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Soya trade provides valuable support

Recent news about import demand for commodities in various countries has not greatly changed the picture evolving in previous months. Signs of additional volumes are visible, but there are also adverse influences pointing to possible reductions, or just lack of growth. This view implies very limited prospects for any overall expansion of global seaborne dry bulk trade during 2016.

Reports about economic activity around the world have not yet indicated that a pick up is beginning or imminent. In the group of advanced economies (mainly USA, Europe, Japan and Korea) average GDP growth similar to last year's slow rate of about 2% still seems to be the most likely outcome for this year. In China a continued slowdown from last year's 6.9% is widely expected.

Grain

One aspect of trade for which the outlook is definitely positive is soya, included in the 'grain' category. Global soyabeans and meal movements are being supported by robust consumption trends, coupled with either insufficient or absent domestic output of beans in many of the consuming countries, resulting in rising imports.

The latest US Dept of Agriculture forecasts for the current 2015/16 marketing year ending September 2016 are summarized in table 1. Total world soya trade, most of which is seaborne, has been revised upwards again to 193mt (million tonnes), a 6% increase. Imports into China comprise over two-fifths of the total, and are forecast to grow by 5% to 82mt this year, accompanied by larger quantities into other Asian countries and elsewhere.

Iron ore

In the iron ore trade sector restraining elements are clearly visible. A number of major raw materials importing countries are facing difficulties in raising steel production, and in some cases probably will not be able to maintain output at last year's level. However, relatively low international prices for iron ore could support purchases.

Steel production in the dominant iron ore importing country, China, seems especially vulnerable to downwards pressure, amid slowing activity in consuming industries. Chinese buyers may reduce last year's 953mt annual iron ore imports in 2016, despite a firm start to the year. A more optimistic view suggests only a small increase, and a similar outlook is applicable to the other main importers, Europe, Japan and Korea.

Coal

Prospects for coal trade also suggest severely restricted scope for resumed global growth in volume this year. Many major importers, including Japan, Europe and China are experiencing unfavourable influences, mainly reflecting switching towards cleaner fuels or expanding use of renewable energy sources. Nevertheless, the outlook is not entirely negative.

Uncertainty surrounds India's coal imports. During the past twelve months it became clear that earlier expectations of a sustained rapidly rising trend were no longer so plausible. An estimated 4% reduction to about 215mt was seen in 2015, amid rapid growth in production from India's domestic coal mines. Conversely, a group of smaller Asian buyers — Malaysia, Philippines, Thailand and Vietnam — evidently increased imports by about 10% to well over 60mt last year, and further growth is likely.

Minor bulks

Among minor bulk commodities, trade in steel products (coil, sheet, plate and many other types) has been prominent. Estimates of global seaborne movements in 2015 suggest that the total may have been about 5% higher at over 320mt. A key part of this enlargement was another big rise in sales by Chinese mills, which grew by 20% to 112mt. Whether these trends will be extended this year is unclear.

Bulk carrier fleet

In the Panamax (65–99,999dwt) bulk carrier size group fleet expansion decelerated last year to under 2%, as shown in table 2. A similar growth rate is estimated for this year, despite a possibility of higher newbuilding deliveries, because the pace of scrapping is also expected to gain momentum.

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

	2010/11	2011/12	2012/13	2013/14*	2014/15*	2015/16*
European Union	34.4	32.9	29.5	31.4	32.7	33.9
China	52.6	59.3	59.9	70.4	78.4	82.0
Other Asia	27.2	27.5	27.8	30.3	31.7	34.0
Others	31.5	30.6	32.6	37.6	39.6	43.2
World total	**145.7**	**150.3**	**149.8**	**169.7**	**182.4**	**193.1**
% change from previous year	+3.8	+3.3	-0.4	+13.3	+7.4	+5.9

source: US Dept of Agriculture, 9 March 2016) *Oct/Sep marketing years* **forecast*

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

	2011	2012	2013	2014	2015	2016*
Newbuilding deliveries	21.8	27.1	19.9	12.8	9.9	11.0
Scrapping	5.2	8.7	5.0	4.8	6.7	8.0
Losses	0.2	0.0	0.0	0.0	0.0	0.0
Plus/minus adjustments	0.2	–0.3	0.1	0.1	–0.3	0.0
World fleet at end of year	**151.1**	**169.2**	**184.2**	**192.3**	**195.2**	**198.2**
% change from previous year-end	+12.5	+12.0	+8.9	+4.4	+1.5	+1.5

source: Clarksons (historical data) & BSA 2016 forecasts **forecast*

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Asian coal trade 2016

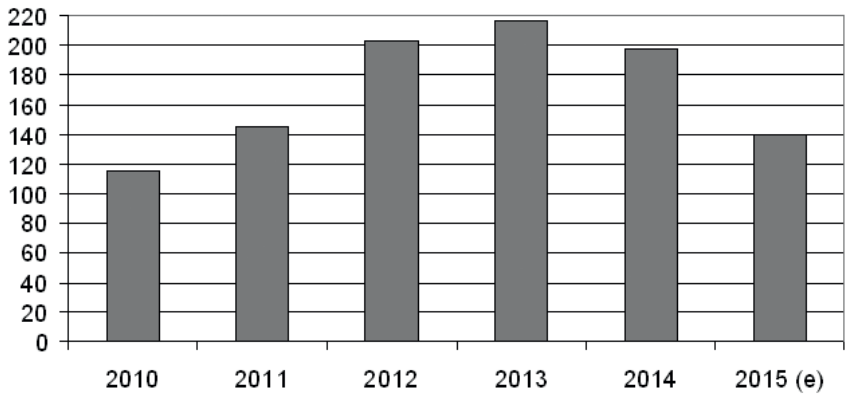
Dr Tim Jones, e-coal.com

Coal trade in the Asian market has faced some enormous problems over the past year, with international shippers seeing particular challenges in China and India. The Indonesian exporters have been badly impacted by new thermal coal quality regulations, but not all has been bad. Although prices are very low, the Australians have managed to ship substantial tonnage of thermal coal to their traditional customers in Japan, Korea, and Taiwan. Some oversupply issues have been addressed over the past year which may begin to have some effect on the market over the course of 2016 and beyond.

In China, the slump in domestic thermal coal prices as well as weaker demand during 2015 led to a substantial decrease in imports of thermal coal and lignite. Volume decreased by 66.5mt (million tonnes) from 198.1mt in 2014 to reach only 131.6mt last year. The tighter controls on coal quality had a heavy impact on imports as soon as the year got under way, and the total for the year was even lower than had been expected by some analysts.

Trade with China took a major hit at the start of last year when the country's new coal quality legislation came into force, and thermal coal import tonnages were well below those seen in the comparable period in the previous year. Total volumes in the first quarter last year were down to about half that seen in

Chinese thermal coal imports (mt)



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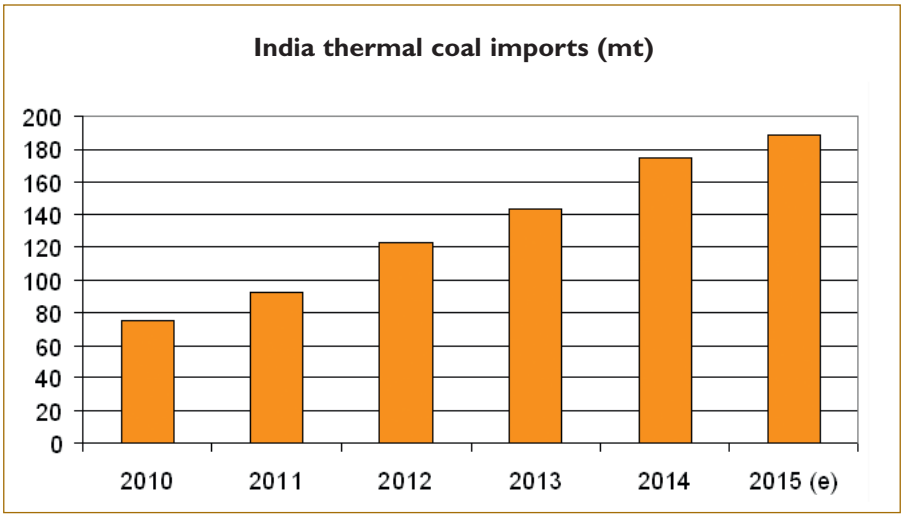
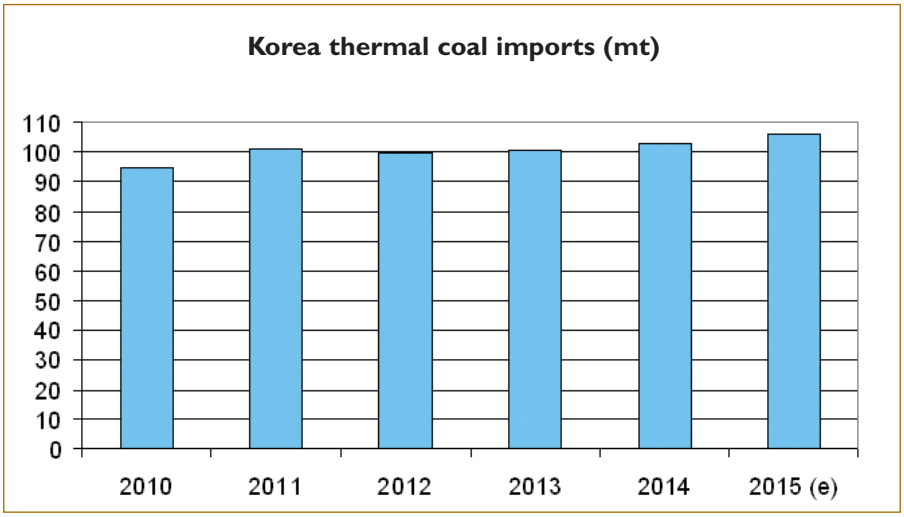
the same quarter in 2014. Throughout the course of the past twelve months or so, the difference became a little more optimistic for coal exporters to China, but by the end of 2015 the total thermal coal taken by the Chinese buyers was more than a third lower than in the previous year at some 34% less. Thermal coal imports reached just 83.4mt which was 51.1mt lower than in the previous year, while imports of lignite decreased by 15.3mt to only 48.3mt.

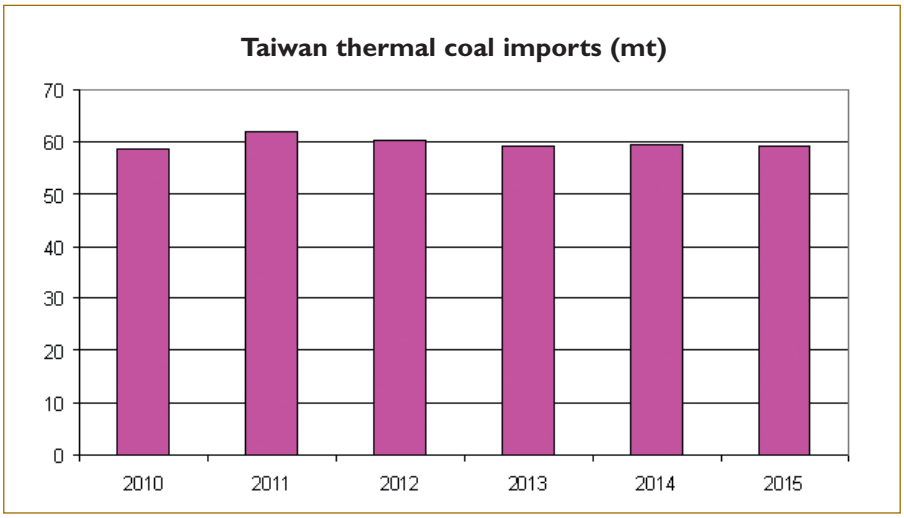
The first nine months of 2015 saw thermal coal demand in China's power generating sector and general industry sector fall by 3.3% and 6% respectively as weakness persisted in both. The two major coal consuming sectors performed poorly and together they accounted for a 4.5% drop in thermal coal demand compared with the previous year. As winter approached there were reports of a recovery in demand for thermal coal in the electricity and heating sectors, but overall thermal coal demand in the country is believed to have decreased by some 3.5% in 2015. While the Chinese economy is expected to improve this year, the thermal coal consuming sectors are likely to remain weak because the extra energy demand is expected to be satisfied by other fuels until the situation improves significantly.

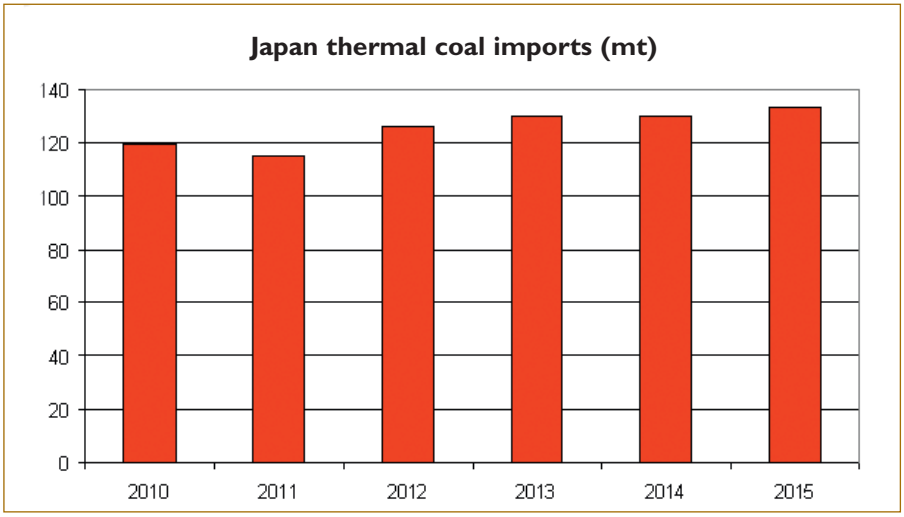
All thermal coal supplier countries were heavily impacted by the new Chinese quality restrictions in 2015, with Indonesia being the worst affected. Total exports of thermal coal and lignite to China reached only 73.8mt which was a decrease of 32.6mt compared with that in 2014. There were volume decreases across the board from major supplier countries including 18mt less from Australia, and Russia shipped 5.3mt less thermal coal. Some countries were unable to sell any thermal coal into China last year, and these include South Africa and the USA. In the previous year, those countries had shipped 5.2mt and 1.5mt respectively.

Domestic coal production in China declined in 2015 after a year of contraction in 2014 as well. All coal mining areas recorded decreases in output and during the nine months to 30 September production was down 4.6% to 2.72bnt. Shenhua and China Coal saw reduction in output while smaller operations also reported lower production last year in Shanxi, Shaanxi, and Inner Mongolia. The total







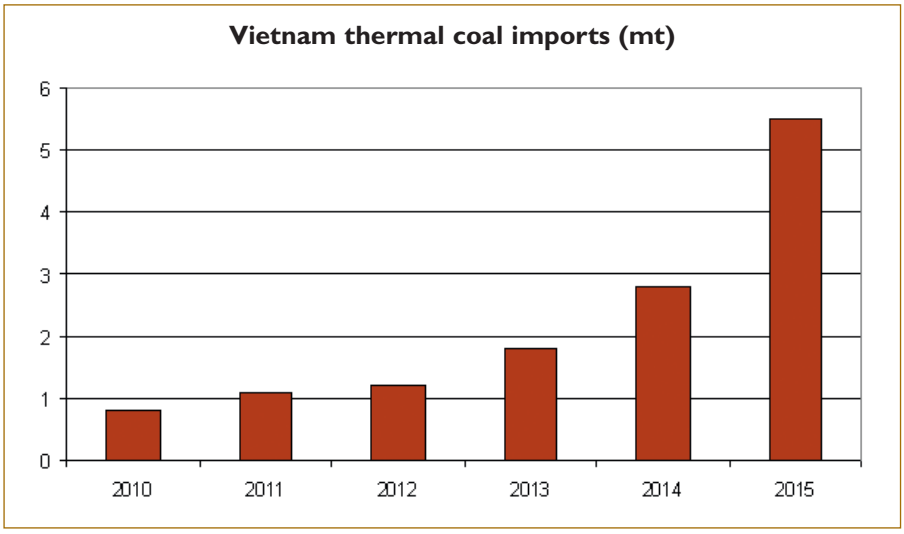


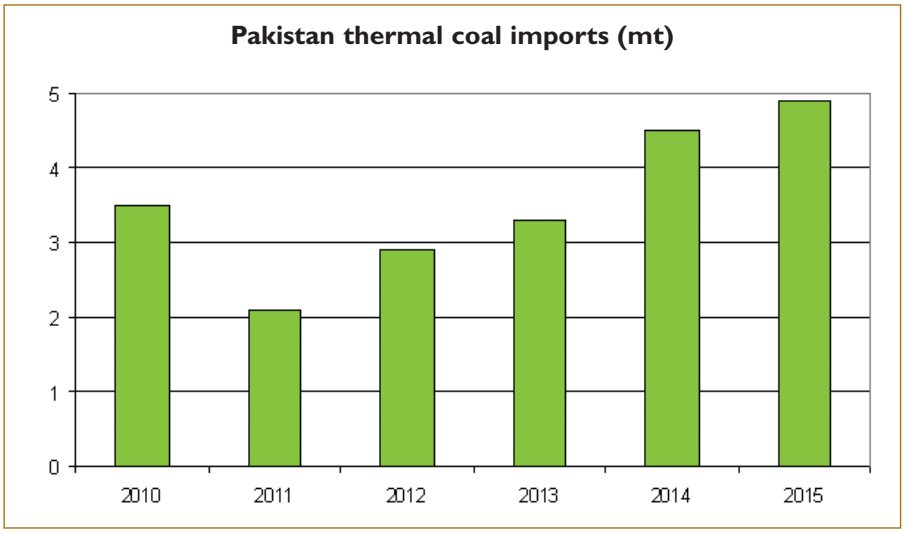
Oversupply continues to be the problem for the coal market and prices have been below the cost of production for many miners for some time now. There had been no improvement for several years despite all players being aware of the problem.

Power station coal stocks have been high throughout China for the past year, and this has also been true at the main ports until drawdowns occurred in the winter months. A total average tonnage of about 9mt was reported at Guangzhou and Qinhuangdao for 2015.

production in 2015 is understood to be about 3.75bnt which is a decrease of some 3% compared with the previous year. A small recovery could be seen this year which would take production above about 3.8bnt but this remains speculative.

Market forces drove coal prices down in 2015 despite the cuts in supply in China from both within the country and in the international market, as well as efforts by the government to intervene. Prices at Qinhuangdao declined by around 40% over the course of the year which was a huge drop by any standards.

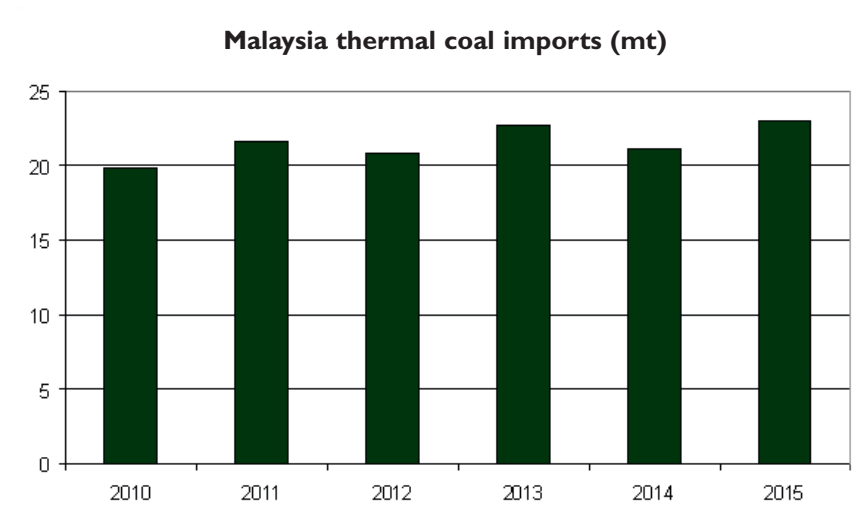


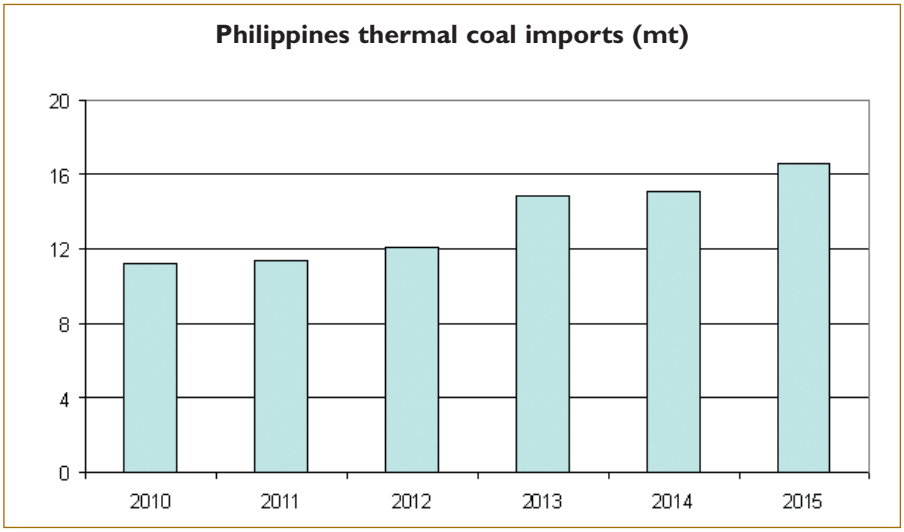


affecting thermal coal trade with the Chinese power companies is that coastal areas where much of the previous demand for imported coal was based, are using less coal. Emissions regulations and better transmission systems are mainly behind this situation at the moment, but coastal-based nuclear power has also been growing in capacity at a high rate. Thermal coal demand will also be increasingly affected by hydroelectric capability in China. The country is expected to increase thermal coal consumption in 2016 on a national

Historically there has been an inverse correlation between coal stocks and spot prices in some ports elsewhere. High stocks tend to mean low prices but there is a lag with this, and in the oversupply situation we have been in, there seems to be no tightness to cause a meaningful rise in the price in the short term. It seems the forecasting behind the need for China to vastly expand its port capacity was seriously flawed, or at least out by a number of years given the decline in coal demand over the past few years.

