the premier export coal blending facility in the United States

Norfolk
Virginia Maritime Association

236 East Plume Street
Norfolk
Virginia
23510
USA
Contact: Mr David
Administrator
T: + 1 757 622 2639
F: + 1 757 622 6302
E: vma@portofhamptonroads.com
W: www.portofhamptonroads.com

North Charleston
Cooper/T. Smith Stevedoring

2030 Hayter Street
Building 58A Pier C
North Charleston
South Carolina
29405
USA
Contact: Mr Ronnie Turner
Vice President
T: + 1 843 744 1613
F: + 1 843 554 2975
E: ronnie.turner@coopertsmith.com
W: www.coopertsmith.com

Owensboro
Kinder Morgan Terminals - Owensboro

Midwest Regional Office
8500 West 68th Street
Argo
Illinois
60501
USA
Contact: Mr William Patterson
T: + 1 708 496 2891
F: + 1 708 496 2540
E: william_patterson@kindermorgan.com
W: www.kindermorgan.com
Location: Owensboro, Kentucky, USA
Ownership: Kinder Morgan Terminals
Throughput Capacity: 3,000 tons per day
Total Storage: 7,500 tons
Vessel Size limitation: Max Draft - 9' 6"
Additional information: Can fleet up to 60 barges. Can handle work up to 5 at a time. 3rd party storage of coal.

Palmer
Port MacKenzie, Matanuska-Susitna Borough

350 E. Dahlia Avenue
Palmer
Palmer
AK
99645
USA
Contact: Mr Marc Van Dongen
Port Director
T: + 1 907 357 6153
F: + 1 907 357 6836
E: Port.Mackenzie@matsugov.us
W: www.portmackenzie.com
Export: Yes
Location: Upper Cook Inlet, Wasilla, AK
Ownership: Port MacKenzie/Matanuska-Susitna Borough
Total Storage: 14 square miles of uplands are available for commercial lease
Vessel Size limitation: Cape Class and Panamax vessels have safely loaded at our facility. Our Deep-Draft Dock is at -60' MLLW

Philadelphia
Agway

3501 S C Columbus BLVD
Pier 122 South
Philadelphia
PA
19148
USA
Contact: Mr George Moore
Foreman
T: + 1 215 467 5861
F: + 1 215 467 5874
E: gmoore@growmark.com
W: www.agway.com

Port Allen
Associated Terminals of Baton Rouge/Port Allen

1133 Mahaffey Road
Port Allen
Louisiana
70876
USA
Contact: Mr Barry Hoth
Vice President
T: + 1 985 479 6358
F: + 1 985 479 6360
E: barry@associatedterminals.com
W: www.associatedterminals.com

Port Arthur
Pabtex

209 Taft Ave. Extension
PO Box 3635
Port Arthur
TX 77643
USA
Contact: Mr Greg Alder
Terminal Manager
T: + 1 409 962 8343
F: + 1 409 962 8581
E: gregalder@savageservices.com
W: www.savageservices.com
Export: Yes
Location: Port Arthur, Texas, USA
Ownership: KCS Railroad
Name of Port Authority: Port of Port Arthur
Throughput Capacity: 6 million tons
Total Storage: 900,000 metric tons
Vessel Size limitation: Panamax vessels. 38 feet + or – 2 feet
Additional information: It is possible to export coal. The main product is petcoke.

Portsmouth
Sprague Energy

Two International Drive
Suite 200
Portsmouth
New Hampshire
03801
USA
Contact: Mr James Therriault
VP Marketing
T: + 1 603 430 5372
F: + 1 603 766 7448
E: jtherriault@spragueenergy.com
W: www.spragueenergy.com

Providence
Waterson Terminal Services

35 Terminal Road
Providence
RI
02905
USA
Contact: Mr Christopher Waterson
General Manager
T: + 1 401 461 9900 ext 230
F: + 1 401 461 6240
E: chris@watersonllc.com
W: www.watersonllc.com
Import: Yes
Export: Yes
Location: East Coast US
Ownership: Private Terminal
Throughput Capacity: 2 million +
Total Storage: 20+ Acres
Vessel Size limitation: 40 ft draught. No LOA, beam, or DWT limitations

Reserve
Associated Terminals LLC

1342 Highway 44
Reserve
Reserve
Louisiana
70084
USA
Contact: Mr Todd Fuller
Sr. Vice President
T: + 1 985 536 4520
F: + 1 985 536 4521
E: todd@associatedterminals.com
W: www.associatedterminals.com