One of the most significant factors

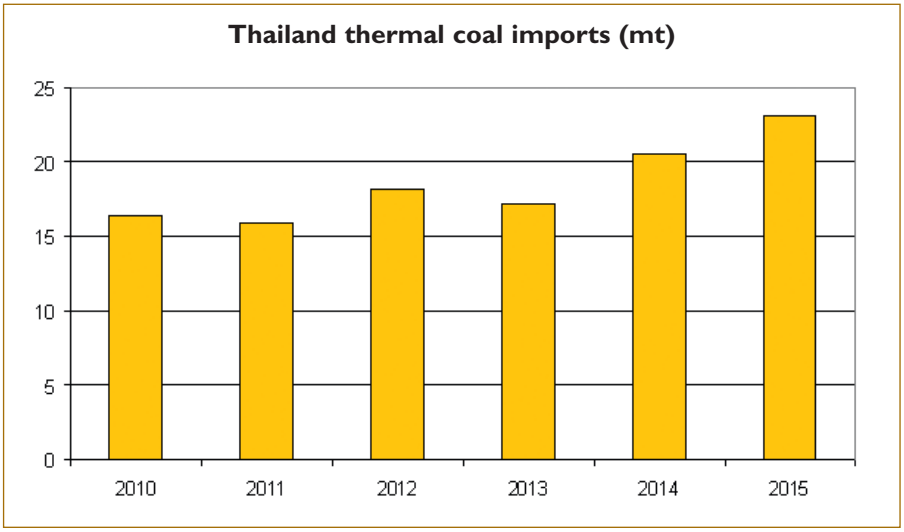


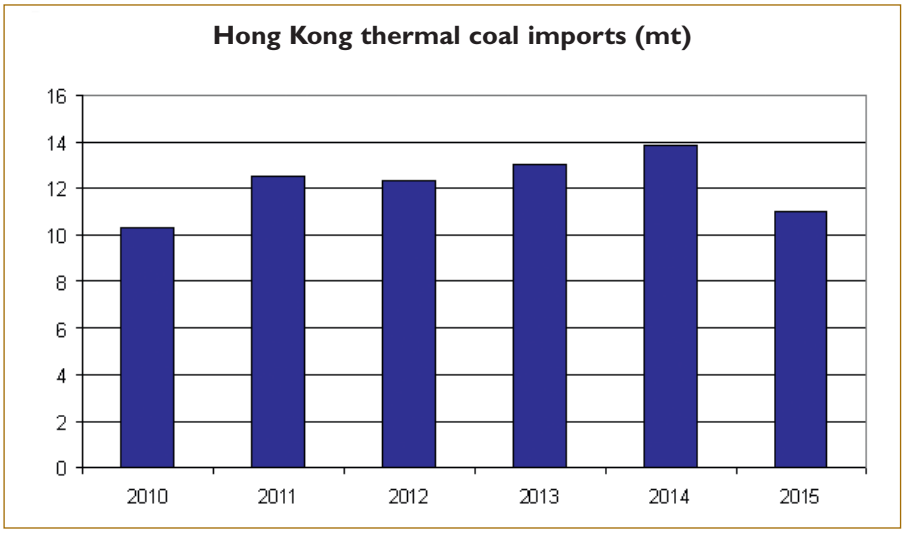


economy, India, also had a poor year in 2015 in terms of thermal coal trade. This was despite declining thermal coal prices during the year, and a strengthening of the rupee which saw buying power mean their price improved from 4,500 per tonne to only 3,750 rupees per tonne over twelve months. Overall tonnage was lower than in 2014 which would have been unheard of a few years ago when all forecasts suggested a booming economy constrained only in its coal import appetite by a lack of infrastructure. Although Indonesia

scale, but import demand is not expected to improve. Indeed, some forecasts suggest China will import less thermal coal during 2016 with the total by December being some 10mt lower than in 2015. Prices are expected to remain weak, putting further pressure on producers and the government. The situation is unlikely to improve over the coming couple of years based on current information, with some hope of a price recovery for producers some time in 2018. That, however, will be too late for the miners forced to cut costs for too long.

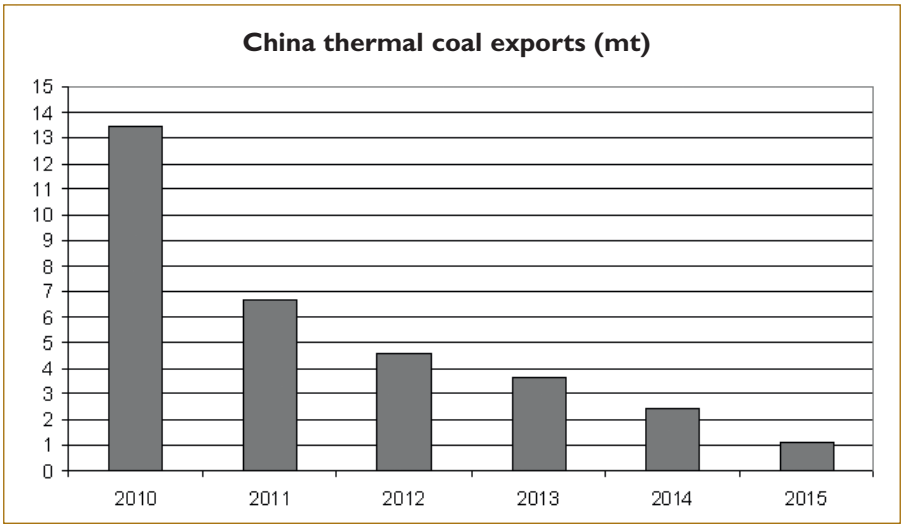
The other power house of the Asian



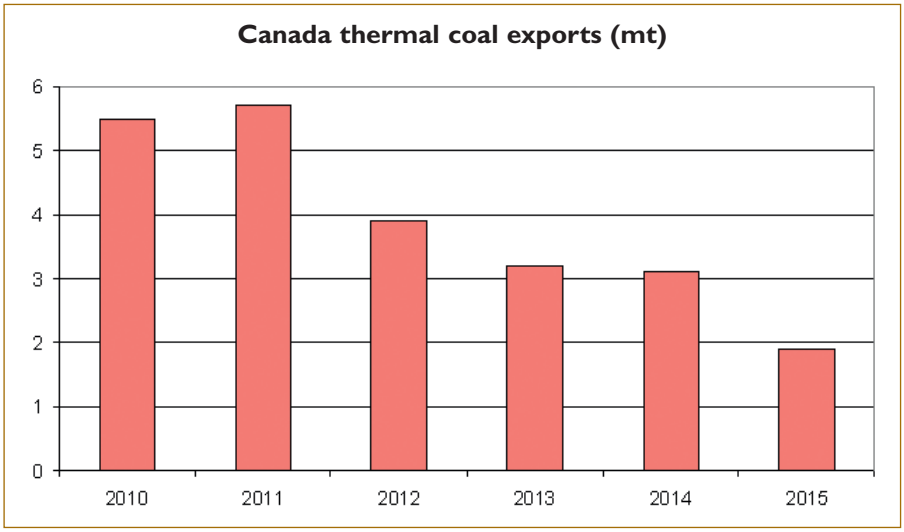


bituminous material ended the year at under US$40/t FOB basis 4,900kcal/kg NAR after it had started 2015 priced at about US$50/t FOB. At this level, it appears that most shippers are unwilling to sell at anything lower. This appears to have set a floor for this type of coal into India, and has allowed competitors to make some headway into the market over the past few months at the expense of the Indonesian sellers of higher quality coal.

Regardless of the state of the market for thermal coal in 2015, the weather



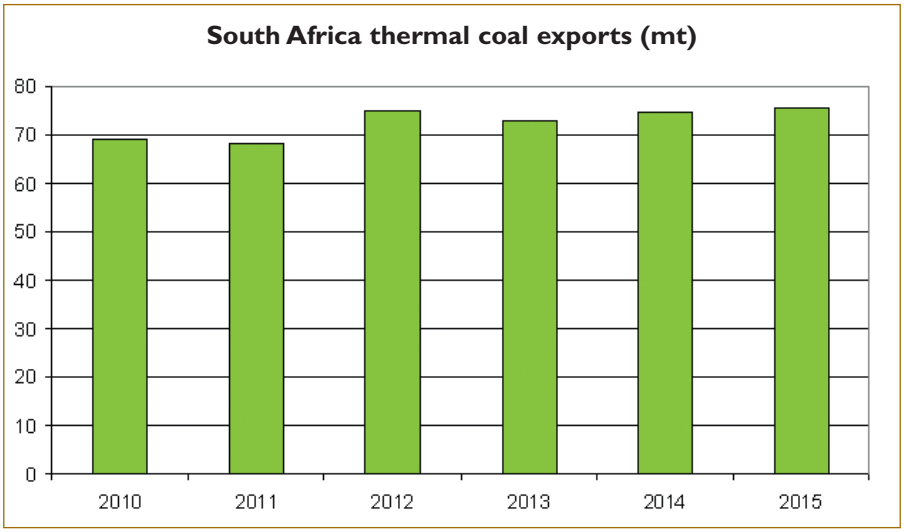
maintained its position as the main supplier of thermal coal to India in 2015 with about a 70% share of the market, South African thermal coal shippers were able to compete with Indonesian suppliers into India last year as the price slumped. Indonesian thermal coal imports were down by more than 10% while South African imports grew by more than that percentage. Even US shippers were able to shift a few million tonnes of thermal coal into India in 2015 and grow their market share in Asia a little. Australian shippers managed to sell more coal to India during the first

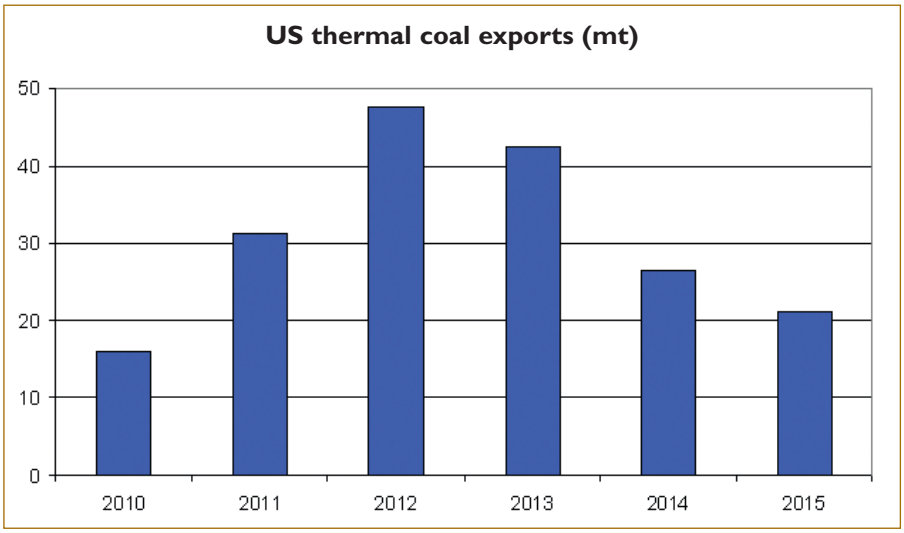


construed to make it possible for state-owned miner Coal India to beat its annual production target of 51mt by 1mt by the end of the year. The unusual result was attributed to low rainfall during the winter months, and allowed Coal India to maintain its share of 80% of the country's domestic coal production total. The company's sales increased during the first nine months of its financial year to reach 389.3mt which was 10% higher than in the same period in 2014.

While coal producing conditions have been favourable over the winter, Coal India has been shipping more coal to the

half of 2015 compared with the previous year, but they became less competitive with South Africa as the year wore on. The second half of 2015 was worse than the same period in 2014 for them. Lower prices at Richards Bay combined with the freight advantage to beat competitors in Newcastle. At the start of 2015 the Richards Bay shippers were achieving US$65/t FOB (free on board) basis 6,000kcal/kg NAR (net as received) but the price collapsed to a 9-year low of US$48/t same basis by the end of the year. The price of Indonesian sub-





power stations which are its major customers. As a result, coal stocks have been building at the power plants and have been at record levels recently, and this has hampered the rate of sales as spare capacity on the pads diminished. Domestic coal production is set to be maintained at a high level this year, and Coal India has set a target of 550mt for the current financial year, which is an increase of 11% from 494mt last financial year. The Indian government appears to be attempting to reduce its reliance on imported coal as much as possible. It seems unlikely that Coal India has been able to achieve this target, although final data is not available at the time of writing.

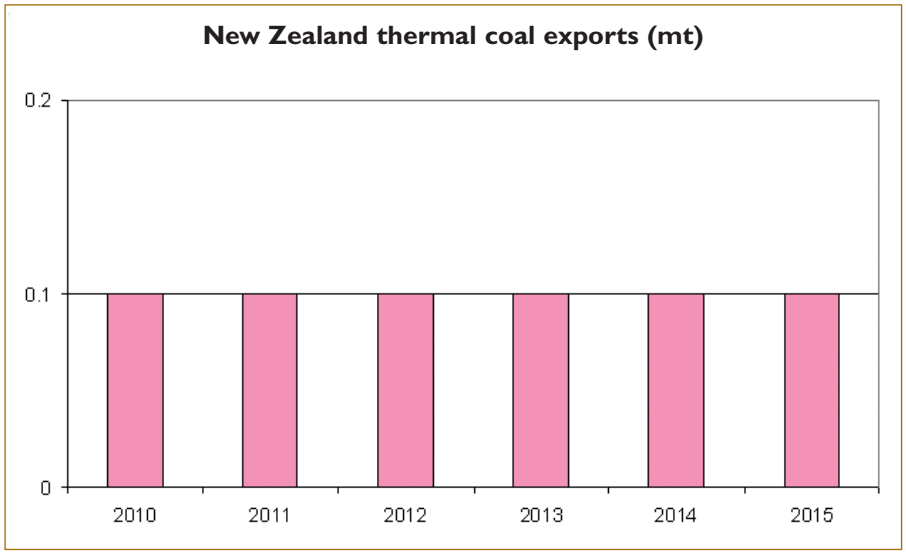
With growing power generating capacity in the country, however, it seems India will continue to need substantial quantities of imported thermal coal for the foreseeable future and this has been in the range of 165–175mtpa (million tonnes per annum) lately. During 2016 it is expected that thermal coal imports will decrease as domestic supply and competition from other fuels act to reduce demand from overseas coal shippers. This is likely to be rather short-lived, however, and the expectation is for imports to pick up again in 2017.

Coal-fired power generating capacity was around 173GW by the end of 2015 which was an increase of 18.8GW compared with the end of 2014. Coal provides over 60% of the country's electricity generation capacity, and total coal-fired generation increased by several percentage points in 2015 compared with the previous year and is around 80% of total TWh recorded in India. Nuclear power was the only growing competitor fuel last year as hydro, gas, and oil decreased their share of electricity generated.

While China and India have seen a challenging year for thermal coal imports, the long-term Asian consumer of coal has had a stronger year in 2015; Japan has been taking more coal, particularly from Australia and reached about 133mt in total by the end of the year which was an increase of some 3% compared with 2014. About 85mt of that was supplied by Australia which was about 6mt more than in the previous year. Imports from Russia also grew during 2015 and were over 10mt by the end of December. Indonesian shippers took another hit in Japan last year as their lower quality coals were in lower demand while higher quality material was still needed. The Indonesian shippers saw their tonnage to Japan drop by over 2mt in 2015 compared with the previous year. Nuclear power

generation began a recovery in 2015 so it could be interesting to see how this impacts coal burn during 2016. Activity at the Sendai plant in Kyushu towards the end of the year put the brakes on coal burn for that utility. Japan saw an unusually low demand for electricity last August, and the overall burn for coal only maintained about its normal annual level despite the rise in coal imports last year. The slump in August was offset by very high electricity demand in the winter months and during the summer heatwave in July. The country averaged just under 8mt of coal consumed each month last year.

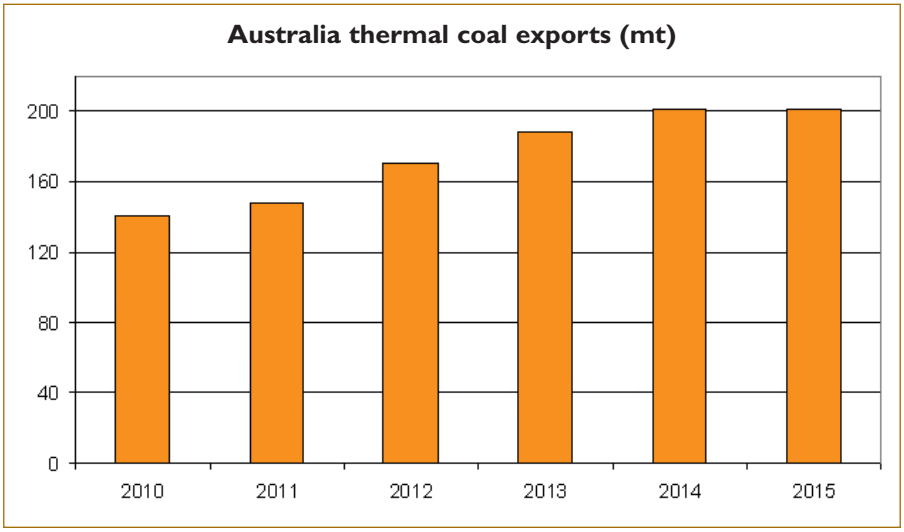
Meanwhile, Japan is developing new coal-fired power generation capacity this year with two new units being built. Tohoku Electric is constructing the 600MW Noshiro No 3 which is scheduled to be commissioned by the middle of 2020. The boiler design will allow more use of sub-bituminous coal in the blend which could be good news for Indonesian suppliers. Meanwhile, in Fukushima a 112MW cogeneration power plant is being proposed by Soma Kyodo Jikahatsu which hopes to commission the facility by the first half of 2018. The boiler is understood to have the capability of burning biomass and coal of a specification available from Australia, Indonesia, and Russia. Other countries could probably compete if the freight rate was favourable.



The return to nuclear generating activity got under way at Kyushu Electric's two units in the second half of 2014, and Kansai Electric Power Company followed with its Takahama power station this year. The four nuclear units compete with up to 8mt of coal per year if fully operational. Shikoku EPC can also restart its Ikata No 3 nuclear unit should it so choose, following the receipt of regulatory approval. Given the improvement in the fuel mix for electricity generation in Japan, the current view is that thermal coal will not see much of a change in volumes imported in 2016 compared with last year.