Reserve
Associated Terminals at Globalplex

1342 Highway 44
Reserve
Louisiana
70084
USA
Contact: Mr Barry Hoth
Vice President
T: + 1 985 479 6358
F: + 1 985 479 6360
E: barry@associatedterminals.com
W: www.associatedterminals.com

Richmond
Levin Richmond Terminal Corporation (LRTC)

402 Wright Avenue
Richmond
CA
94804
USA
Contact: Ms Barbara N. O'Neill
Director of Marketing - Bulk Operations
T: + 1 510 307 4009
F: + 1 510 236 0129
E: barbara@levinterminal.com
W: www.levinterminal.com
Export: Yes
Location: West Coast of the United States
Ownership: Private Marine Terminal & Stevedore
Name of Port Authority: Levin Richmond Terminal
Throughput Capacity: 1.2 Million Metric Tons
Total Storage: 50,703 sqm
Vessel Size limitation: Panamax-size vessel
LOA 228.6 m
62,000 MT Max Cargo
Additional information: Also own Short Line railroad - Richmond Pacific Railroad. Unload unit trains of coal.

Roanoke
Ashtabula Coal Pier

110 Franklin Road
Roanoke
VA
24042-0026
USA
Contact: Mr Randy Carter
Director
T: + 1 540 985 6795 / + 1 540 524-6044
F: + 1 540 985 6398
E: Randy.Carter@nscorp.com
Location: Lake Erie, Ohio
Throughput Capacity: 7 million tons
Total Storage: Up to 1.2 million tons
Vessel Size limitation: Lakesize

Salt Lake City
Savage Companies

6340 South
3000 East Suite 600
Salt Lake City
Utah
84121
USA
Contact: Mr Nathan Savage
Director Marketing Coal & Petcoke
T: +1 801 944 6600
E: nathans@savagecompanies.com

Sandusky
Sandusky Dock Corporation, Pier #3

2705 West Monroe Street
PO Box #899
Sandusky

Ohio
44870
USA
Contact: Mr Jeff Smith
Superintendent
T: + 1 419 626 1215
F: + 1 419 483 1296
E: jeff.smith@nscorp.com
W: www.nscorp.com
Location: Port of Sandusky Harbor at Sandusky, Ohio
Ownership: Norfolk Southern
Throughput Capacity: 7 million tons
Total Storage: 900,000 tons

Sandusky
CT Stevedoring

2705 West Monroe Street
PO Box 2647
Sandusky
OH
44870
USA
Contact: Mr Ron House
General Manager
T: + 1 419 626 0801
F: + 1 419 626 8248
E: Ron.house@coopertsmith.com
W: www.coopertsmith.com

Seattle
Stevedoring Services of America

1131 SW Klickitat Way
Seattle
WA
98134
USA
Pay Roll
T: + 1 206 623 0304
F: + 1 206 623 0179
E: info@ssamarine.com
W: www.ssofa.com

Seward
Aurora Energy Services, LLC

PO Box 1789
Seward
Alaska
99664
USA
Contact: Mr Victor Stoltz
General Foreman
T: + 1 907 224 3120
F: + 1 907 224 3921
E: vstoltz@usibelli.com
Export: Yes
Location: Latitude 60˚ 07' 28" N Longitude 149˚ 07' 00" W South Central Gulf Coast Alaska
Ownership: Terminal Owned by Alaska Railroad Corp. Operated by Aurora Energy Services, LLC
Name of Port Authority: ARRC
Throughput Capacity: 1.5 million MT
Total Storage: 112,500 sqm
Vessel Size limitation: LOA 274m / Beam 38m / Draught 14.9m
100,000+ dwt
Additional information: Fixed position luffing and slewing type shiploader. Largest vessel loaded DWT 96,042mt
Loaded summer displacement 111,406mt SSW
Ice Free Year Round Port

St Louis
Cahokia Marine Services

1441 Hampton Avenue
St Louis
MO
63139
USA
Contact: Mr John Brereton

Vice President Marketing
T: + 1 314 647 7529
F: + 1 314 647 8084
E: jbrereton@slay.com

Superior
Superior Midwest Energy Terminal

PO Box 787
Superior
Wisconsin
54880
USA
Contact: Mr Fred Shusterich
Vice President
T: + 1 715 392 9807
F: + 1 715 392 9137
E: fshusterich@midwestenergy.com
W: www.midwestenergy.com