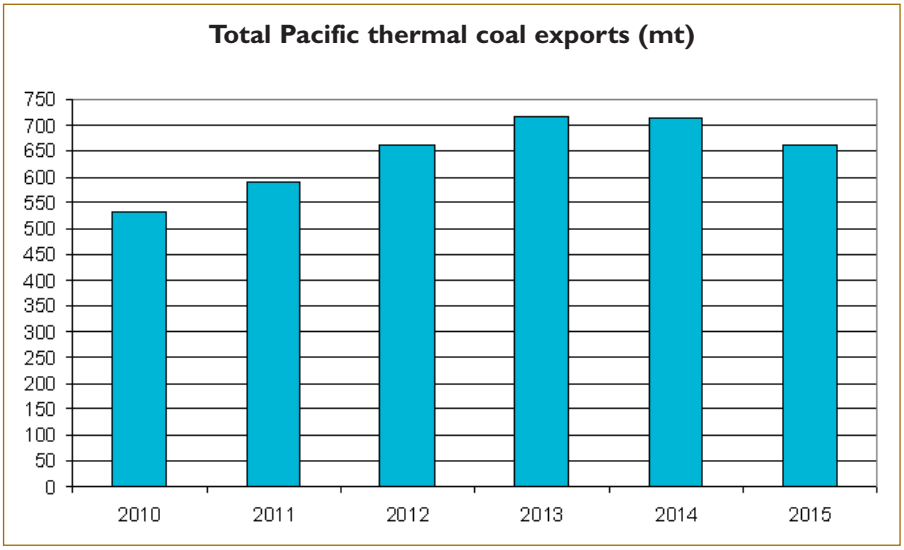
In the other coal consuming countries in Asia, Korea saw a strong year in 2015 and ended the year importing well over 100mt again. Electricity from the country's coal-fired power stations was in high demand during the year. New monthly receivals records were set in February and July last year, with 9.5mt taken in each month. Australia remained the main supplier to Korea last year, and saw growth in tonnage to give it a market share approaching 45%. Nearby Russia enjoyed around 15% of the thermal coal market in 2015 and saw comparable growth in shipments as seen by the Australians at around 3mt. US shippers even managed to sell more thermal coal to Korea last year, with around 1.4mt shipped. The expectation is for Korea to import about 110mt of thermal coal in 2016 as the country's reliance on coal remains firm.

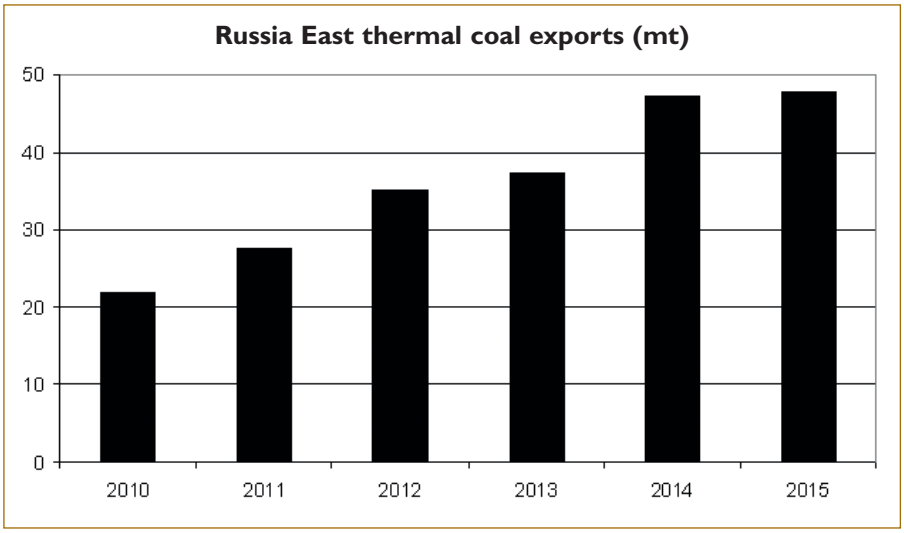
Taiwan's economy slowed down in 2015 and demand for thermal coal decreased. In total, the country took less than 60mt of thermal coal last year, with Australia moving into top position as supplier displacing



Indonesia. Nearby Russian suppliers also recorded small gains while other supplier countries saw declines in shipments. New coal-fired power generating capacity coming online this year is expected to see imports improve this year, but there are reports that coal is becoming increasingly unpopular on environmental grounds in Taiwan and the future is less certain.

Malaysia imported about 23mt of thermal coal in 2015 and is expected to increase this by some 3mt in 2016. Indonesian shippers were able to increase deliveries into that market last year, as were the Australians as demand for coal-fired power generation firmed. Next year is expected to see demand level off. Thailand's economy was firm last year, and thermal coal consumption was over 20mt. Industrial consumption was stronger but electricity generation was met by competitor fuels so growth was not reported in that sector. Thermal coal imports were stronger over the course of 2015. Vietnam has been increasing its imports of thermal coal over the past year in order to satisfy growth in coal-fired power generating capacity. Imports more than doubled to about 7mt compared with the previous year. The country took material from Indonesia, China, Australia, and Russia. As expected, Vietnam has become a net importer of coal as export volumes collapsed over the past year to only 1.5mt from 7mt in 2014.





On the supply side in the Asian region, China now exports hardly any thermal coal with only around 1mt recorded in 2015. The government still has a 3% tariff on coal exports but this may need to be amended if domestic producers such as Shenhua are to try to recoup some cash by re-entering the export market amid very difficult operating circumstances in the domestic Chinese coal market. Indonesian coal shippers had a bad year in 2014 and that accelerated last year as overall demand declined and buyers turned away from lower quality coals. The slump in prices also contributed to the large fall in Indonesian thermal coal exports in 2015. The large Chinese market contracted last year, and had the biggest impact on Indonesian shipments. India has become Indonesia's largest buyer in recent years, but for the reasons described earlier the consumers there took less imported material last year. Currency movements have not been in Indonesia's favour either, and put the exporters at an additional disadvantage to competitors in the Asian region. This has squeezed smaller operations beyond survival limits. Overall exports are still rather uncertain but are likely to have declined by some 50mt last year compared with the 408mt recorded in 2014. Domestic coal demand has been growing, but at far less than the losses seen in the export market.

Australian thermal coal exporters actually enjoyed some growth in 2015 which is considered remarkable under the circumstances. Although at only around 1% it has maintained the country's total at about the 200mt level to give it second place in the world again. Traditional markets in Japan, Korea, and Taiwan sustained business for the Australian producers.

The freight market took a huge hit last year, and current forecasts suggest another smaller decline is likely over the course of 2016. China's slump in demand for raw materials led the way and with the imbalance in supply and demand in the freight market, the situation looks depressing for the foreseeable future.

The Asian thermal coal market is likely to face similar challenges this year, although changes are expected to be less severe compared with last year. The supply imbalance has been affected by the long slump in the price, and this could result in the next couple of years seeing a floor in the international thermal coal market with the large operators maintaining their function. Freight markets look set to stay in the doldrums overall and are not expected to recover while demand for raw materials in the international markets is lower. Political pressure is increasing where nations are losing their industries due to market conditions, foreign ownership, and lack of government protection. It will be interesting to see how these issues affect the global picture of trade in the coming years.

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.*

Asian agribulk

India strives to ensure food security in the face of serious weather challenges

Kunal Bose

For a government administering a country with a population of around 1.25bn of which close to 30% live below the poverty line, a perennial prime concern is to provide food security to the masses. At the same time, a sense of income security to farmers constituting close to 50% of the total workforce is to be offered. That security gets threatened and food price inflation starts raising its ugly head in a monsoon deficit season. India has encountered not one but two consecutive bad monsoon years in 2015 and 2016 leaving parched earth in a number of states. As the net irrigated area to total cropped area in the country is only around 35%, Indian farm production remains highly dependent on monsoon rains. This has come to the fore once again first in 2014/15 agriculture season (July to June) and then again in the current year, the failed monsoon being the villain.

Pulses

Deficit rains in two successive seasons have led to a shrinkage in the area under pulses, a major source of protein for Indian masses, at 23.1m hectares and therefore, in production raising the country's dependence on imports to meet the shortfall in local supply. India's food minister Ram Vilas Paswan said in Parliament the other day that in order not to "allow prices to rise in any circumstances," the country is required to import at least 6.5mt (million tonnes) of pulses this financial year (April to March). By 1 March, imports had amounted to 5.5mt. The government's second advance estimate of pulses production in the current crop year is 17.33mt when demand is pegged at 23.66mt. This gap is required to be bridged by imports.

Public discontent ran high in 2015 when combination of a short crop and hoardings by sections of trade took pulses prices to such highs as to make the commodity unaffordable for poorer sections of society. Government officials are aware of incidents when private importers would buy pulses abroad cheap but leave these in foreign ports only to bring these to India when

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prices would scale very high. "The challenge for New Delhi is to get the 29 states and seven union territories to take stern anti-hoarding steps and give exemplary punishments to erring trade people. I have told the government more than once that the best antidote to pulses price inflation will be to build a strategic buffer stock enabling it to make effective market intervention whenever prices tend to rise to unreasonable level," says farm expert Om Prakash Dhanuka.

The food minister now confirms of steps being taken to start building a buffer of an initial size of 150,000 tonnes. Dhanuka says along with more efficient management of imports and local distribution of pulses, the government will have to initiate steps to "very substantially" improve the farm productivity of pulses. A recent government paper admits countries such as Brazil, Nigeria and Myanmar have better yields of pulses than India. Comparison with China will make India blush. The 2015/16 Economic Survey says: "Some states do much better than the all-India average (744kg per hectare), but even the key pulse producing state of Madhya Pradesh has yields (938kg per hectare) barely three-fifths that of China (1,550kg per hectare)." The principal reason for low Indian productivity is growing of pulses in mostly non-irrigated land. Hopefully, things will start changing for the better as the government in the recently presented budget for 2016/17 has talked about "fast tracking" implementation of irrigation projects covering catchment areas of 10.91m hectares. The country has a net cultivated area of 141m hectares.

Om Prakash Dhanuka.

Wheat

Thanks to the green revolution of the 1960s, India not only became self-sufficient in wheat and rice, but there were times when it became a challenge to store the surplus grains in damage free condition. India, which in the pre-green revolution days produced one-third the size of US wheat crop produced 60% more than the US in 2013/14 with an amount of 95.8mt. It is now the world's second-largest wheat producer behind China. But good times for wheat growing came to an end in 2014/15 when production suffered its second biggest year-on-year fall of 6.9mt to 88.9mt. This happened because a highly deficit south-west monsoon between July and September did not leave enough moisture in wheat growing fields to facilitate sowing in December and then the weather behaved truant during crop growing and maturing period.

For the current 2015/16 season, the government initially was targeting wheat production of 93.8mt, ambitious by any reckoning because of two bad monsoon years in a row. Then, as it would happen, came western weather disturbances in March accompanied by hailstorms and rains posing a serious threat to the standing crop. Not only does the crop size stand to be shaved by anything up to 13mt, but its texture and quality are likely to be compromised. Leading industry body Assocham captures the disturbing development in a report submitted to prime minister Narendra Modi saying: "The emerging wheat situation in the country is alarming in view of the expected lower crop, depleting stocks [with government agencies] and the erratic weather threatening the crop further towards maturity."

The production setback, says the Assocham report, should lead the government to create conditions for liberal imports of good quality wheat in the current season.

Last year between April and July, Indian flour mills and private trade agencies imported at least 500,000 tonnes of high quality Australian wheat. Imports happened at a time when domestic wheat prices started rallying on reports of a short crop and government ordained minimum support price for the commodity becoming increasingly disproportionate with international rates. To give protection to local farmers from taking a hit from falling world wheat prices spurring imports, the government first imposed customs duty of 10% in late July 2015 and then raised it to 25% in October. Imports then stopped

making commercial sense for traders.

Production falls and also a vast majority of wheat going to prove of a relaxed quality in 2015/16, imports facilitation, according to Assocham, will demand bringing down the duty to a "more reasonable level of 5% to 10%." Duty at the suggested lower rate will allow flour mills and private trade to participate in imports. The report says: "While the government can import wheat duty free through its state trading agencies, private traders too should be encouraged to import... to check the open market prices." The prospect of ending 2015/16 with wheat stocks of 13.37mt in government warehouses and official agency Food Corporation of India likely to show a drop of anything up to 20% over last season's procurement of 28mt, New Delhi has reasons to be concerned about wheat prices rising sharply.

Rice

India grows rice principally during summer and also in winter. The advance estimate for 2015/16 says rice production at 103.61mt will be 1.87mt less than 105.48mt in the previous year. The country is a regular exporter of long-grain aromatic basmati rice and non-basmati rice. According to Rajen Sundaresan, executive director of All India Rice Exporters Association, India was likely to have exported 10.5m to 11mt of both varieties of rice in 2015/16 against 11.92mt in 2014-15. Non-basmati rice exports were likely around 5mt. "Our basmati shipments volume might have increased by about 10% this year, but in value realization there could be a fall of 20% to 25%," says AK Gupta, director of Basmati Export Development Foundation. The setback in rice exports both in value and volume was because of reduced purchases by African countries, particularly Nigeria, which has an issue with foreign exchange largely due to low oil prices. Rising domestic prices have also muted export interest of the trade. India faces stiff competition from Thailand, which has the benefit of a depreciating currency, Pakistan and Vietnam in the global rice market.

Sugar

What did encourage the sugar bulls to finally overcome the last key technical resistance level of 15 cents a pound of raw sugar? The three-month price of raws at over 16 cents a pound is at a multi-month high. Sugar futures hit a seven-year low at 11.20 cents a pound in August first week, plunging the industry worldwide into a major crisis. "Two developments will principally explain why prices of sugar, the source of livelihood for millions in all growing countries across the world, which fell out of market favour for long should continue to trend higher in coming days. First, research agencies have all revised upwards the global sugar deficit — that is, production trailing consumption — for the current season to end in September. Second, the world's largest producer and exporter of sugar Brazil is spiriting away increasingly larger volumes of cane juice from the sweetener to ethanol as its currency real continues to appreciate," says Dhanuka who owns sugar factories in the Indian state of Bihar.

Brazilian consultancy Agroconsult says in a report of an estimated 622mt of cane to be crushed in the South American country's centre south region in the country's season starting next month, the share of ethanol will be 58.3% and sugar 41.7%. The consultancy claims big rains in Brazil in the past few months have largely compensated for the earlier *EL Niño* effect on cane plant growth. Some other agencies, however, maintain that extended rains will delay start of cane crushing by most factories

Sugar beet.

in 2016/17. The *EL Niño* phenomenon has not spared the world's second-largest producer India and Thailand either. Against last season's very high production of 28.31mt, Indian output is likely to shrink to 25.5mt or even less this time. Lack of rain during the south west monsoon was particularly acute in Maharashtra, the country's leading sugar producing state. "As drought has shrivelled cane crop in Thailand, the country will be producing about 10mt of sugar in the current season, 14% less than the earlier estimate of 11.6mt," informs Dhanuka.

The International Sugar Organization (ISO), which now has pegged world production shortfall at 5.02mt, up from 3.5mt in November says "a statistical deficit is clearly supportive for world prices" moving generally higher in the remaining months of 2015/16 season. While Rabobank confirms that the deficit will be bigger than its earlier estimate of 4.7mt some agencies are putting the shortfall at up to 7mt, spurring bullish sentiment. In step with rises in world sugar prices, the Indian industry under growing pressure to settle cane dues of about $2.33bn and service bank loans are mercifully meeting with steadily improving ex-factory prices. May futures contracts on NCDEX are quoting Rs3,430 ($51.54) a quintal.

Indian Sugar Mills Association president Tarun Sawhney attributes better price realizations to revised lower sugar production during 2015/16, the expectation of reduced plantings for the season to start in October and the industry's "good response" to the government's export quota programme. Whether or not the factories manage to break even while selling in the world market, they must make every attempt to achieve the industry's export target of 3.2mt. At likely exports of around 2mt, the shortfall over the industry target will be quite large. But the overhang of a large inventory, a cause of keeping local prices down, will get shaved to the extent of exports. The industry began the current season with stocks of close to 9mt. DCi

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Damen Shiprepair & Conversion has CN Bulkers' new acquisitions ready for operations in eight weeks

Four bulk carriers brought up to standard in two locations

Damen has completed maintenance and surveys on four bulk carriers recently bought at auction by CN Bulkers, a joint venture between Universal Shipping & Trading and NedNor. The work took place at its Rotterdam yards; Damen Shiprepair Rotterdam (Schiedam) and Damen Shiprepair Van Brink Rotterdam (Pernis). The four vessels, all between 16,000dwt and 17,000dwt, had been inactive for a time following the insolvency of their previous owners and had not been dry-docked since 2012.

The vessels came up to the North Sea from the Mediterranean either under tow or using their own power and arrived in Rotterdam at the end of December/beginning of January, with two going to each yard. The scope of works included five-year special surveys for three of the ships and a 15-year special survey for the fourth. Each underwent a thorough cleaning and repainting below the waterline, and some assorted blasting and painting on the topsides.

Once the works below the waterline were completed one of the vessels was moved to a smaller dock for the interior work. Once there, activities included inspection and maintenance of the valves and gearboxes, load testing of the cranes where applicable, and laying out of the anchors and chains. One of the carriers also needed an engine overhaul and straightening of the crankshaft. This was carried out *in-situ* in the engine room.

Two of the vessels were ready for sea by mid-February, the second by the 24th of the same month and the last left the dock on 8 March. With at least one of the vessels already booked for a charter, being ready on schedule was an important consideration.

Part of the works also involved painting on the new name for each vessel, and they are now called the *Sotra*, *Sanna*, *Senja* and *Silda* respectively. Universal Marine is providing management services.

"It's been ten years since we last had vessels from Universal Marine at Damen, so it's a pleasure to welcome them back," said Boudewijn Baan, sales manager at Damen Shiprepair & Conversion. "Our extensive network of repair yards allowed us to complete this multi-vessel project within just two months and have them ready for charter once again."

"We decided to drydock the vessels at Damen Shiprepair & Conversion because of the good experiences we have had with them," said Bert Pleysier, Technical Director of Universal Marine. "They are flexible, practical and fast. They also have ready access to a large variety of well-equipped sub-contractors close by in the neighbourhoods of their shipyards."

Damen Shipyards Group

Damen Shipyards Group operates 32 shipbuilding and repair yards, employing 9,000 people worldwide. Damen has delivered more than 6,000 vessels in more than 100 countries and delivers some 180 vessels annually to customers worldwide. Based on its unique, standardized ship-design concept Damen is able to guarantee consistent quality.

Damen's focus on standardization, modular construction and keeping vessels in stock leads to short delivery times, low 'total cost of ownership', high resale values and reliable performance. Furthermore, Damen vessels are based on thorough R&D and proven technology.

Damen offers a wide range of products, including tugs, workboats, naval and patrol vessels, high speed craft, cargo vessels, dredgers, vessels for the offshore industry, ferries, pontoons and superyachts.

For nearly all vessel types Damen offers a broad range of services, including maintenance, spare parts delivery, training and the transfer of (shipbuilding) know-how. Damen also offers a variety of marine components, such as nozzles, rudders, anchors, anchor chains and steel works.

In addition to ship design and shipbuilding, Damen Shiprepair & Conversion has a worldwide network of 15 repair and conversion yards with dry docks ranging up to 420 x 80 metres. Conversion projects range from adapting vessels to today's requirements and regulations to the complete conversion of large offshore structures. DSC completes around 1,500 repair and maintenance jobs annually.

'Revelin': keeping it clean with Thordon's COMPAC solution

China's Qingshan Shipyard has delivered *AP Revelin*, the second in a series of two environmentally sustainable Handysize bulk carriers, to Croatia-based shipping company Atlantska Plovidba d.d. from Dubrovnik. The 38,700dwt 'ecoship' will join first of class *AP Dubrava*, which was delivered in July 2015.

Each 180m (591ft)-long tramp trader, built to the Green Dolphin 38 design unveiled by Shanghai Merchant Ship Design & Research Institute (SDARI) in 2012, features Thordon Bearings' seawater-lubricated COMPAC propeller shaft bearing system and a Thordon Water Quality Package (WQP). This will provide a clean and consistent supply of seawater to the bearings even when the vessel is docked downstream of the current in shallow waters.

"These energy-efficient vessels are ocean-going but will also operate in river entrances where the seawater is highly abrasive," said Thordon Bearings' business Development Manager Scott Groves. "But running Thordon's WQP 24/7 means the propeller shaft bearings can be lubricated even when the sea chest is drawing in filthy river water."

Explaining the reason for specifying a water-lubricated bearing system, Atlantska Plovidba's Vice-President, Ship Management, Marin Matana, said: "Our vessels trade globally, including the USA. With the Vessel General Permit in effect, we felt that the seawater-lubricated system was the perfect solution. It meets the US VGP requirements and is the right choice for the environment."

Matana revealed that a conventional white metal bearing for use with an environmentally acceptable lubricant had been considered but an unproven track record prevented their take-up.

"Some EALs can react negatively with stern tube seal lips which could lead to costly dry-docking, affecting the profitability of the vessel. We insisted on Thordon Bearings' COMPAC because we wanted to benefit from its 15-year wear life guarantee, he said.

"I have worked with Thordon Bearings and its Croatian distributor Skoring for more than 20 years and have a lot of experience with Thordon's SXL rudder bearings, which have a perfect track record. A single source for the design, product quality and installation support was deemed essential to ensuring the COMPAC system will perform as required and keep my vessels on the high seas," Matana added.

AP Dubrava, *the first vessel in the series of Green Dophin 38s for Atlantska Plovidba, was delivered in July 2015*

Craig Carter, Head of Marketing & Customer Service, Thordon Bearings, said: "The Qingshan Shipyard had little experience of a COMPAC installation before this project and initially resisted, but Thordon Bearings' distributor in China, CY Engineering, was instrumental in explaining the benefits of the system, resulting in one of the smoothest installation processes we have seen. We've had excellent feedback from both the yard and owner."