Tampa
United Maritime Group

601 S Harbour Island Boulevard
Suite 230
Tampa
Florida
33602
USA
Contact: Mr Robin Hastings
Vice President, Commercial
T: + 1 813 209 4218
F: + 1 813 273 0248
E: sales@united-mar.com
W: www.unitedmaritimegroup.com
Export: Yes
Location: Davant, Louisiana (south of New Orleans on the Mississippi River)
Ownership: United Maritime Group
Throughput Capacity: Approximately 12M tpa
Total Storage: 1.2M sqm (developed) / 4.4M sqm (total)
Vessel Size limitation: LOA 229 meters +
Draught 14.3m (controlling draught is the SW pass of the Mississippi River)

Tampa
Kinder Morgan Terminals - Tampaplex Terminal

Southeast Regional Office
4942 Port Sutton Road
Tampa
Florida
33619
USA
Contact: Mr Marvin Williams
T: + 1 813 620 2705
F: + 1 813 620 2096
E: marvin_williams@kindermorgan.com
W: www.kindermorgan.com
Location: Tampa, Florida, USA
Ownership: Kinder Morgan Terminals
Total Storage: (3) Warehouses totaling 72,000 NT of storage
Silo cluster of (16) 3,500 ton silos (12 available)
40 acres open storage
Vessel Size limitation: Max Draft - 36 feet
Additional information: 3rd party storage of coal.

Texas City
Oxbow Carbon & Minerals LLC

PO Box 100
Texas City
TX
77592
USA
Contact: Mr Don Covert
Facility Manager
T: + 1 409 944 3500
F: + 1 409 944 3523
E: Don.Covert@oxbow.com
W: www.oxbow.com

Toledo
CSX Coal Dock

PO Box 8279
Station A
Toledo
OH
43605
USA
Contact: Mr Paul LeCompte
T: + 1 419 697 2353
F: + 1 419 697 2320
E: paul_lecompte@csx.com
W: www.csx.com
Import: Yes
Export: Yes
Location: Western end of Lake Erie at the mouth of the Maumee River.
Ownership: Port of Toledo
Vessel Size limitation: 1000 ft + dock
Additional information: Traveling Coal Machine with 800ft range.
Coal is transferred from rail cars onto vessels for shipment to industries and public utilities scattered throughout the Great Lakes region and overseas.

Toledo
Midwest Terminals of Toledo International, Inc

3518 St. Lawrence Drive
Toledo OH
43605
USA
Contact: Mr Jason Lowery
Director of Business Development
T: + 1 419 897 6868 ext 211
F: + 1 419 691 7016
E: jason.lowery@mwtti.com
W: www.midwestterminals.com
Import: Yes
Export: Yes
Location: Lake Erie at the mouth of the Maumee River
Ownership: Port of Toledo
Vessel Size limitation: Seaway draught
Additional information: Foreign Trade Zone
Five gantry plus one mobile crane, dry bulk conveyor system, heavy material handling equipment.

Wheelersburg
Norfolk Southern - Wheelersburg Terminal

110 Franklin Road
Roanoke
Virginia 24042-0026
USA
Contact: Mr Randy Carter
Director Industrial Coal Marketing & Transloading
T: + 1 540 985 6795
F: + 1 540 985 6398
E: Randy.Carter@nscorp.com
W: www.nscorp.com
Location: Ohio River at Wheelersburg, OH
Ownership: Norfolk Southern
Throughput Capacity: 9 million tons
Total Storage: 1 million tons

Wilmington
Metro Ports

348 Shipyard Blvd
Wilmington
California NC 28412
USA
Contact: Mr Rob Waterman
Vice President, Bulk Operations
T: + 1 310 816 6557
F: + 1 310 816 6519
E: rob.waterman@metsteco.com
W: www.metsteco.com

Venezuela

Maracaibo
Carbones del Guasare SA

Centro De Operaciones Guasare
Av 9B Edif Banco
Industrial Piso 5
Maracaibo
Zulia
4001
Venezuela
Contact: Mr Jose Rios
Marketing
T: + 58 261 797 3831
F: + 58 261 790 6664
E: jrios@guasare.com
W: www.guasare.com
Export: Yes
Location: Maracaibo, Venezuela
Throughput Capacity: 7.0 mio tpa