In addition to the award-winning COMPAC bearing system and WQP, CY Engineering also supplied bronze shaft liners and a Thor-Coat corrosion protection system to both vessels.

The Green Dolphin bulk carrier concept was introduced during the Posidonia Exhibition in 2012 following a joint research project between SDARI, Det Norske Veritas (DNV) and Wärtsilä. It features a hull form and machinery configuration designed to optimize fuel consumption and reduce emissions.

Atlantska Plovidba's *AP Dubrava* and *AP Revelin*, delivered in January, however, are powered by MAN B&W 5S50ME-B9.2 engines and built to Bureau Veritas class.

AP Dubrava, the first vessel in the series, has been operating 'perfectly' for six months and is now on duty in the Black Sea. Vessel options are being considered.

Atlantska Plovidba will run the Thordon Water Quality Package continuously so that the vessels' shaft bearings can be lubricated even when the sea chest is drawing in filthy river water.

About Thordon Bearings

A global leader in seawater lubricated propeller shaft bearing systems with over 25 years' experience in this technology, Thordon Bearings designs and manufactures a complete range of non-metallic sleeve bearing solutions for marine, clean power generation, pump, offshore oil, and other industrial markets. The polymer bearings operate pollution free without oil or grease. Thordon Bearings is the only manufacturer of propeller shaft bearings to guarantee its award-winning COMPAC system for a 15-year wear life.

About Atlantska Plovidba d.d. – Dubrovnik, Croatia

Established in 1955, Dubrovnik-based Atlantska Plovidba d.d. operates a fleet of 17 modern bulk carriers and is committed to meeting the demands and expectations of national and international charterers. The company operates to quality, environment and safety management policies and procedures required by ISO 9001:2008, ISO and the ISM Code for the Safe Operation of Ships and Pollution Prevention.

Fairway Shipping Agencies BV — committed to service and quality

Fairway Shipping Agencies BV mainly focuses on the tramping side of the shipping business. Tramp agency is one of the oldest professions in the shipping industry. Fairway Shipping Agencies was established on 1 July 2003. The company is privately owned and its shareholders are Hudig & Veder BV and Gans Transport BV. The company's head office is located in the Netherlands in Rhoon which is a suburb of Rotterdam and located strategically towards the ports of Rotterdam, Moerdijk and Dordrecht. From this office Fairway co-ordinates all calls in Belgium, the Netherlands and Germany through its local offices.

As an agent there is only one way for a company to distinguish itself from the rest — good service. Fairway Shipping Services strives to offer the best service to its customers in combination with up-to-date knowledge about the ports it represents. Furthermore, it is vital to have a good relationship with the port authorities and the various port services such as pilotage/boatmen etc.

Fairway Shipping Services acts both as charterers' agents as well as owners' agents.

The vessels it handles vary in the dry cargo trading from bulk carriers to general cargo up to coasters. In wet cargo trading, vessels include ULCCs (ultra-large crude carriers), LPG (liquefied petroleum gas) carriers, LNG (liquefied natural gas) carriers etc.

What makes Fairway Shipping Services different is

- its team of highly skilled and motivated people, ready to serve and protect its customers' interests, 24 hours a day, 365 days a year;
- being its customers' eyes and ears in the North Western European ports as their dedicated, trustworthy partner;
- being interactive in solution solving thinking (tailor made concepts); and
- a large network of partners enabling it to cover all North Western European ports

Through its shareholders, Fairway Shipping Services can offer additional services in mainly the dry bulk/reefer sector and it has an important share in forwarding. Fairway Shipping Services' service includes:

- attendances on arrival, during the port stay and upon departure day/night/official holidays etc.;
- daily updates about vessel's programme;
- checking availability of Original Bladings prior to the commencement of discharging advising owners regarding the outcome view taking actions concerning LOI etc.;
- communicating with port authorities, immigration officers, ISPS regulation required by terminals, Port State Control, surveyors, vessel's class etc.;
- co-ordinating various supplies, stores barge, launches etc.;
- arranging proper conveyances for attending port captains, superintendents from and to the airport or to the hotel/vessel. All of this is of course at cost supported by relevant vouchers;
- arranging all crew matters such as doctor/dentist/hospital/ embarking/disembarking/ visa — at cost supporting vouchers by taxi and immigration;
- taking vessel's mail/parcels delivered to its office below 15kg and without custom documents.

Fairway Shipping Services' principals are located worldwide. Its target customers are owners, traders, charterers, receivers and all other parties that require locally a reliable agent.

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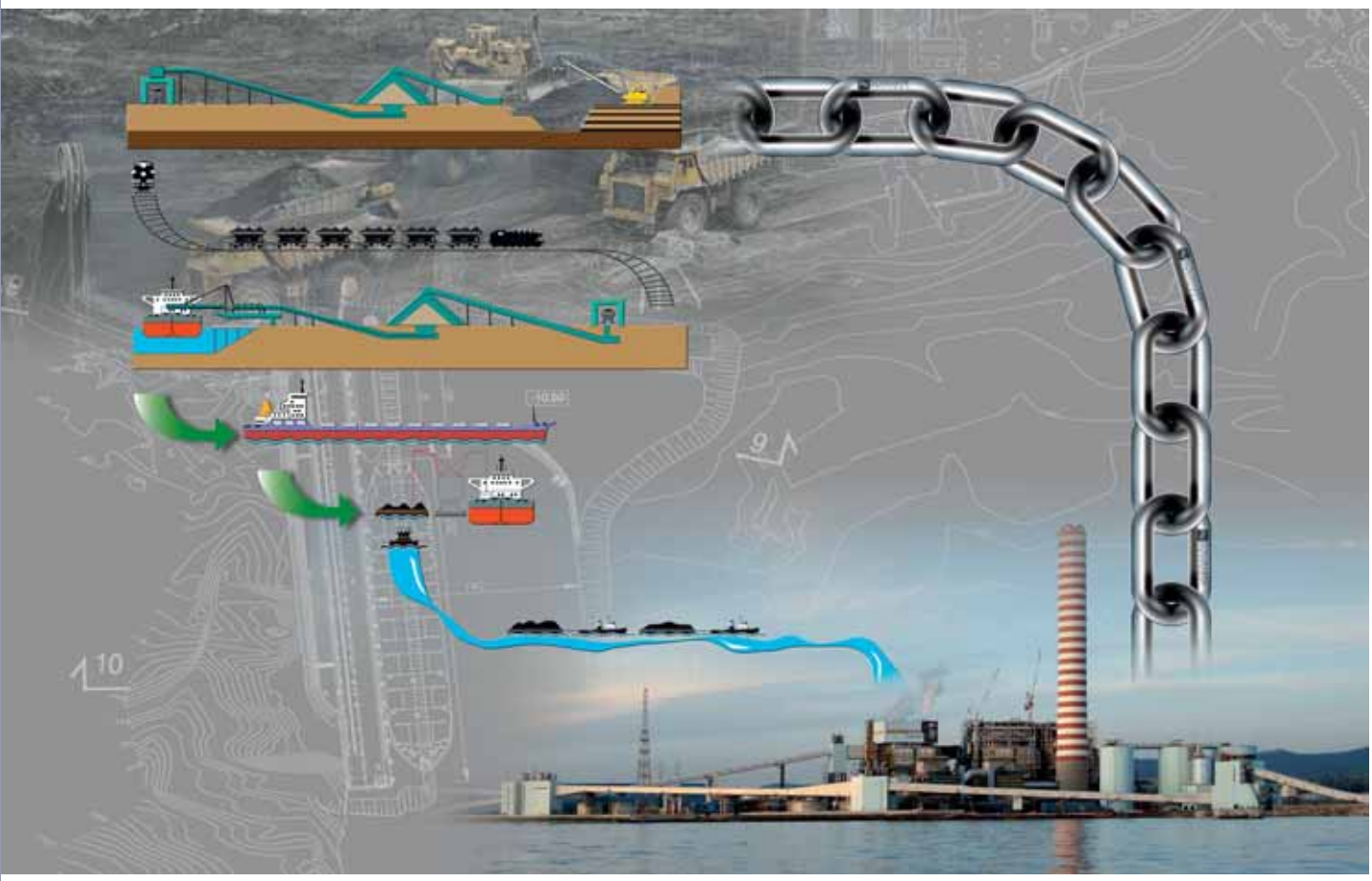


In logistics there is no universal solution, each project has its own unique challenges and consequently its own unique solutions, *writes Francesca Narizano – Naval Architect & Marine Engineer – LOGMARINE ADVISORS Srl.* In order to avoid sub-optimizing links in a supply chain and to increase the overall efficiency, a holistic view and a deep understanding of the project parameters and supply chain is needed. It is not enough to simply transfer something from A to B. This is truer than ever in today's globalized dry commodity market, which is at the moment undergoing serious changes.

Take the coal market for example, where a majority of the new power stations and mines are located in shallow water areas. This implies that the larger the vessel the bigger the margins, is invalid. As such the basic assumptions of the coal market are put into question and forces suppliers and consumers of coal to charter into unexplored territory. It is in these competitive and ever changing markets that companies need to optimize and seriously evaluate every part of their business and ventures. The dry commodity market is a segment of the economy that relies heavily on transportation as it revolves around the distribution of physical products. Because of this it is in the logistical part of a project that a lot of efficiencies and cost reductions can be found.

Generally the most efficient way to export or import dry cargo is through direct shipping, fully loaded vessels arrive at port and fully loaded vessels depart from port. This is however not always possible, seeing as a direct shipping solution requires sufficiently deep water for the vessel. In order to draw on the cost benefits of larger vessels (a larger vessel implies a lower transportation cost), the largest possible vessel is usually employed. This puts a lot of demand on ports and infrastructure and might prevent power plants and mines from reaching their full capacity or potential. For a developing region, where infrastructure and port facilities might be lacking, this is a serious issue. In order to solve it, the most cost effective solution is often not a capital heavy investment in infrastructure or port facilities, but a cheaper and more adaptable solution.

Southeast Asia is, according to the International Energy Agency, one of the places in the world where demand for coal is expected to increase the most until 2035. In fact, the

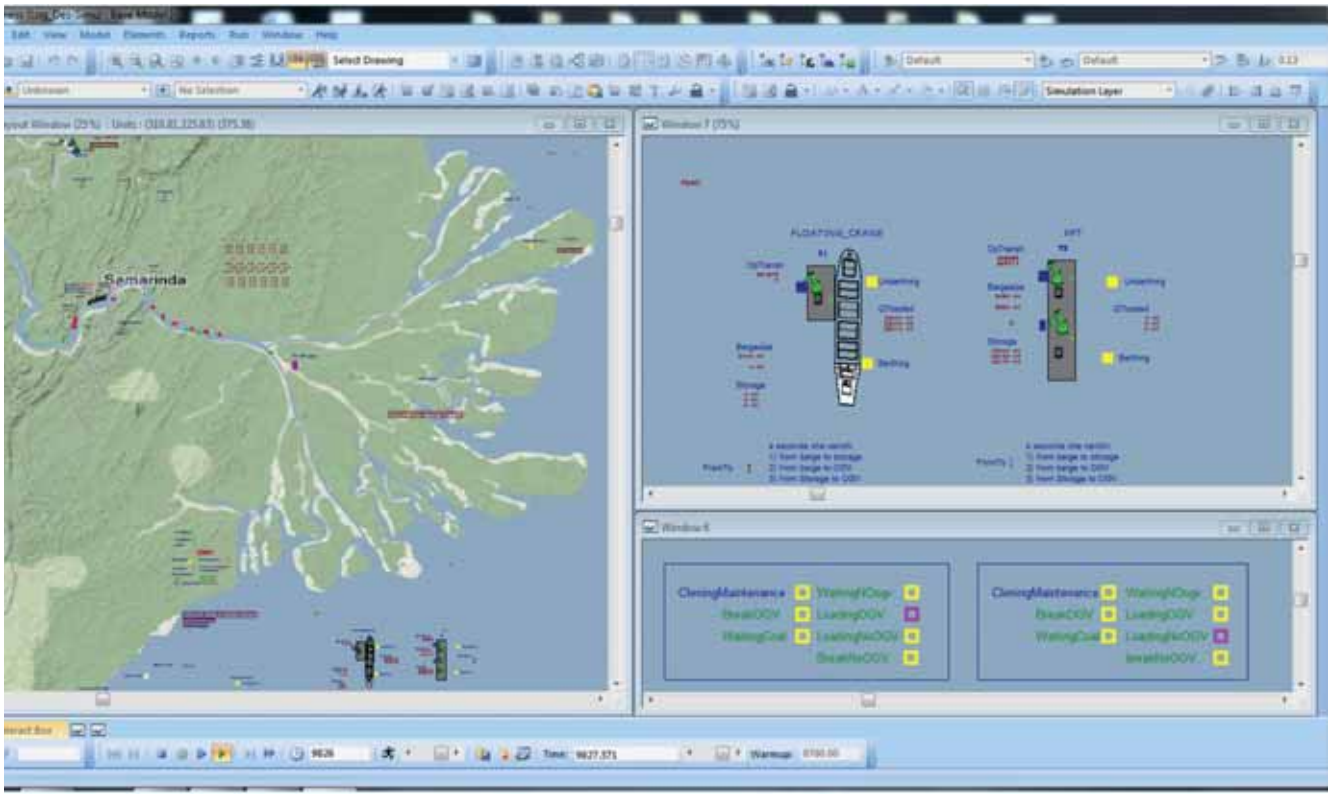
International Energy Agency claims that the demand for coal in the region will increase with 4.8% per year until 2035, providing 30% of global growth in coal demand. The majority of this coal will be imported towards energy production, to fuel the growing economies and countries.

Southeast Asia is home to many places with a shallow water draught, and a number of the new major power plants and mines are located in such places. This prevents large bulk carriers from arriving and rules out direct shipping as a solution. To that extent, the economic benefit of larger vessels is negated, unless an alternative solution is implemented. For a coal power plant, the most important budget item is the fuel, the coal. As such, the way the coal is transported directly affects the efficiency and competitiveness of the plant. In order to draw on the economic benefit of a large vessel when in a shallow draught area, a viable option is to employ an offshore terminal. Then use the offshore terminal as a topping-off point or for lighterage or as a full transshipment point.

Dry commodity supply chains are complex; they require an integrated multidiscipline effort. In order to provide a viable and competitive solution for a client, a combination of technical, financial, geological, operational, maritime, civil, logistical, environmental knowledge, needs to be done, whilst still following the wishes of the client and respecting the local community. Often a standard mine-to-ship solution is replicated, not focusing on what is best for the client. This might have been sufficient years ago, it's not enough today. In today's world, each solution needs to be customized and adapted to each individual project.

In a new project, be it greenfield or other, there is little to no data on the efficiency of the envisaged supply chain. When dealing with places where the infrastructure and port facilities are insufficient, and offshore terminals need to be employed, the amount data decreases further. This is problematic seeing as the supply chain needs to be calculated, changed and optimized, in order to construct the most efficient solution. The further into the life of a project, the more expensive and difficult it is to change the details and specifications of it. Because of this it is important to get things right from the start, in order to avoid costs and inefficiencies that could have been foreseen.

This forecasting has previously been done through analytical and static methods. Analytical methods, although powerful, still lack the variability and stochasticity that is reality. A solution is



the sole result of the equations, and the dependencies defined in them. Today with the proliferation of data and increase of computing power, discrete event simulations are more viable than ever. They provide the stochasticity and replicate reality in a way that analytical methods cannot. The relationships between items and links in a supply chain aren't always intuitive and need to be identified and in order to identify them, they need to be studied.

Thierry, Thomas and Bel (2008) wrote in their book *Simulation for Supply Chain Management,* that the only reasonable tool to use when exploring large projects with many potential solutions and scenarios is simulation. The reason they cite is because you can change and explore potential solutions to your project in a way that other tools cannot mirror. However, a simulation is only as good as the information and logic that it's built of. Because of this an experienced team with the knowledge of how a commodity supply chain works is needed.

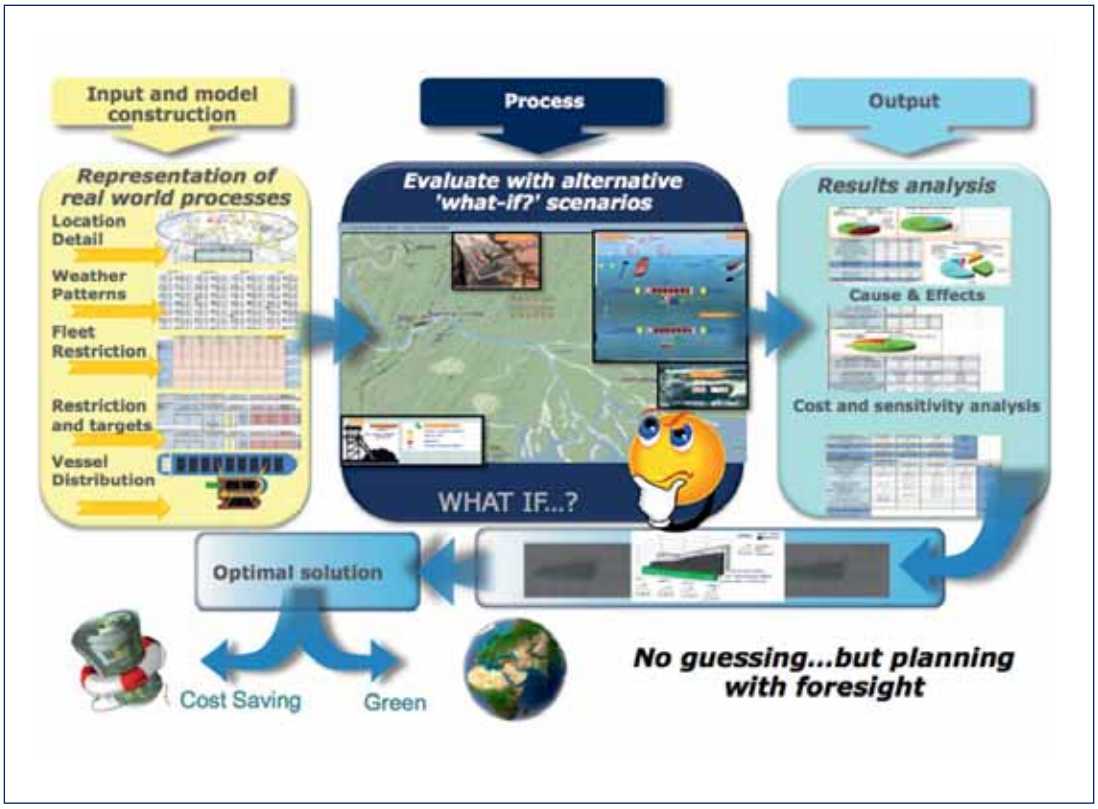
Logmarin's team has acquired this knowledge through ten years and the devising and commissioning of over 22 Floating Transfer Units as well as over 75 feasibility studies in over 23 countries.

Logmarin has built its own dynamic Supply Chain Simulation Software (Log.Des.) from the commercial simulation software Witness. With the help of Log.Des. Logmarin can construct a virtual supply chain and gather data on the operative properties of said system. Through the exploration of different scenarios with the use of different equipment (cranes, conveyors, etc.), sources of material, type of material, types of vessels, types of land based vehicles, etc. and understanding their relationship with key-outputs (such as profit, costs, environmental impact, risk, uncertainties, etc.), Log.Des. is an invaluable tool.

The results and relationships from the simulation are then thoroughly analysed by Logmarin's experienced and skilful team, as such, without heavy capital investments and risk, explore 'what if' scenarios to find the most suited and viable solution for each project. Earlier this year, Logmarin released the web application of Log.Des. allowing Logmarin to come closer to the customers. The web application allows clients to change the simulation models themselves online without having to worry about the complicated under the hood construction of the simulation.

Log.Des. provides invaluable information at the most important stage of a projects life, the design stage. It helps to create a detailed and correct feasibility study. With the feasibility study, Logmarin can advise clients and identify potential bottlenecks before they are built into the project. The feasibility study should be developed by team work, utilizing each team members strengths, background, experiences and competences allowing everyone to work together in order to evaluate all eventual risks and opportunities. Once the feasibility study has been constructed, Logmarin can provide further supporting

activities such as; conceptual designs of transshipment and port facilities, preparation of preliminary channel layout, estimation of dredging volume/ cost, storage management optimization, support for service providers' selection, hazard and operability (HAZOP) workshops, and assistance in permitting obtainment by local authorities.



During Logmarin's ten years, Log.Des. has been an invaluable tool during different projects, from optimizing the coal supply chain in the frigid north of Canada, to exploring a cement supply chain in New Zealand, to calculating best use and types of barges in the tropical South East Asia. The versatility that the simulation software Log.Des. gives allows Logmarin to develop diverse projects in many regions. Today, Logmarin, with the help of Log.Des., is involved in dry commodity projects all over the world, amongst others;

- the world's largest grain export project in South America;
- the world's largest floating terminal in South East Asia;
- a coal power plant in Pakistan; and
- an iron ore export project in Australia.

During the different projects, the constructed and simulated virtual supply chains has given Logmarin insights that has saved not just headaches, but also money for the clients. Logmarin works closely with its clients, working together against bottlenecks in their supply chains, and with the release of the Log.Des. web application Logmarin is closer than ever to its clients. With its closeness, expertise and versatility Logmarin has built a good reputation with many long-lasting relationships and returning clients and will continue to do so for many years. DCi

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Speaking out on shipping

interview with Intercargo's Secretary General

Intercargo's Technical and Executive Committee meetings held in Singapore on 7 and 8 March. David H Tongue, Secretary General of Intercargo, can be seen on the first row seated, second from the left.

Dry Cargo International *caught up with David H Tongue, Secretary General of Intercargo, the International Dry Cargo Shipowners Association, during Intercargo's Technical and Executive Committee meetings held in Singapore on 7 and 8 March. He said the role of Intercargo was to help guide and implement global maritime policy and work to improve the safety record of the bulk carrier fleet. And he told* DCI's *Michael King that regulators, owners and operators faced multiple safety and operational challenges in the years ahead.*

DCI: Warwick Norman, CEO of RightShip, said in his presentation to the Intercargo Committee that members of Intercargo record significantly fewer detentions than the bulk carrier fleet overall. Why do you think this is?

Tongue: Intercargo is inherently safer because we personally vet our members to ensure their performance is better than

David Tongue

David Tongue was appointed Secretary General of Intercargo, the International Association of Dry Cargo Shipowners, in 2014. Prior to taking up the challenge of leading the organization, he served as Director of Regulatory Affairs at the International Chamber of Shipping for 12 years. Tongue represents the not-for-profit Intercargo, launched all the way back in 1980 in its role as a Non-Government Organization at International Maritime Organization events. Intercargo's objective is the creation of a safe, efficient, high quality and environmentally friendly dry cargo shipping industry.

Key findings from Intercargo's new Bulk Carrier Casualty Report

Key findings from Intercargo's new *Bulk Carrier Casualty Report* which covers the period 2005–2015, include:

- 71 bulk carriers over 10,000dwt were identified as total losses over 2005 to 2015. 46.5% of the ships lost were Handysize bulk carriers, while Capesizes represented just 9.9%
- 255 crew members lost their lives as a consequence of the 71 losses, while 21 years was the average age of bulk carriers lost;
- the highest loss of life was attributed to cargo failure — liquefaction. This cost the lives of 102 crew, 40% of the total loss of life over the period;
- the most common reported cause of ship losses was grounding, totalling 36.6% of losses;
- losses due to flooding for both ships (19.7%) and lives (21.2%) were also significant;
- cargo liquefaction has been a major issue for bulk carrier safety over the last ten years, especially the transport of high-risk nickel ore, but also other cargoes such as bauxite which led to the loss of the *Bulk Jupiter* and 18 of the ship's 19 crew in January 2015. Indeed, Intercargo said many in the bulk carrier industry had still have not recovered from the shock of losing six bulk carriers and 82 seafarers as a consequence of suspected cargo liquefaction in the years 2010, 2011 and 2013;
- following the *Vinalines Queen* tragedy in 2011, Intercargo released its *Guide for the Safe Loading of Nickel Ore* which warns shippers of the hazards and provides a go/no go guidance chart for the loading of nickel ore to supplement IMO guidance;
- ship losses due to structural failure have decreased over the last ten years and, even if still unacceptable, Intercargo said the positive effect of enhanced design standards and monitoring had been proven; and
- lessons learnt from past incidents play an important role in determining where additional safety improvement is necessary. Intercargo said it was disappointing and unacceptable to note the slow response of many Flag States in carrying out incident investigation for serious bulk carrier casualties and in providing a report to IMO. It is to be noted that only 24 of the 71 bulk carrier losses over the period had had investigation reports made available to IMO. And the average time from incident to a report becoming available was 20 months.

standard. They all have a proven performance record and desire for quality. So that's why our fleet has a positive allowance in the RightShip vetting system.

DCI: Whenever bulk carrier spot rates drop as they have done recently — indeed, returns have been poor for a number of years — there are always concerns that owners and operators will look to cut costs on training, management and maintenance. Is Intercargo worried that cost cutting due to financial distress could have a negative impact on safety?

Tongue: Of course, everyone is looking carefully at costs, the market is atrocious, lower than it was 25 years ago while operating costs are of course greater.

Something has to break because the market is so strained and some owners might not be able to keep going. Oversupply is the problem and I'd expect more scrapping. But despite all the pressure, I believe we have safety regimes in place that are safe. Unscrupulous owners might try to get away with cutting corners. But the ones we are involved with operate under enhanced codes of practice and various other quality measures. There is no doubt that it's a very bad market and returns aren't covering costs, but it is essential that safety and quality are maintained.

DCI: Are you expecting more bankruptcies?

Tongue: The market is dire. Drewry said in its presentation today that ships under 15 years old should be scrapped. I'm not sure about that, but I expect higher levels of scrapping. The analysts differ on how much tonnage will be scrapped and I thought the idea from Drewry of 30% of the fleet was too much. But we do need to lose capacity. There is no lack of cargo. You can get cargoes, it is just that the cargo isn't paying enough to cover the ship's cost. Laying up is an option, but it's a careful balance when considering lay-up costs versus operating. If you're making losses every day then it's an option, but perhaps not viable for an extended period for older vessels.

DCI: In your just-published *2005-2015 Bulk Carrier Casualty Report* (see box), what do you think are the key findings and the areas where most progress can be made on loss prevention?

Intercargo's Technical and Executive Committee meetings held in Singapore on 7 and 8 March.

Tongue: One of our main concerns is the delays of Flag States in releasing their investigation reports into casualties, or more often the total lack of a published report. We need timely reports to put countermeasures in place and take preventive action. But from the beginning of 2005 to the end of 2015 there were 71 bulk carrier casualties which we list and identify in the new report. However, only 24 investigation reports have been recorded on the IMO's Global Integrated Shipping Information System with the average time period between the date of the incident and the data of posting the casualty report being 20 months. It's not good enough.

Nickel ore is a potentially hazardous cargo.

DCI: This must be of particular concern when lives have been lost, especially due to liquefaction where investigation reports have been published and made available to IMO at startlingly slow rates, if they've been published at all?

Tongue: Yes it is. If we go back to the *Bulk Jupiter* casualty last year, the Bahamas Flag State's casualty investigation report was out within seven months and it had depth as well as identifying the shipper as being uncooperative. We need accurate shippers' declarations and cargo information to protect ships and seafarers. The Bahamas did a great job on the *Bulk Jupiter*. But generally these reports are slow to come out. We're constantly pressing the IMO to make the worst offenders improve their performance. If we don't have timely and accurate reporting so we understand the causes of casualties then this increases the chances of repeats, which is putting peoples' lives in danger.

We'd also like more quality assurance requirements for charterers. Many charterers do have quality assurance, but some are a bit risky.

DCI: Would you like to see bauxite, the cargo loaded on to the *Bulk Jupiter*, be re-classified under the International Maritime Solid Bulk Cargoes Code (IMSBC code)?

Tongue: Bauxite is a presently classified in the IMSBC Code as a Group 'C' cargo which means it should not have any inherent danger or hazard during carriage, unlike Group 'A' cargoes which are those that may be subject to liquefaction during carriage if the transportable Moisture Limit (TML) is exceeded. There are

RightShip to launch major new ship vetting product

Warwick Norman.

Vetting specialist RightShip will launch a new product later this year offering a wide range of service upgrades for customers seeking to vet bulk carrier vessels before chartering.

RightShip Qi will introduce the benefits of big data and predictive analytics to ship vetting in a bid to improve safety and offer owners more choice when selecting a vessel on sustainability criteria.

Warwick Norman, CEO of RightShip, said the new tool — pronounced 'key' and an acronym for Quality Index — is planned to "commence in Q3".

He told *DCI* on the side lines of Intercargo Committee meetings in Singapore in March that RightShip Qi would replace the company's existing Ship Vetting Information System (SVIS) which has so far been used to vet over 260,000 dry bulk vessels, denying approval to more than 8,000.

According to Norman, Qi will improve bulk carrier safety and reduce customer risk by using predictive analysis techniques during the vetting procedure, making use of more data points, and enabling greater flexibility with vetting criteria and rules as well as offering real time calculation options. It will also no longer treat vessels with specific Flag States or Classification Societies as singular blocks and will better define vessel type groups.

"Instead of a broad brush approach we can define it all much better now," he added.

He also called on the dry bulk industry to aggressively pursue improvements to safety performance and called for the development of a similar system to ISGOTT (International Safety Guide for Oil Tankers and Terminals) which has helped the tanker industry improve its standards.

"Human factors in safety need to be addressed better than has been managed so far, and we need more benchmarking so there are more incentives," he added. "There are opportunities for the dry bulk sector to improve performance and there is pressure to improve performance. Our customers want this in the fleet. We're one of the cogs but we all need to look at this."

some that think bauxite should be classified as both a 'C' cargo and an 'A' cargo as there has been no historic problem with bauxite cargoes from some areas where it is mined and shipped. But I think the IMO should move it to a Group 'A' only cargo to provide certainty and the increased level of safety that the requirement to test all bauxite cargoes would provide. Australia has also determined, and drawn to IMO attention, that the schedule for coal requires further attention due to the possibility of liquefaction under certain particle size ranges. IMO has recognized the problem, and an inter-sessional working group led by Japan has been established to review and propose amended schedules for both bauxite and coal — the additional recent experiences where some declared Group 'C' coal cargoes have caught fire is also of concern. The IMO inter-sessional group are just finishing a second round of talks on bauxite and coal cargoes. The IMO will move this forward later this year and they have also sent out a circular on the dangers of bauxite advising caution. A French research project is also looking at ways of introducing a new test procedure for the testing of Caledonian nickel ore cargoes. Nickel ore problems have mainly occurred with Indonesian cargoes and when Indonesia banned the export of unprocessed ore it removed a major source of concern for safety. But there is no doubt that exports will resume at some point and I imagine there will be a lot of nickel ore sitting in stockpiles in a potentially dangerous condition.

DCI: What other challenges are bulk carrier operators and owners facing in terms of new regulations?

Tongue: Emissions regulations are a worry, but not the greatest

Laying up vessels: pros and cons

The pros and cons of laying up vessels versus keeping them in service were laid out in some detail at Intercargo's Technical and Executive Committee meeting held in Singapore on 7 and 8 March.

James Forsdyke.

James Forsdyke, Asia Marine Sales & Marketing Manager, Lloyd's Register Marine, illustrated some of the key decisions owners and operators needed to consider when deciding whether to lay-up ships as a response to rock-bottom ocean freight rates.

Drawing on input from LR's *Laying up Ships* guide, he said there were multiple lay-up options available to owners. These ranged from 'hot' layups of up to one month out of service which would allow vessels to be reactivated within 24 hours, to 'cold' and long-term lay-ups which would see vessels out of service for five years or more and take three weeks to reactivate. The costs of different options varied hugely, he said, due to the different manning, insurance, class, maintenance and mooring costs associated with each option.

Citing estimates from one lay-up specialist is Asia, he said an average comprehensive cold lay-up for a 43,656dwt bulker would cost US$50,904 in addition to charges of US$34,750 per month, although less comprehensive service options were also available.

According to Forsdyke, for owners looking at hot and cold lay-up options versus keeping their ships in service, one of the key variables was understanding the real risk associated with re-activation of the vessel.

"It's fairly straightforward to cost out a preservation plan during the lay-up, whether doing it yourself or using a sub-contractor," he said. "But we all know in this industry you have to expect the unexpected. If a vessel is laid up for a long period of time, then re-activation starts with a tow to dry dock. From that point on, there are a number of things that could need renewing or repairing that you didn't bank on.

"Ultimately, an owner's best defence is in a comprehensive preservation plan, and I would certainly recommend that anyone putting one together has it reviewed by a third party."

Forsdyke told *DCI* owners of bulk carriers were looking at all options given the bearish outlook for freight rates and current poor returns on operations. "I read a Bloomberg article this morning that stated, in spite of rates at record lows, the global fleet is still relatively well utilized," he explained." Owners are choosing to stay in the market even if it means operating at a loss, which is often the case during downturns — the unknown for them is how long they will need to see it out."

The difference now compared to previous dry bulk downturns was that low global interest rates were enabling many owners to keep operating while doing their best to keep their banks onside. "But many of the owners and operators that we speak to are beginning to assess the economics of lay ups, although they appear to still be of the opinion that they are not there just yet," he added.

"The key thing to assess is, based on their current income and costs, how long they can last? If they can re-negotiate mortgage repayments that buys them a bit more time to weather the bad rates storm. If poor markets persist then more hard decisions will need to be made by owners — or for them by their banks."

Asked if scrapping ships even less than 15 years old might become an option for some owners, Forsdyke said it depended on subjective analysis of the supply-demand balance.

"I believe we are already seeing reports of some 21st century built ships going to the breakers," he said. "Certainly, average ages of ships sent for demolition have declined dramatically and are now below long term averages. The idea of scrapping schemes or a focus on age is a subject that always comes up during bad tanker and dry bulk markets.

"It all comes down to the individual owner and their perception of risk versus opportunity — and their ability to hold on, keeping the show on the road, until they can cover costs, pay back debt and move back to profit."

concern at the moment. We are more concerned with the effect of the entry into force of IMO's Ballast Water Convention. The ratification requirements will most certainly be achieved this year with entry into force sometime in 2017. Finding an appropriate treatment system for retrofitting the majority of existing bulk carriers with a ballast water system is particularly difficult or even impossible when you have a bulk carrier with say three uptake points and maybe twelve different discharge points. The majority of systems on the market rely on treatment upon both uptake and discharge and to treat the upper wing drop tanks is hugely difficult. What people don't understand is that it's not a solution to simply connect the topside wing tanks to the double bottom tanks with a pipe, because the double bottom tanks are not designed to withstand the additional pressure. To upgrade the bottom tanks to withstand the additional head pressure that would be imposed is just not feasible in practice. The additional electrical demand that BW treatment systems require is a further concern that is frequently not understood, traditional bulk carrier designs do not have the power to operate ballast water treatment systems and cargo cranes at the same time, the lack of space to fit an additional generator means that the only way to operate would be with greatly increased loading or discharge times. Certainly, the paper Liberia has recently submitted to IMO advocating continued use of enhanced ballast water exchange systems is a breath of fresh air and is seen as a practical way forward, which would effectively control the discharge of invasive species in a manner that can be undertaken by bulk carriers with minimal cost and permit continued operation without any delay.

DCI: Looking forward, what would you hope to achieve for your members and the wider dry bulk shipping community in your time as head of Intercargo?

Tongue: Although often considered as the 'poor relation' when compared to other 'sexier' sectors of shipping it needs to be fully recognized that the bulk carrier fleet is by far the largest sector of world shipping by DWT, well in excess of 40%, and the continuous efficient transport of raw materials to feed the demands of worldwide industries that is provided cannot be underestimated in its contribution towards world trade and development. The undoubted success that Intercargo has achieved in continuing to effectively address such controversial and important issues for the dry cargo industry as cargo liquefaction, safe loading rates, and raising awareness of bulk carrier casualties with openness and transparency, has been due to the dedication of its secretariat and willingness to engage by its members. I hope to continue to build on this good foundation to enable Intercargo to maintain and increase its influence and standing in the maritime sector. DCi

South East Asian surveillance: integration can transform cargo protection

Dimitris Nikoleris, Business Development Manager from global integrated surveillance solutions specialist Synectics, explains how evolving surveillance technology can help South East Asian ports do more than keep goods secure.

With an annual economic growth rate of 5%, the SE Asian market is currently undergoing huge expansion. As the GDP of the 11 countries that make up the region approaches $2 trillion and the personal income of the 600 million people living there comes into line with that of China, the rapidly growing middle class is demanding more consumer products. This is fuelling a boom in trade.

Even with the current slump in dry bulk shipping, public and private investment in SE Asian ports and the supporting infrastructure is estimated to reach around $8 trillion* in the next ten years.

Unloading coal at Gangavaram port in India.

Where a sector is so critical to both economic and human life, there are of course always threats. Keeping port assets, the goods they hold, the ships using them and the staff working there safe, is a challenge. But it is a challenge that an intelligently integrated surveillance solution is well equipped to tackle, particularly in terms of dry cargo storage and logistics.

What has been the typical approach to surveillance?

Historically the ports sector has looked to individual, separately implemented and monitored systems to protect its assets. Perimeter security, intruder detection systems, access control, emergency incident alarms, cameras and general site surveillance will be present on most port estates — but they are traditionally considered, and therefore treated, as siloed elements.

The net result of this has been inefficiency; with increased time, manpower and monetary costs incurred to manage the individual systems. This approach also has limited potential in terms of maximizing the information and data available - with disparate solutions there will only ever be a disjointed view of operations.

Achieving full-site situational awareness is currently an almost impossible task because 'isolated' incidents can never be presented and understood in the broader context of other events. When you consider how many carriers, logistics operators and businesses operate in and around a port, the potential negative impact of a fragmented operational view is quite significant.

But this does not have to be the case. To see why, let's firstly look at the essentials of port surveillance. There are three main elements to consider with any surveillance system handling dry cargo.

1. **Safety** — the proactive monitoring and enhanced activation of health and safety is paramount in any port setting. This can include monitoring storage conditions, cargo movements, staff interaction with cargo etc.

2. **Security** — ports are large targets; in this age of advanced security threats, the security of a site requires careful consideration. It is not only the security of the cargo that needs monitoring, but that of the site and people too.

3 **Operations** — a port needs to be efficient to be profitable. With multiple companies, cargo and machinery using the same space, stringent operating procedures and processes need to be in place.

Referenced from the McKinsey Report

How does an intelligently integrated system support this?

Open protocol surveillance command and control platforms enable video (analogue, digital and thermal cameras), intruder alarms, fire and gas detection, access control, critical asset tracking and site management systems to be integrated, monitored and managed within a single, unified environment.

This allows operators located in a central security centre to achieve a 360° view of data and events. For example, an integrated solution of this nature can not only detect 'obvious' isolated incidents, such as a forced perimeter fence breach, but can also be programmed to 'look for' specific events which individually may not mean anything, but when analysed together can signal potential threats.

Safety

Monitoring health and safety is a paramount concern on any port estate — to protect assets/people and also ensure protection against compliance and negligence claims. But it is not just the safety of people and cargo on the port estate that needs monitoring; the infrastructure and surrounding areas are an integral part of the safety concern. Here are some examples.

An alarm sounds as the unloading of a consignment of sulphur commences, signalling no water can be sprayed onto the cargo as it is unloaded. In isolation, this is not necessarily a worry. But what if a man-down alert is also received by the surveillance team, while in another area of the site air quality readings start to fluctuate? Together these individual events indicate an issue. However, without being able to view and understand them in the context of each other, a potentially significant threat to safety could be missed.

Integrating these different systems into one command and control platform, together with unified communications, the

control room team can rapidly investigate this scenario, alert local authorities to evacuate residents in range or in the path of projected pollution, while simultaneously sending emergency service personnel to attend to the staff member already overcome by the fumes. All these activities and subsequent actions can then be logged against the incident for evidence review or training purposes.

In addition, operating an integrated system has the added benefit of proving compliance to ISO 28000:2007, the specification for security management systems for the supply chain, as well as ISO 20858:2007 for maritime port facility security assessments and security plan development.

Security

Imagine another scenario. Thermal imaging cameras begin to show heat in one of the coal storage sheds, which is a restricted area. This triggers a safety alert advising control centre personnel to check temperature readings and initiate a cooling/fire-prevention workflow process.

But imagine the same scenario occurs in conjunction with an access card alert from a member of staff who is not due on shift for another three hours. Using the system's in-built analytics with live-streamed video, the control centre team can track and quickly locate and identify the person using the access card, while deploying and guiding a security team to intercept them.

Furthermore, this system enables control staff to collaborate and monitor the situation, while being automatically guided through appropriate incident scenarios and workflows. An integrated system offers complete situational awareness and a quick resolution to a threat before it can escalate further; delivering a level of consistency vital to overall port security.

Operations

Although threat of theft or attack is a key factor affecting surveillance trends in the global shipping and marine market, the other important consideration is the economy. Budgets are tight, cargoes are precious and resources are limited. What is becoming a standard practice, therefore, is the use of surveillance as a way to improve operational efficiencies.

With the integration capabilities of modern surveillance systems, port management companies can, for example, reduce staff numbers needed for high-risk activities. As well as reducing the risk to staff, this can be a beneficial scenario for operations in areas such as complex machinery zones or storage areas for potentially flammable or self-igniting goods such as oil seed or coal.