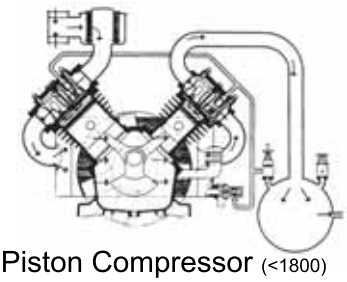
Maracaibo
BDV - Bulkguasare de Venezuela, SA

(subsiduary of Coeclerici Logistics SPA)
Calle 77
Esq. Av 3C - Edif. Los Cerros
Piso 4. of 4B
Maracaibo
Zulia
4001
Venezuela
Contact: Captain Guido Villani
Terminal Manager
T: + 58 414 364 1331
F: + 58 261 793 3576
E: guidus2000@hotmail.com
W: www.coeclerici.com
Export: Yes
Location: Lake of Maracaibo
Ownership: Bulkguasare de Venezuela, SA
Name of Port Authority: Carbones del Guasare
Throughput Capacity: 8,000,000 tpa
Total Storage: 60,000 t
Vessel Size limitation: 44m beam
Additional information: Commercial **Contact:** Capt. Giordano Scotto
Coeclerici Logistics Spa
Piazza Diaz, 7
20123 Milano, Italy
Tel: + 39 02 62469435
Fax: + 39 02 62469444
email: newprojects@coeclerici.com

Santa Cruz de Mara
Santa Cruz Coal Terminal

Carbones del Guasare SA
Terminal de Embarque
Edificio Banco Industrial, Piso 3
Santa Cruz de Mara
Edo Zulia
4002
Venezuela
Contact: Ms Larissa Chacin
Marketing Manager
T: + 58 261 790 6620
E: lchacin@guasare.com
W: www.guasare.com
Export: Yes
Location: North East of Maracaibo Lake
Name of Port Authority: Carbones del Guasare
Total Storage: 100,000 tonnes Santa Cruz Terminal + 60,000 tonnes in Bulk Wayuu floating station
Additional information: Capacity: 25,000 tonnes per day

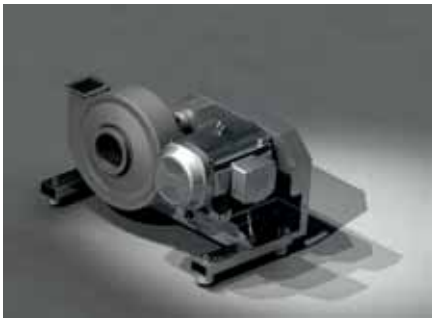
www.NEUERO.com



Piston Compressor (<1800)

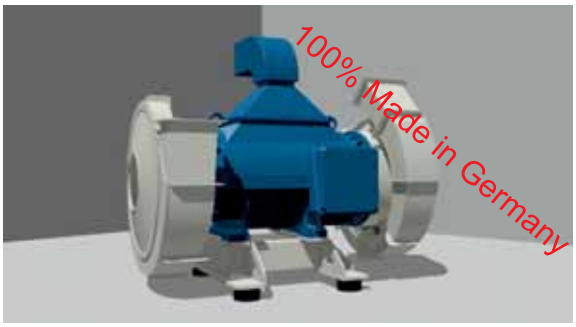
Roots Blower (1900)

Fan with Air Flow Regulator (1960)



Fan with frequency inverter and automatic belt tension (2000)

TURBO POWER single stage (2009)



TURBO POWER double stage (2011)

MULTIPORT SHIPUNLOADERS ADVANTAGE

- RELIABLE
- LOWEST POWER CONSUMPTION
- EFFICIENT
- 100% BLOWER DIRECT DRIVE - No V-Belts, No cardan joints, No bearing blocks...

With TURBO POWER Direct Drive (single or double) on the motor shaft. With temperature and vibration bearing monitoring control (upper right picture).

224-2012
NEUERO Industrietechnik für Förderanlagen GmbH
✉ Neuerostr. 1 ● 49324 Melle ● Germany
T: +49 5422 9503 0 ● **F:** +49 5422 9503 50 ● **E:** neuero@neuero.de **H:** www.neuero.de

Managing complexity.

Coeclerici S.p.A.
Piazza Generale Armando Diaz, 7
20123 Milan – Italy
Telephone: +39 02 62469 451
Email: newprojects@coeclerici.com
www.coeclerici.com

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