The other major trend, in terms of operational efficiencies, is for surveillance monitoring and control technology to integrate with systems critical to goods maintenance.

Temperature fluctuations, excessive humidity and light levels can all have a detrimental effect on goods. Linking sensory data programmed to detect such changes with real-time video footage, personnel can immediately see any factors that may need addressing. These could include temperature increases, fire, water ingress, too many personnel in one area, or doorways/hatches that may be open when they should be closed.

In this way, intelligently integrated surveillance monitoring and control systems deliver valuable insight and can become integral to an overall assessment system.

Data gathered from surveillance sub-systems, via an open architecture integrated surveillance solution, can provide complete situational awareness for all aspects of port operation. In-built analytics enable detailed insight into procedures and practices, as well as programmed to 'look for' patterns of inefficiencies. Data collection and in-system analysis enables management teams to work towards improvement, efficiency and best practice.

This has a knock-on benefit for port management companies; as well as helping to keep goods in optimal condition, it also provides the audit trail to provide confirming evidence. As part of their 'trade journey', goods may be stored or transported by various different methods and therefore, could be damaged at multiple stages. Being able to demonstrate that items were received, maintained and delivered in optimal condition by providing the data captured is a valuable resource. This can mitigate against questions or allegations about goods maintenance for example as part of an insurance investigation.

With dry bulk shipping costs escalating and daily fees dropping, the shipping and marine sector needs to improve the processes for transporting, unloading and storage to ensure maximum product quality is retained. The additional return on investment offered by integrated security systems are two-fold, providing the means to develop a highly dynamic process, coupled with data analysis that has multiple applications — ensuring costs are kept to the minimum for the maximum return.

Looking to the future

As the Transatlantic Trade and Investment Partnership (TTIP) nears resolution and with the Trans-Pacific Partnership (TPP) already in place, multinationals are ready and waiting to seize the opportunity to transport large amounts of cargo from East to West and vice versa.

To enable the safe transport of ever increasing amounts of trade, integrated surveillance and smart technology is fast-becoming the go-to solution to ensure the safe, efficient transfer of goods and materials.

For example, as ships become more connected to the mainland, data coming in from sea can be used to plan the most efficient unloading and transport of dry cargo from sea to end delivery point. This can include ensuring storage bays are empty to receive goods, transportation is scheduled and routes are clear, and GPS data can be captured throughout the land based journey to provide real-time delivery timeframes.

As global satellite communications become more advanced, the link between ships and shore will also become increasingly blurred, as data will be able to pass more freely from one to the other. In addition to transport planning, this can be used to monitor the state, and even value, of the cargo on board – meaning a decision about storage or transportation can be taken before the vessel has even entered the port. Real-time cargo tracking of this nature does currently exist but it is in its infancy.

In addition, in order to deliver the UN's 'Safer Cities' objectives, ports must interface with local municipal and emergency services and be included in any critical infrastructure protection. Here too we will certainly see information integration — made possible through surveillance command and control — increasingly move into the spotlight.

What is very clear, whether looking at the here and now or to the future, is that surveillance is quickly moving beyond being an isolated component of port security. Data unification is absolutely critical for protecting assets that are so important to the global economy — it's an ambition that has to become a reality for the port operators. Intelligently integrated surveillance can make that happen.

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Abbott Point expansion to go ahead

The government in Australia has given the go-ahead for the controversial Abbott Point expansion project, which will require investment of $12.1 billion. This is being funded by Adani Enterprises in the Galilee Basin and will increase the coal handling capacity of the existing terminal.

Given that the work will involve the dredging of one point 1.1 million m³ of spoil, environmentalists have argued that this will cause damage to the Great Barrier Reef.

However, the Environment Minister has imposed 30 strict conditions on the project. Indeed, earlier plans to dredge 3 million m³ of material, which would then be dumped into the water around the Great Barrier Reef Maritime Park, have been completely abandoned. Spoil extracted as part of the new project will have to be disposed of on existing industrial land.

The Environment Minister also stressed that the port is some 20km from any coral reef and therefore no coral reef would be negatively impacted by the work.

The Environment Minister additionally emphasized that Indian power stations would be able to use the higher quality Australian coal rather than have to rely on cheaper and poorer quality coal from elsewhere.

Adani mines in Australia are due to produce around 60 million tonnes of thermal coal a year for export. The company claims that the expanded terminal will generate 10,000 jobs, both directly and indirectly.

Some in the industry believe the new initiative will never make money, given falling coal prices globally. Indeed, Greenpeace labelled the decision by the government has both "illogical and unnecessary". It went on to say that Adani has yet to source the necessary investment and might struggle to do so at a time of falling prices. *Barry Cross*

First Capesize bulker calls at Indian ports

Adani's Kandla bulk terminal at Tuna in India has created history by berthing its first-ever Capesize bulk carrier. The 180,000dwt vessel, which was 295 metres long, conveyed 127,180 tonnes of coal from Baltimore, in the USA. The record was even more impressive in that it's the first time that any of the major ports in India have accommodated such a large vessel.

Tuna Terminal, which is fully mechanized, is operated by Adani Kandla Bulk Terminal as part of a concession granted to it by the port trust. *BC*

Callao to have largest covered minerals warehouse

Impala Terminals Perú is building the world's largest minerals warehouse at the Peruvian port of Callao, says managing director Cristian Landeo. Once complete, it will cover 126,000m². Part of the aim is to reduce the amount of particulates released into the air from the handling of concentrates.

Construction is reported to be three-quarters complete, with the roof now being put on. Work, which is due to finish in November, will mean that two of Callao's mineral storage areas are covered. Previously, similar work had been undertaken by Louis Dreyfus Commodities at its warehouse in Gambetta Avenue. Perubar (Glencore) is shortly to follow suit.

According to Landeo, it is costing Impala $35 million to cover its operating area, which can be added to other investment undertaken in 2001, which saw the lead storage warehouse covered. Then, in 2014, a covered conveyor system was introduced at the port.

"The conveyor has allowed vessel waiting times to be cut from eight days to just a few hours," he said.

Impala is a major player in the port of Callao, being responsible for 55–60% of total mineral traffic stored there. It warehouses concentrates produced in Central Peru by the likes of Volcan, Milpo, Votorantim and Chinalco, and has an area set aside especially for output generated by Toromocho, handling all its copper concentrates.

This latter contract involved the company in expanding its facilities from 74,000m² to 180,000m² at a cost of $70 million.

"Since 2001, we have invested $170 million," said Landeo.

Impala's turnover has been boosted by the new traffic, resulting in throughput of 2.8mt (million tonnes) and revenue of $60 million in 2015.

However, given the downturn in demand for minerals, the company will not continue its current levels of investment, particularly now that mining companies are scaling back production.

"At present, we are committed to completing the projects that we have scheduled, and to be creative in order to continue being competitive and won't hike prices," he said.

Impala is, however, looking at expanding into other areas. In the port of Salaverry, it is partnering Santa Sofía Puertos on a project to install a new conveyor system. Furthermore, in Matarani port, there is another initiative to create a further minerals storage area. Government go ahead is required in both cases.

Impala Terminals, which was set up in 2011 as Trafigura's logistics subsidiary, now operates across 18 countries. *BC*

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Northern Brazilian ports handling more export grain

In 2015, Brazil's so-called Northern Arc of ports — Itacoatiara (AM), Santarém and Vila do Conde (PA), Itaqui (MA) and Salvador (BA) — boosted exports of soya and wheat by 54%. In total, they reported handling 20mt (million tonnes).

According to Marcelo Cabral, the director of Infrastructure and Logistics at the Ministry of Agriculture, Fisheries and Food Supply (MAPA), just five years ago, these ports accounted for 8% of the total amount of soya and wheat that was exported; now, the figure has risen to 20%.

He explains that by using these northern and north-eastern ports, overall distances have been reduced from the production areas in the mid-West, cutting logistics costs by around $50 per tonne. Cabral also stresses that they have helped relieve pressure on ports in the south and south-east, such as Santos and Paranaguá.

For all of 2015, exports of soya and wheat amounted to 100mt in Brazil. Of this, Santos accounted for 30mt last year, up from 27mt the year before. Growth at Paranaguá was less dramatic, up from 17mt to 18mt. *BC*

Itajaí handling organic soya

In Brazil, the reinforced and realigned Berth 3 at the port of Itajaí is due to start handling dry bulk traffic as of May. This will consist almost entirely of organic soya. This should help offset last year's loss of 40% of the port's Asian traffic.

According to port director Antonio Ayres dos Santos Júnior, it was absolutely essential to implement this change to attempt to widen the overall mix of services offered. Once the soya traffic begins, he said, it will help improve the overall financial health of the port and reinvigorate the logistics chain.

Around 55 road haulage vehicles daily will bring organic soya to the port, which will improve the overall traffic at the port by 8% compared with January 2016 and by 38% on the right hand bank of the port.

It is calculated that up to 60,000 tonnes of soya a month will come to the port, making use of the BR-101 highway.

In January this year, the Itajaí-Açu port complex handling 874,000 tonnes of cargo, with 161,000 of those tonnes coming through Itajaí on the right bank. This figure is now expected to increase to 220,000 tonnes per month. When Asian shipping lines left the port, throughput had been in the order of 300,000 tonnes. *BC*

Salalah exporting locally mined minerals

Dry bulk traffic at the Omani port of Salalah was up 22% last year to 12.54mt (million tonnes), the majority of it being locally mined limestone and gypsum. Traffic had risen by 30% the previous year, too, and is forecast to rise once more in 2016, according to CEO David Gledhill, thanks to the opening of new berths at the General Cargo Terminal last year.

"The General Cargo Terminal achieved these results through operational planning and efficiency, improvements and innovation, including the completion of a government-funded expansion and the inauguration of new berths in December 2015," he said.

Giving an overview of last year's performance, he noted, "The handling of locally-mined limestone and gypsum has been driving growth in the general cargo business and remains the largest commodity for the terminal followed by methanol, fuel and bagged material, mainly cement. The outlook for GCT is positive as it attracts new business and works with existing customers to increase their throughput in 2016."

In December, the port officially opened a new deep-water General Cargo and Liquid Bulk Terminal, which is capable of handling up to 20mt of dry cargo, in addition to 6mt of liquid bulk. The facility, which has 1,266 metres of berthing line, is situated on the leeward side of southern breakwater. Two 320-metre berths are given over entirely to dry bulk.

Gledhill notes that rising demand for both limestone and gypsum means that more than 1mt a month will be handled at the terminal.

"This increased volume will be achieved thanks partly to the expanded berths that became operation in December 2015 and planned investment in automated equipment for handling aggregates. An anticipated increase in the importation of grain and other general cargo will also benefit the terminal," he suggested. *BC*

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DELACHAUX GROUP

Burlington Stone increases its fleet of heavy duty Case machines

Proven reliability and performance combined with reduced ownership costs were key reasons for Burlington Stone choosing a Case 1021 F Series Wheel Loader

Burlington Stone, one of the UK's leading natural stone and slate producers has increased its quarry and earthmoving equipment fleet of Case machines to 10 with the addition of a new Case 1021 F series wheel loader, supplied by local Case dealer Dennis Barnfield.

The Case 1021F will join an existing Case fleet of 7 x 921F wheel loaders located at Burlington's Kirby-in-Furness quarry, working alongside a Case CX350C and CX470B crawler excavators at the quarry face, loading the cut stone blocks onto trucks for transportation to secondary cutting, production, crushing and recycling facilities on site. To enable longer lengths of stone to be moved the 1021F has been fitted with tyre chains plus a V Profile special bucket.

Specially designed to work in demanding quarrying and aggregate environments this machine offers high levels of fuel economy and reliability, and delivers class leading performance and productivity due to its SCR technology and advanced cooling technology, high bucket payload, and a Tier 4 Interim 9 litre Case/FPT diesel engine, producing 320hp.

Burlington stone has been working Case machines for many years and their proven performance and reliability were key reasons for the company choosing a new Case 1021F as the successor to the 921E.

"The Case 921E has been a great machine for us" said Ian Kelly, Quarry Manager at Burlington Stone. "We've been using Case loading shovels for 17 years and they have proved to be reliable and robust enough to handle working in what is quite a harsh environment on our sites. We have always had good productivity with the Case machines through very little down time, and the power delivered by the machine is great for handling the large blocks of slate we extract.

Before purchasing the Case 1021F Burlington looked at other manufactures equivalents, Ian Kelly explains why they decided to go with another Case: "Without the proven reliability the Case machines offer we didn't feel the others we looked at offered the best value for money. For us it was the complete package of a good purchase price, plus good fuel consumptions figures and low maintenance costs. We also have a very good working relationship with Malcolm Mackay at Dennis Barnfield, which has been built up over the last 17 years. They are fairly local to us and if we have a problem or need to fit a service in around our planned operations they always do their best to help."

Burlington's machine operators have also been impressed with the 1021F especially the new cab layout, which provides excellent visibility, and with Case's joystick steering system which is integrated into the left hand armrest, repetitive loading duties are a much easier task. There is also the optional rearview wide-angle camera, which has a live feed to the colour monitor in the cab for additional security and improved safety on site.

Kelly adds "The Case machines we have used over the past 17 years have always been operator friendly but this new machine offers a totally different level of operator comfort to the previous ones, which is important if you are asking someone to work full shifts on it 5-6 days a week."

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Kalmar unveils plans to consolidate and streamline operations

KALMAR PLANS TO CONSOLIDATE ITS EUROPEAN ASSEMBLY OPERATIONS TO POLAND AND INVEST IN A BUSINESS, INNOVATION AND TECHNOLOGY CENTRE IN SWEDEN

Kalmar, part of Cargotec, plans to consolidate its assembly operations in Europe. In order to improve operational efficiency and ensure long-term competitiveness in the global markets, Kalmar plans to transfer the production of forklift trucks from Sweden to Poland, invest in new, state-of-the-art premises in Sweden and transform the operations in Southern Sweden into a Business, Innovation and Technology Centre.

The new Business, Innovation and Technology Centre in Ljungby, Sweden would focus on strengthening Kalmar's expertise in digital business development, research and development, prototype production and testing of mobile equipment. Additionally, Kalmar is planning to launch a digital business development programme in collaboration with Linneaus University in Southern Sweden.

According to the plans, the forklift truck production that is currently located in Lidhult, Sweden would be transferred to Kalmar's assembly operations in Stargard, Poland. The transfer would take approximately two years and lead to the gradual closing of the operations in Lidhult. To implement the plans, Kalmar begins negotiations with the labour unions. Approximately 190 employees in Sweden would be affected by the change, and Kalmar will provide them support in competence development and assistance in finding new job opportunities.

"We recognize that this is a difficult time for people in Lidhult. However, we must make sure that we continue to sustain our global leadership position also in the future. We are expecting to gain synergies and strengthen Kalmar's competitiveness in the global markets with a more cost competitive production setup. At the same time, we will invest in the future by boosting our technological competences to speed up our digital journey," says Dan Pettersson, Senior Vice President, Mobile Equipment, Kalmar.

"We have a strong heritage in Småland, Sweden. The new Business, Innovation and Technology Centre would create new business and job opportunities especially in the area of digitalization. In Poland, our plan is to expand the operations at Stargard which would create 200 new jobs in the region," he continues.

Kalmar employs currently approximately 350 people in Lidhult and Ljungby, Sweden, and approximately 320 people in Poland.

MacGregor equipment packages ordered for ESL's new eco-bulker duo

MacGregor, part of Cargotec, has confirmed an important order to deliver hatch covers, cranes, deck machinery and steering gear to two new 25,600dwt dual-fuelled Handysize bulk carriers for Finnish owner ESL Shipping. The ice-class vessels are the first to be built to new classification society rules introduced January 2016. The ships have been designed to set new standards in efficiency and environmental performance and introduce liquefied natural gas-powered bulkers to the market.

For each vessel MacGregor will deliver three K3030-4 mechanical grab cargo cranes with a safe working load of 30 tonnes at 30m outreach, design and key components package for multi folding-type hatch covers (6+6), electrically-driven Hatlapa deck machinery and Porsgrunn steering gear.

"These are exciting new bulk carriers and we are happy that our customer choose MacGregor to supply the extensive equipment package for the vessels," says Anders Berencsy, Sales Manager at MacGregor. "ESL has operated MacGregor cranes and hatch covers for a number of years on several bulkers in its fleet. The fact that ESL has returned to MacGregor demonstrates the company's trust in our equipment and in MacGregor's ability to deliver the multi-discipline expertise required for complete equipment packages including Hatlapa deck machinery and Porsgrunn steering gear."

"We wanted to have a highly efficient and reliable cargo handling system on our newbuildings, with service and spares close to our operations," adds Mikki Koskinen, Managing Director at ESL Shipping. "The extended commissioning service that MacGregor is able to provide, was also an important factor in securing the contracts."

The 160m vessels are being built to B.Delta26LNG-design developed in close co-operation between Deltamarin and ESL Shipping by Sinotrans & CSC Shipbuilding Industry Cooperation's Qingshan shipyard in China. The first vessel is scheduled for delivery at the end of 2017 and the second in early 2018. They will primarily be used to carry raw materials for steel and energy industries in the Gulf of Bothnia and Baltic Sea.

MacGregor shapes the offshore and marine industries by offering world-leading engineering solutions and services with a strong portfolio of MacGregor, Hatlapa, Porsgrunn, Pusnes and Triplex brands. Shipbuilders, owners and operators are able to optimize the lifetime profitability, safety, reliability and environmental sustainability of their operations by working in close cooperation with MacGregor.

MacGregor solutions and services for handling marine cargoes, vessel operations, offshore loads, crude/LNG transfer and offshore mooring are all designed to perform with the sea. MacGregor is part of Cargotec. Cargotec's sales in 2015 totalled approximately €3.7 billion and it employs almost 11,000 people.

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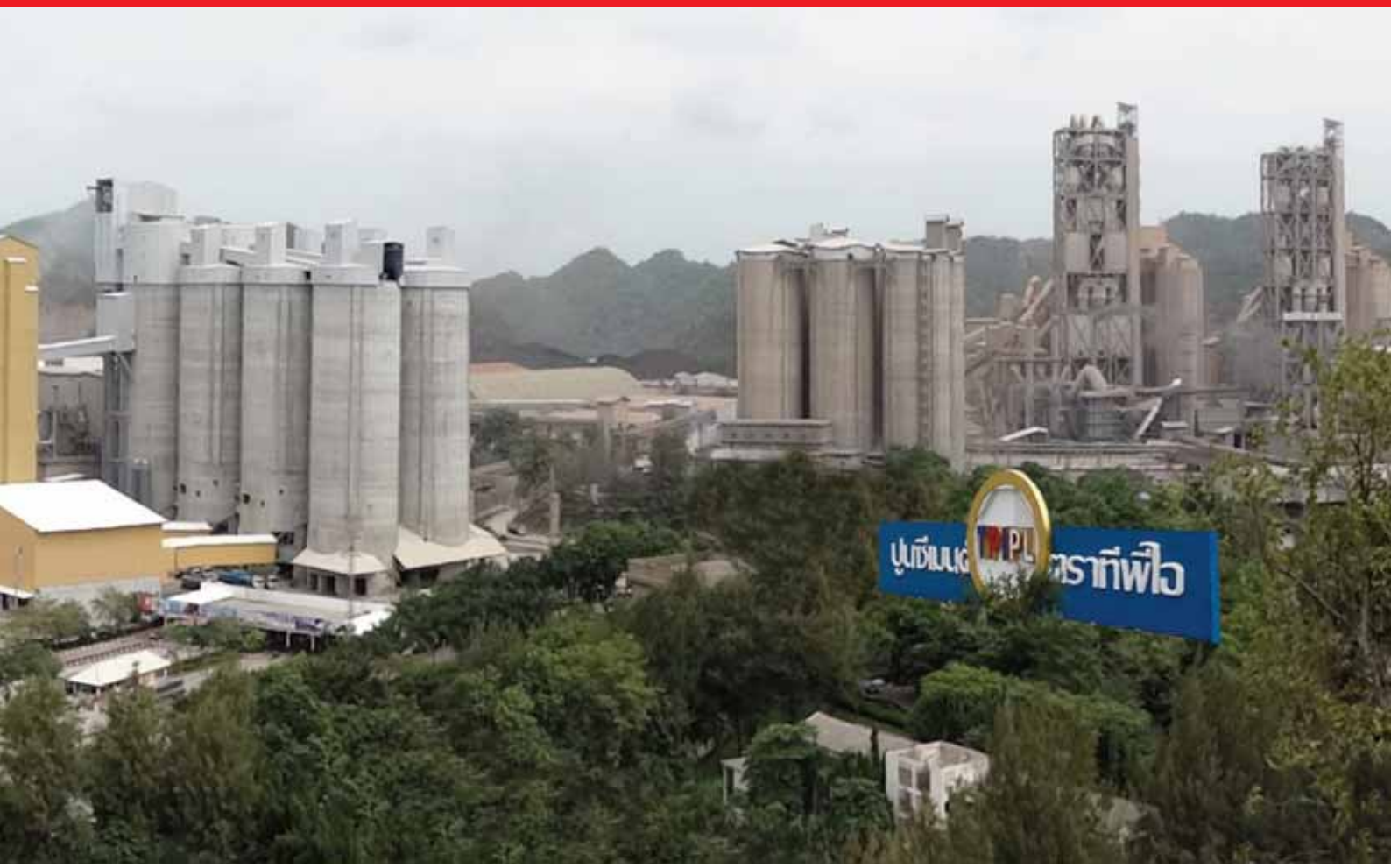

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AUMUND to supply extensive package for Arabian Cement to Rabigh

Arabian Cement Co. (ACC) is building a new Brownfield-cement mill in Rabigh (Saudi Arabia) with a clinker production capacity of 10,000 tonnes per day. AUMUND Fördertechnik GmbH has now received the order for a substantial package of machines for the grinding plant currently being constructed in Rabigh. Initially it will grind externally produced clinker. Ten years ago, AUMUND won a contract to supply equipment for lines nos. 5/6.

AUMUND will deliver 16 bucket elevators, seven deep-drawn pan conveyors, four arched plate conveyors and two CENTREX®-Machines by 16 July this year. Depending on their field of operation, the 16 bucket elevators are equipped with belt or chain and have elevating heights between 22 and 73 metres. They will be utilized for the transport of cement from the grinders to the cement hoppers, for the clinker transport, for the charging of the grinders and for the grinder circulation. One of the bucket elevators will be used for charging the grinders with additives (pozzolana, limestone and gypsum). The conveying capacity of the individual machine is between 120 and 660 tonnes per day.

Five of the seven deep-drawn pan conveyors (axis-centre distance: 50–148 metres, conveying capacity: up to 800 tonnes per day) will be equipped with baffles. The deep-drawn pan conveyor with baffles (KZB-Q type) has been constructed for inclination angles up to 45° and axis-centre distances up to 78 metres. Baffles bolted to the pans and stabilized by catches pressed into the side panels, provide for flexibility and an efficient, reliable transport during conveying up the inclination.

CENTREX® (©AUMUND).

Arched plate conveyor Type BPB (©AUMUND).

With the pan conveyor, conveying capacities between 33 and 1,300 cubic metres per hour and pan widths between 400 and 2,400 millimeters can be realized. The conveyor utilized at ACC Rabigh has a pan width of 1,800 millimeters and will be used for transporting clinker to the clinker hoppers.

Since the customer wants to do completely without the use of spillage conveyors, AUMUND developed special discharge chutes with spillways during lay-outing the plant. Besides, special spatial demands had to be considered. Since the optional transfer of the material to two different conveyors should be a possibility, the chutes were designed to serve a deep drawn pan conveyor on both sides respectively.

Four arched belt conveyors with a pan width of up to 2.40 metres are utilized for the transport of clinker, gypsum, additives and pozzolana. The highest performance machine for the transport of clinker has been designed for a capacity of 1,200 tonnes per hour.

The package of delivery is completed by two machines of the CENTREX® type with a diameter of five metres for the discharge of FGD gypsum.

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"WHITE is the New Green"

E-Crane reaches commercial representative agreement in Latin America

E-Crane International has announced a commercial representative agreement for Latin America with Ingeber SRL in Rosario, Argentina.

After receiving training at the E-Crane facilities in the USA, Ingeber will also be able to offer E-Crane's existing and future clients technical support. Ingeber will be responsible for the marketing and support of E-Crane products in Argentina and the region of influence. The contract was signed by Steve Osborne and Steve Suter on behalf of E-Crane and Germán Bertolo of Ingeber SRL.

Steve Suter of E-Crane (left) with Germán Bertolo of Ingeber SRL.

This agreement clearly reflects E-Crane's desire to have a greater presence in the region. The partnership with Ingeber reflects -Crane's commitment to provide comprehensive and innovative solutions in the handling of bulk materials to its potential customers.

The CEO of E-Crane Steve Osborne, said: "We are very pleased to have Ingeber as our partner in South America. Germán brings a strong technical background and experience in the unloading of barges, a key market segment in the important regions of the Paraná River, the River Uruguay and Plate River Basin."

Another E-Crane milestone in Latin America

On 22 March, E-Crane USA announced a sales and service agreement with SIMEHSA Sa de CV (Sistemas Mecanicos e Hidraulicos, SA de CV) located in Santa Catarina, Nuevo Leon, Mexico (Greater Monterrey area).

Alejandro Garcia Senior and Junior as well as Federico Santillana and Alberto Reyes are excited to be able to offer E-Crane products and services to their clients in the steel and maritime Industries. E-Crane looks forward to a fruitful and prosperous relationship.

Photo: Federico Santillana (Sales Department), Alberto Reyes (Sales Department), Alejandro Garcia Suarez (Founder of Simesha), Alejandro Garcia (Son of the founder), Jerry Hoffman (E-Crane).

Industry 4.0 makes Dino bulk truck loaders smart

A Dino bulk truck loader that transmits a signal itself if a component is not working properly or if maintenance is required. In modern language there are various terms for this: Smart Industry, the internet of things or Industry 4.0. Van Beek shows that this new development makes it possible to take the lead again with a trusted machine that has long existed: called the 'Dino Wireless Monitoring System'.

Smart Industry

Smart Industry simply means that sensors collect and transmit all sorts of data from a machine so that action can be taken based on these data. "Now we often sell a Dino and usually we do not get any feedback about the operation of the machine. As a result, this can now change", says Mark Jonkers. He is investigating for Van Beek how Smart Industry can be used on the Dino.

Better service

By fitting Dinos with sensors and their own internet connection Van Beek can collect data remotely on the operation of the bulk truck loader. Based on these data the company can better predict when maintenance is necessary or there is a risk of a malfunction occurring. "The idea is that in this way we can ultimately provide an even better service," says Jonkers.

Remote detection of malfunction cause

"It is also possible to solve problems without a mechanic having to visit ", Jonkers expects. "For example: someone calls because his Dino is suddenly no longer working. We can then see remotely that for example a hatch has not been closed properly."

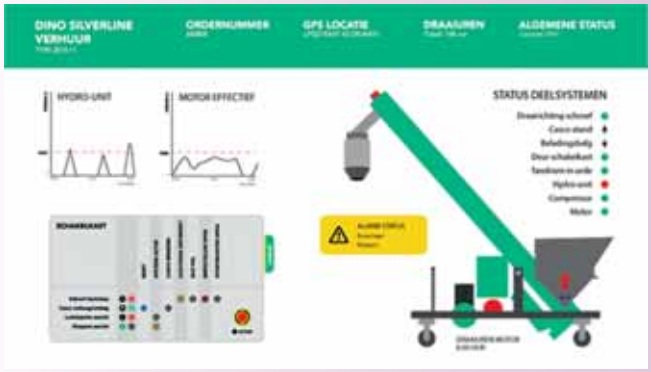
Cost saving

Smart Industry technology also has a cost-saving effect. "Many components are replaced as a precaution to prevent machine downtime just as they are in vehicles. But what if you can see that a component is still working perfectly well?

"For example we have sensors to measure the vibration of a bearing. Every type of bearing has its own healthy vibration and you can compare this with the vibration that you are measuring. So you know immediately whether the bearings need replacing or not. We then replace the components just in time, as it is called."

Why develop a Smart Dino?

Jonkers has already mentioned a few reasons for doing research into this. By collecting data on the use of the Dino the customer can be better advised on the use of the Dino and components can be replaced just in time. "But this development also makes it possible to monitor Dinos remotely and to build up a database to provide more knowledge about the bulk truck loader. This can again result in a better Dino for our customers."



Three specialist areas in one machine

Jonkers is in the last phase of his Mechatronics studies at Avans Hogescholen in Breda, a combination of mechanical engineering, electronics engineering and ICT. This area of study arose because there is a growing need for personnel with enough knowledge of all these areas to link them together. "The Dino 4.0 is a perfect example of this. You have a big mechanical machine that is electrically operated and you have all sorts of data from the sensors that have to be processed by a programme."

Van Beek is in the near future starting a large scale field test with the 'Dino Wireless Monitoring System'. Existing Dino owners can register with Van Beek to take part in this field test.

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Jan Lindbäck, CEO, Marine Cranes, Sweden

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Grab and go?

grabs and grapples: the workhorses of the cargo handling market

A Verstegen clamshell grab on a Liebherr mobile harbour crane.

Jay Venter

A different Verstegen grab for each bulk material

Verstegen

Verstegen grabs is based in the centre of the Netherlands at one of the mean river crossings. In the last 15 years, the company has developed to become one of the world's leading manufacturers of rope-operated mechanical grabs. The company was founded in 1951 and since then over 10,000 grabs in more than 100 countries worldwide have been supplied.

The quality of Verstegen's products is based on 65 years of designing and building a wide range of grabs for all conceivable applications. Regular feedback from many loyal customers ensures the continuous development of the quality of its products. Modern production methods, combined with highly qualified staff, make Verstegen a first class manufacturer of mechanical rope-operated grabs.

Verstegen grab designs are based on extensive knowledge of cranes, bulk materials and wide experience with all conceivable applications in the bulk industry. Stevedoring companies, port authorities as well as steel works and power plants all use the company's grabs to handle all kinds of bulk materials.

Verstegen philosophy

For fast and efficient unloading, a grab is the most important tool. In order to get high unloading rates, the grab must be extremely reliable with a high productive capacity. Furthermore, each grab should be custom-built for the material it has to handle and the unloading situation in which it has to operate. Verstegen focuses completely on optimal capacity and durability for long-lasting profitability rather than on low initial acquisition prices. This makes a Verstegen grab not only operational but also economical, and therefore a very good choice.

Assembly line of Verstegen orange peel grabs.

High capacities and low dead weight

In order to obtain the highest productive capacity, a grab should have the highest possible volume without unnecessary dead weight. This is only possible with a good and well-proven design and the use of the best possible materials. For the highest strength and minimum wear, each Verstegen grab is provided with shells completely made of high tensile wear-resistant steel. The friction in the articulation points is absolute minimal because of an excellent bearing system.

A different grab for each bulk material

Each bulk material has its own specific properties and this requires a specially designed grab. For example, the optimal grab for coal can have great difficulties with iron ore. Verstegen has developed a full range of grab models especially designed for common bulk materials like coal, iron ore, agribulk, fertilizer, phosphates, etc. Besides grabs for the above materials, Verstegen has special solutions available for other bulk materials with specific properties.

Technological innovations in design and handling

Modular building system

The large variety in the grabs Verstegen supplies necessitate a make-to-order production process. To fulfil delivery times of six to eight weeks, as often required by customers, Verstegen developed a Modular Building System (MBS). This MBS divides the grab into seven different components. Each component has a number of standardized versions. Thanks to this standardization many different models are possible, with a minimum amount of individual parts. MBS enables Verstegen to produce custom-made grabs with standardized components. The advantage is that all its technical innovations are implemented in every individual grab it produces. This ensures continuous improvement of the company's products and short delivery times.

Servicing and repair

Service

For a long and productive operation of grabs, regular maintenance is very important. Wear is the main reason for regular maintenance. Every time the grab scales move through the material, all parts of the grab that are in contact with the bulk material will wear. Wear takes place gradually, but will never stop and therefore maintenance is required on a regular basis. Verstegen offers a comprehensive range of service and maintenance options and support for the customer's own technical department.

Central greasing system

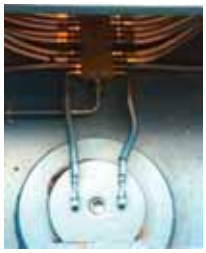
Verstegen pays a lot of attention to the reliability and durability of their grabs. To optimize reliability and durability of the grab the central greasing system is a good option. This system connects all greasing points of the upper structure to one central point, accessible from ground level.

The system has three important advantages:

1. The safety of the operational people is greatly increased because they don't have to climb the grab to grease it (the height of the grabs in open position is often 5 to 7 metres).
2. It saves a lot of time, because about 15 greasing points are connected to one central point.
3. The lifetime of all moving parts is increased, because of better greasing and thus less wear.

Verstegen clamshell grab on a Liebherr mobile harbour crane.

Rope guide rollers.



Dividing block in grab head.

Central greasing point.

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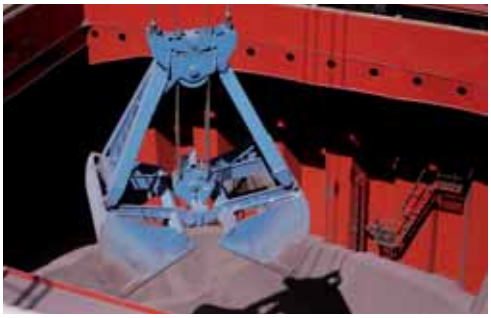
IN ROPE-OPERATED GRABS



Are you looking for a new grab?

Please contact us. At Verstegen we are fully specialised in rope-operated mechanical grabs. Our goal is to provide the optimal grab for your specific operation. A new Verstegen grab leads to higher production rates and lower maintenance costs through extreme reliability and long lifetimes. Tell us how you want to improve your operation and together we will find the best solution.

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Negrini grabs for various material handling requirements

Negrini Company, which specializes in engineering and manufacturing a comprehensive range of grabs and buckets for rope machines and crawler-mounted cranes, has been active in the market since 1967. Negrini supports its clients by analysing the job to be done and, if needed, by adjusting the standard design of grabs and buckets to enhance their performance once in operation.

Negrini products:

Electro-hydraulic and hydraulic orange peel grabs to handle rocks, waste for recycling and loose material. To be operated they require crawler-mounted cranes and, in general, boom lifting machines.
Two- or four-rope orange peel grabs to handle rocks and waste to be recycled. To be operated they require crawler-mounted cranes or, in general, boom lifting machines.
Electro-hydraulic and hydraulic clamshell grabs for the handling of any loose material as well as for dredging work in confined areas such as near jetties or quays.
Dual scoop grabs to handle loose material, including the load inside ship cargo compartment. For operation they require two- or four-rope boom lifting machines or crawler-mounted cranes.
Radio-controlled single-rope grabs meant to handle any loose material. The dust and waterproof radio controls opening of the bucket. They can be operated by any kind of crane.
Environmental hydraulic clamshell bucket to load polluted mud especially for the sea or river ground. The two peculiarities of this range of buckets are that at lifting the two sides copy the ground they contact with, hence leaving it flat so the digging depth is automatically controlled. The second are the valves on the upper part that allow water to flush away without releasing polluted mud in the water.

Electro-hydraulic clamshell grab

Among the latest of Negrini's innovations, its electro-hydraulic clamshell grab deserves a special mention:

Key features

The traditional construction includes 90° welded plates; in this case the material pastes easily on the walls, the insertion of a profiled plate inclined at 45° greatly strengthens the structure and creates two 45° corners facilitating the sliding of the material.

The bucket may be provided with valves of different shape, 'standard' valves, valve with opening windows to reduce load capacity, 'Anti-dust' or 'Containing' valves to reduce the loss of material. It is possible to apply metal or rubber roofings to reduce loss of dust, protecting the environment. It is possible to change the characteristics of the bucket by replacing the valves, mounting large valves for moving light materials, or smaller (but heavy and robust) valves for hard and compact materials. The timing of the valves is obtained via innovative hydraulics, which does not use teeth or rods eliminating wear, breakage and maintenance. This is obtained by the equal oil distribution to jacks through an innovative hydraulic










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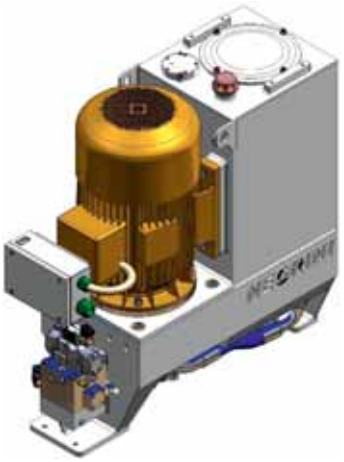
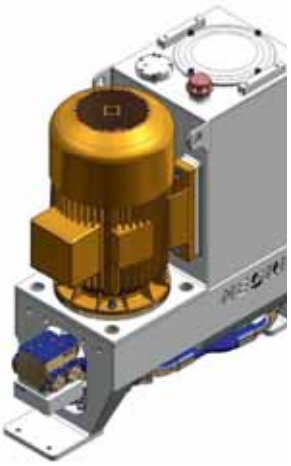
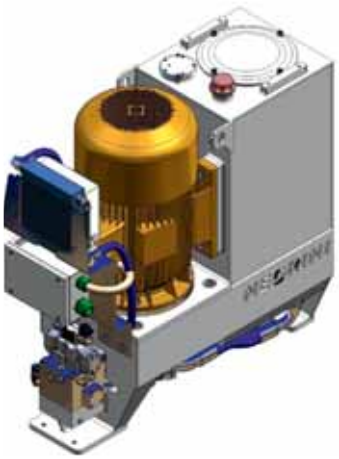


Standard with solenoid.



Reverse engine.



Front heat exchanger.

Heat exchanger on top.

circuit; the jacks receive the same amount of oil on both opening and closing, obtaining a correct movement of the valves without using mechanical parts. All jacks have a retarding device to prevent the collision between the 'end-run' lines during valve opening. Pistons are protected from shocks, hydraulic hoses are wired inside the structure. The total protection of pistons and hydraulic hoses prevents accidents such as the bucket exiting from the ship hold. The most sensitive and difficult to maintain area is the connecting socket of the valves, Negrini used a large bush which is easy to replace. All the pins will be greased automatically through an electric pump and a specific distribution circuit, each pin will receive a fixed amount of grease regardless of the resistance created by dirt, distance, etc., each pin will be lubricated as programmed.

The operator will be required to check the grease level in the tank. The pins are automatically lubricated, but can keep the traditional greaser to allow manual greasing in case of an emergency. The whole electrohydraulic system is accessible by removing the hoods, allowing ordinary maintenance. The hydraulic unit is independent and can be easily removed, tested or controlled comfortably 'on the ground', without unplugging electrical or mechanical parts but only four hydraulic couplings to the bucket, the operation may take about one hour. The hydraulic central unit has been inserted in a single metal block, the entire valve block can be replaced simply by removing four screws. The operation can be performed even, by non expert personnel.

The buckets can be fitted with standard hydraulic units (with solenoid valves) or with reverse motor, in the latter type the opening and closing of the bucket will be controlled by the reverse rotation of the motor. The versatility of the project will allow the bucket to accommodate non-standard hydraulic units, in many cases the units will be replaceable.

KARDESLER GRAB AND MACHINE operating in over 50 countries

In 1985 KARDESLER GRAB AND MACHINE was established in Istanbul/Maltepe, where it started to produce grabs for sand. After that, because of the developments in the industry and technology, the company rapidly started to develop its products.

KARDESLER manufactures all types of grabs for the dry bulk industry.

Stevedoring companies, port authorities as well as steel works and power plants are using the company's grabs for handling all kinds of bulk materials. More than 2,500 Kardesler grabs operate in more than 50 countries worldwide.

Dedicated to grabs

Kardesler specializes in the designing and building of grabs and is continuously working to develop and build the most efficient and cost-effective grabs. Besides the standardized product range, KARDESLER also develops unique solutions for specific situations and customer needs.

KARDESLER philosophy

For fast and efficient unloading, a grab is one of the most important tools. In order to get high unloading rates, the grab must be extremely reliable with a high productive capacity. Furthermore each grab should be custom-built for the material it has to handle and the unloading situation in which it has to operate.

High capacities and low dead weights

In order to obtain the highest productive capacity, a grab should have the highest possible volume without unnecessary dead weight. This is only possible with a good and well proven design and the use of the best possible materials. To increase strength and minimize wear, each KARDESLER grab is provided with shells completely made of high tensile wear resistant steel. The friction in the articulation points is absolute minimal because of an excellent bearing system.

A different grab for each bulk material

Each material has its own specific properties and a grab must be adjusted to these properties. A grab that will work perfect in coal, can have great difficulties whilst handling iron ore. Through extensive experience and know how, KARDESLER has developed a number of grab models, especially designed for common bulk materials (coal, iron ore, agribulk, fertilizer, phosphates). Besides grabs for the above materials, the company has special solutions available for other bulk materials with specific properties.

CIVETTINI ITALO & C SAS

The quality of our products is a result of our passion, dedication and hard work.

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P.I. 01583540982
Registro Imprese di Brescia 01583540982 – Iscrizione R.e.a 324999

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Mobile: (+39) 340 1358822 **Foreign office:** (+44) 7978302839
www.cfshandling.it

Continuous development behind CFS Handling's reliable equipment

Civettini Italo & C. sas, under the brand of CFS Handling, designs and manufactures equipment for material handling. The company remains at the forefront of the industry with the development of its electro-hydraulic buckets as well as its mechanical rope grabs.

As more and more customers require special equipment, and the lifting capacities of port cranes are increasing, the demand for ever larger equipment has been growing.

All CFS's air to oil heat exchangers are equipped with systems that maintain the optimal viscosity of the oil according to its predetermined function, so that temperatures do not exceed 60°C, ensuring long operational life to all components including the hydraulic cylinders.

Often the bulk market requires equipment for wood chips or even big grabs for logs for the unloading of ships and the loading of trucks to produce wood chips later.

Civetti Italo & c sas is continues to research materials and components of increasing sophistication and high-performance, such as hydraulic grabs fitted with diesel engines of 60kW and the ability to lift 20m^3 with a remote control for cereals and for use with the cranes used by its customers who have not yet adopted the use of port cranes as Terex Gottwald or Liebherr.

CFS Handling is active in the following sectors:

Waste

In incineration plants, in waste disposal and recycling in general, there is a need to handle different types of materials. CFS Handling offers a wide range of buckets and grabs, which is the result of continuous research and development to meet customers' specific needs.

Steel

Handling in the steel sector requires maximum operational reliability because of the advanced technologies, materials and components used. CFS Handling produces grabs and buckets able to guarantee safe performance at the highest levels of quality.

Ports

Thanks to its experience in the port sector, CFS Handling is able to propose solutions for the specific requirements of various different types of material.

Cement

The processes of handling materials in the cement sector require equipment that can operate in environments with critical conditions. CFS Handling provides buckets and technologically advanced equipment to ensure consistant and reliable operation.

Demolition

In different sectors of industrial demolition, steel structures, and selection post demolition, CFS Handling provides highly reliable and specific equipment.

The Grab Specialist: reliability in action

With over 50 years of experience in the production of grabs, The Grab Specialist (TGS) is a well-known supplier, manufacturer and repairer of all types of grabs and special constructions.

The grabs are designed and manufactured using advanced tools and machinery in such a way that digging force is optimized and a low dead weight is maintained.

Only high-quality and wear-resistant steels are used.

Bulk handling terminals are familiar with TGS's clamshells for dry cargo handling.

TGS is a full time production company with a production facility of 28,000m^2 in the Netherlands. Its production hall is fitted with overhead cranes with lifting capacities up to 200 tonnes.

Besides manufacturing 'standard' grabs that can be used for different bulk materials, TGS also designs custom-made grabs tailored to work with a specific crane or machine.

Sometimes TGS manufactures a completely new grab for a special task.

Clamshells dry bulk

TGS manufactures mechanical, hydraulic and electro hydraulic grabs ranging in size from 400 litres to 60m^3. The shells of its grabs can be provided with spill plates to reduce capacity. This will give an advantage when bulk materials with various densities are (dis)charged. This can be calculated to the biggest capacities possible in combination with the lifting capacity of the customer's crane.

Mechanical grabs

- single line, equipped with the following mechanisms for opening/closing:
  - touch down (automatic)
  - hand tripped (manually control)
  - remote control (remote control)
- two-rope; one-rope for opening and one-rope for closing the grab.
- four-rope; two-rope for opening and two-rope for closing the grab.

Hydraulic grabs

- fitted with one, two or more cylinders.

Electro hydraulic grabs

- fitted with an electro motor.

For each type of crane and almost any kind of dry bulk material.

For every inquiry that comes in to TGS, a check is made regarding the specifications of the crane or machine, the material handled and the needs and wishes of the customer.

Offers are prepared with the aim of maximizing production of the crane or machine and reducing fuel consumption.

TGS is fully informed about the latest developments and marketing trends.

Quality is top priority at TGS to provide a sustainable product with low maintenance costs.

Agro bulk

In the past 50 years The Grab Specialist has designed and manufactured many grabs and for agricultural bulk handling. This has led to innovative solutions and sustainable grabs.

Quality has improved over the years by the ongoing process of making changes in product design. TGS's engineers can rely on many years of experience and advanced software.

This has resulted in lighter and stronger grabs that have a better digging performance in the bulk material.

The care for the environment has also played an increasingly important role in agro bulk handling.

The expectations

TGS is still growing. An new 2,000m^2 hall warehouse for spare parts was taken into use earlier this year. Also, work is under way on a new 3,000m^2 production facility, which will be finished by the middle of this year.

Bulk handling is growing again in the Netherlands and abroad. TGS expects many more clients to ask for standard grabs or specific solutions to difficult requirements.

Efficiency will remain a top priority to be thought over in consultation with clients all over the world.

Record turnover for Blug grabs in 2015

The year 2015 has been an important year for the company Credeblug due to the 50th anniversary celebrations and the largest turnover of its products in the company's. With a consolidated direct export rate of 80%, the company is facing new challenges related to grab automation business and offshore market penetration. Maintaining port activity, steel industry and recycling sectors as its main markets, the company is moving towards an increasing R&D profile. Present in 54 countries and a main supplier to some of the most important crane manufacturers, Blug has a product catalogue that offers a complete range of electro-hydraulic, hydraulic and rope-operated grabs for different product and crane scenarios.

Development and reliability

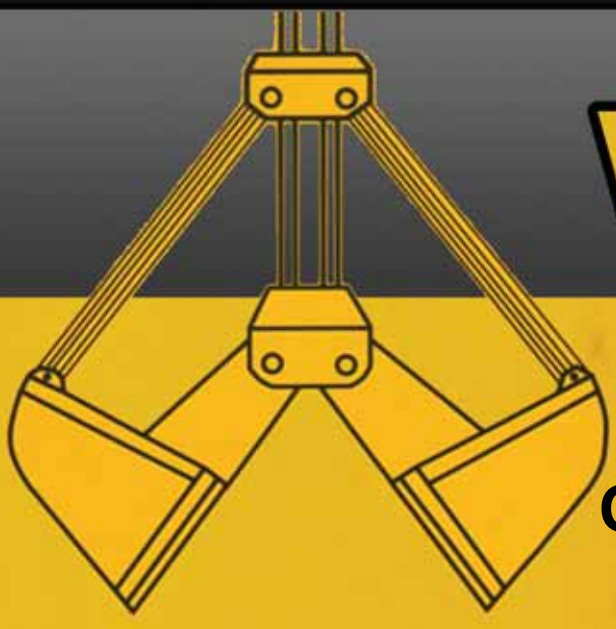
The main challenge in the grab business nowadays is to achieve a good balance between technological features and the overall robustness of the grab. The current market is seeking an evolution in grab control, particular in the area of more autonomous grab motion and diagnostics. Environmental conditions and operational requirements make it necessary for these new systems to work perfectly irrespective of fatigue and onerous working conditions.

In the past few years, the market has been moving towards designing grabs for specific commodities whilst also reducing the overall weight of the grabs themselves. In terms of port activity, specific developments have focused on dust control and also on increasing capacity. Furthermore, in the next few years, the industry will move towards providing more automation and increased safety features.

Compared with older grabs, new models — and particularly the smart systems they come with — can generate a faster return on investment in terms of maintenance and operational costs. Cycle time reduction, better capacity, lower electricity consumption and, particularly, cycle reliability make grab renewal a very interesting investment.

In recent years, Credeblug has been focusing its efforts on creating a more modular grab design, based around a standard structure and concept. The reasoning is that customers can easily modify their grabs without having to increase the number of spare parts they keep. Credeblug has also refurbished some of the old grabs by replacing the electro-hydraulic unit with the new concept of variable flow motion, which minimizes electricity usage and also the need to heat the oil.

Credeblug is working on new systems that should be available soon. These are based around Pulanfi technology, which offers additional features that make it possible for grabs to work in deep water environments. This new range includes improved



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vision and illumination capability, in addition to positioning sensors.

The company has 50 years' experience working in the grab market, which has always demanded robust solutions that can be continuously improved, whilst not forgetting what has to be in place to guarantee a good cycle cadence. Blug grabs have an average working life of 20 years.

"We aim to offer a quality product that produces a solid return on investment, which is achieved by reducing operational cost and increasing working life. We don't try to provide cheap options for the medium term, but rather a good quality product and all the necessary back up that the customer expects," says Asier Susaeta, general manager of Basque-based manufacturer.

Improvements and technological developments ensure that Blug products are better value for money than ever before. Nevertheless, in what is a very niche port market, the key factor for manufacturers to remain competitive means they have to innovate.

Company expansion

Following the Credeblug company expansion and product development, in 2015 the customer portfolio has included some of the principal European crane manufacturers, as the perfect combination of crane and grab is one of the key aspects to be considered for any shipping contract profitability. The port cargo handling business has represented in 2015 the biggest income within company's portfolio.

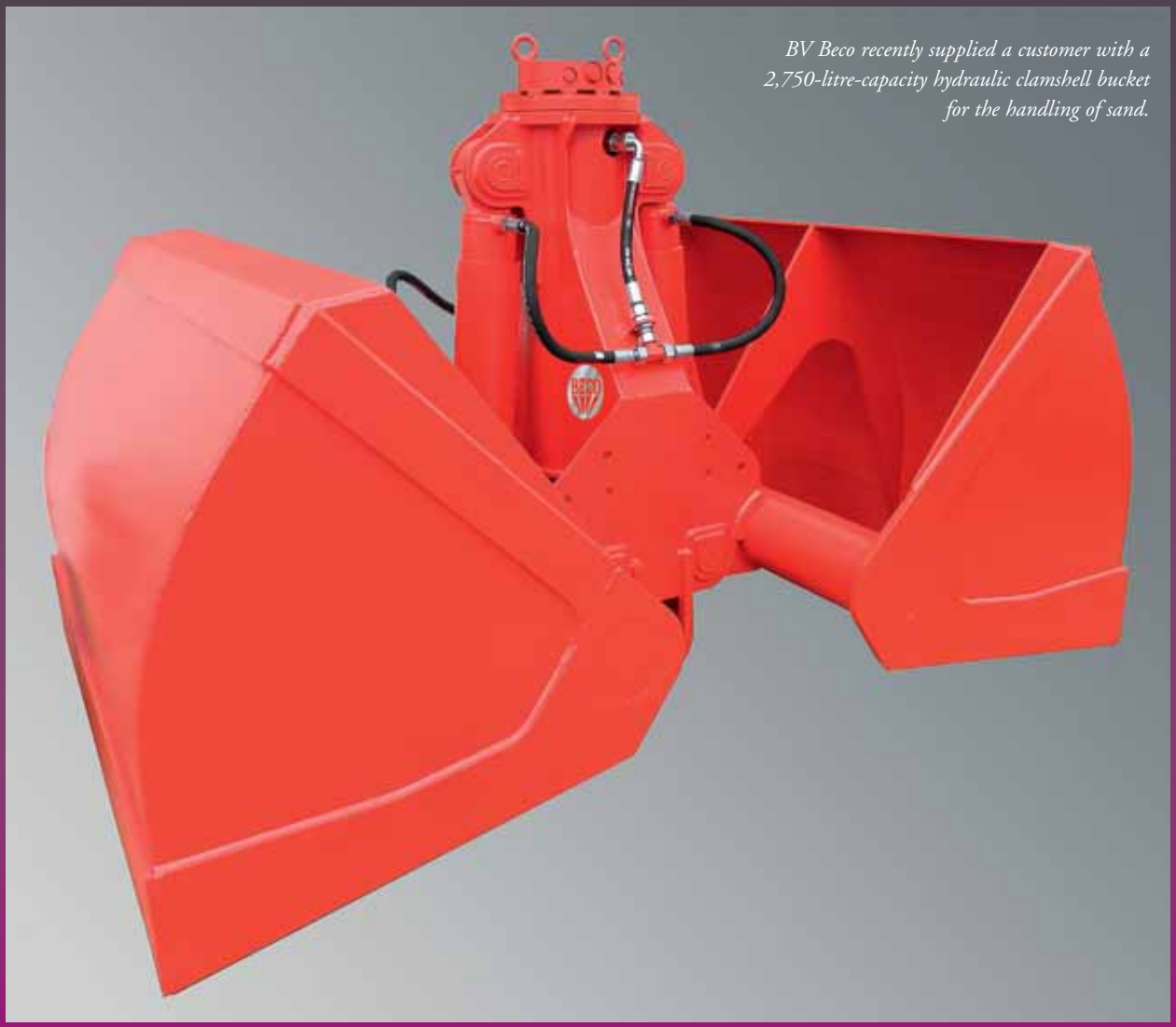
These orders' figures show the market tendency and Blug products' reference position for the biggest lifecycle value solutions. Fifty years of experience, in addition to continuous product development, makes Blug a very competitive option that offers a step forward in the grab business.

BV Beco supplies customer with another hydraulic clamshell bucket

For a customer in Belgium, BV Beco manufactured another hydraulic clamshell bucket for the handling of sand with a capacity of 2,750 litres, light execution, an own weight of 2.2 tonnes with hydraulic rotor, collars to increase the capacity, hoses fixed on front and rear side.

The clamshell bucket has been made of high tensile steel 690 and wear-resistant material, hardness HB400 and S355.

The company welcomes customer enquiries regarding grabs, clamshell bucket, orange peel grabs and other Beco Group products like, tippers, attachments, fronts and trailers.



BV Beco recently supplied a customer with a 2,750-litre-capacity hydraulic clamshell bucket for the handling of sand.

Wide range of material handling equipment from Essar Industries

Conceptualized in the year 2004, Essar Industries is a well-established organization engaged in manufacturing and exporting a wide assortment of material handling equipment. Its broad catalogue of products comprises of quality jib cranes, industrial grabs and iron-ore grabs. The company's products are highly robust, with precise controls, easy handling, ergonomic designs and low maintenance traits. Moreover, the company has the distinction of executing a number of projects on a contractual basis for reputed government, quasi-government, MNCs and reputed Indian companies.

Keeping in-sync with the latest developments in industrial technology, Essar Industries has implemented the state-of-art infrastructure for accomplishing the varied needs of the market. Its production facility equipped with modern-age machinery and long transfer lines have enabled it to make products with extreme precision engineering. In addition to this, Essar has effective quality testing and a warehousing unit for making the prompt supply of defect-free products as per clients laid specifications. Moreover, Essar makes effective ply of skilled experts for ensuring smooth implications of qualitative management system in all its processes. With these prospects, Essar has attained a vast clientèle base to serve nationally as well as globally in countries such as Indonesia, Saudi Arabia and Pakistan.

Essar has attained immense success in this domain, with the competent leadership of its chief executive A.M Sherif.

Products

Essar Industries manufactures and exports a wide array of material handling equipment such as cranes, grabs, grapples and tongs, lifting equipment and material handling equipment. The entire range is manufactured using qualitative raw material sourced from reliable vendors based in UK, Sweden, Germany and others. The superior grade raw material comprises mild steel, carbon steel, stainless steel, cast iron and brass, which ensures optimum finish and performance standards of the end equipment.

Material handling and allied equipment

- Jib crane
- Industrial grabs
- Iron ore grab
- Multi jaw grab
- Mechanical grabs
- Transfer cars
- EOT cranes
- Multi rope grab
- Industrial tongs
- Electrode tongs
- C - Hooks
- Industrial tilters

Essar prides itself on the fact that its entire range of equipment has the following features:

- Durability
- High material strength
- Dimensional accuracy
- Excellent loading capacity
- Resistance to rust and corrosion
- Longer work life

In addition to this, Essar Industries also has the ability to customize its range as per the specifications detailed by the clients.

Services

Essar Industries extends customer service operations, not only assistance to the customer's needs, but also support whenever needed. The company provides engineering services and equipment manufacture after-sales services. Essar's workshop in Coimbatore, India, manufactures equipment, components and product lines in accordance with the requirements, demands and plans of its customers. All its equipment is custom built and designed together with customers with regard to their specifications and inputs. The company keeps in touch with the customer project team on a regular basis and updates the production schedule. Essar provides after-sales services. A team is deputed along with equipment for commissioning and ensuring that the equipment is working as per the specifications and approved drawings. Essar provides periodical maintenance of the equipment supplied by it, if required by the customer or at any time of need. Essar's workshop complies with the requirements of ISO 9001: 2008 quality system reliable engineering workshop. DCi

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For more information, visit us at **www.flsmidth.com/dcibe**

FLSmidth

Making stockyards efficient and cost-effective

Metso bucketwheel stacker/reclaimer.

Metso offers wide range of stockyard equipment

Metso is a major industrial company serving the mining, aggregates, recycling, oil, gas, pulp, paper, and process industries. The company helps its customers improve their operational efficiency, reduce risks and increase profitability by using its knowledge, experienced people and innovative solutions to build new, sustainable ways of growing together.

Metso is very active in the stockyard equipment market, as well as elsewhere. Its products range from mining and aggregates processing equipment and systems to industrial valves and controls. Metso's customers are supported by a broad scope of services and a global network of over 80 service centres and about 6,400 services professionals. Metso has an uncompromising attitude towards safety.

Metso's Business Area is responsible for providing minerals processing solutions for mining customers, crushing and screening products for aggregates customers, as well as recycling solutions, and system deliveries.

Among the many diverse products offered within Metso's Business Area is a complete range of stockyard equipment used for the loading and unloading of dry bulk materials across many industries. Metso's long history and vast experience in bulk material handling equipment enables it to offer the latest state-of-the art equipment to complement its customers' processes and needs. Its line of stockyard equipment includes:

- bucketwheel stacker/reclaimers;
- scraper reclaimers;
- portal scraper reclaimers;
- circular scraper reclaimers;
- barrel reclaimers;
- wheel on bridge reclaimers;
- stackers; and
- conveyor systems.

In addition to this complete line of stockyard equipment to manage the stockyards, Metso also offers the equipment necessary to receive and dispatch from the yards with a complete line of car dumpers and positioners, continuous barge unloaders, grab barge unloaders, balance cranes and ship and barge loaders.

Technology to feed a growing world

Technology as an integration of manufacturing know-how with the expertise in evaluating the quality of the finished product. Technology as a result of the integration and co-operation of a group of companies that are now fully integrated and synergistic, covering the entire supply chain from cereals delivery to the packed product on the shelf. Technology allowing to set up in strict co-operation with our customers a manufacturing system tailored to their specific needs. Technology to feed a constantly evolving world.

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GOLFETTO SANGATI
A COMPANY OF PAVAN GROUP

Circular scraper reclaimer.

Metso's core customer industries are in the mining sector, however, it also serves other industries such as pulp, paper, recycling, grain, cement, chemical, power and fertilizer. Specific commodities handled or managed with Metso stockyard equipment includes: coal, iron ore, fertilizer, wood chips, food & grain, limestone, potash, phosphate, urea, industrial minerals, cement, recycling materials, scrap, etc.

Metso utilizes latest technology in all designs which are continually reviewed and updated within the Metso Technology group which consists of a team of experienced product directors who drive the latest innovations into each of the products offered. Through the efforts of the Technology Product Teams,

Circular scraper reclaimer.

Portal scraper reclaimer.

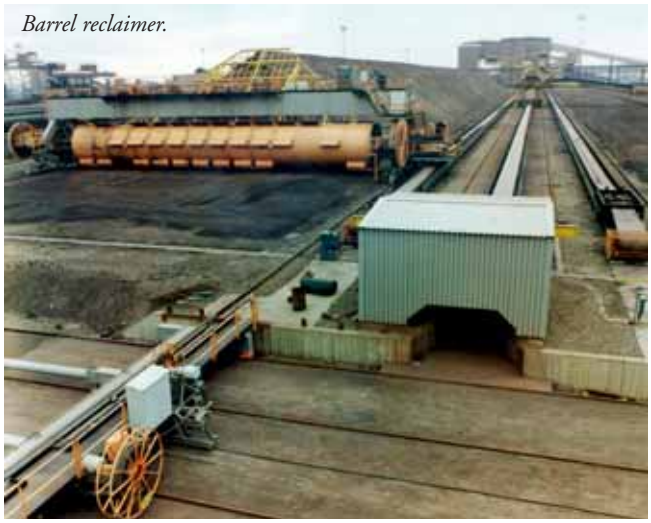
Metso can provide cost-effective equipment and remain competitive in the market and industries it serves. Additionally Metso's dedication to continued R&D and new product development strengthens its position with new products such as a newly developed Balance Crane for the recycling industry. Continued development and renewal of its stockyard offerings and other equipment remains a priority.

While Metso's Business Area is being challenged by tough market conditions, inquiry levels remain moderate in the mining, power, fertilizer, and grain industries. Metso's main competitors are global companies, small regional and local competitors that have similar product and service portfolios. Staying ahead in technology and providing cost-effective solutions to customers' needs keeps Metso competitive throughout the industries it serves.

Metso's most recent installations and/or contracts include: three bucketwheel stacker/reclaimers in the power industry, two portal scraper reclaimers in the fertilizer industry and, two rotary car dumpers at port facilities and two rotary car dumpers for the power industry.

Portal scraper reclaimer.

Scraper reclaimer.



Barrel reclaimer.

Stockyard Equipment

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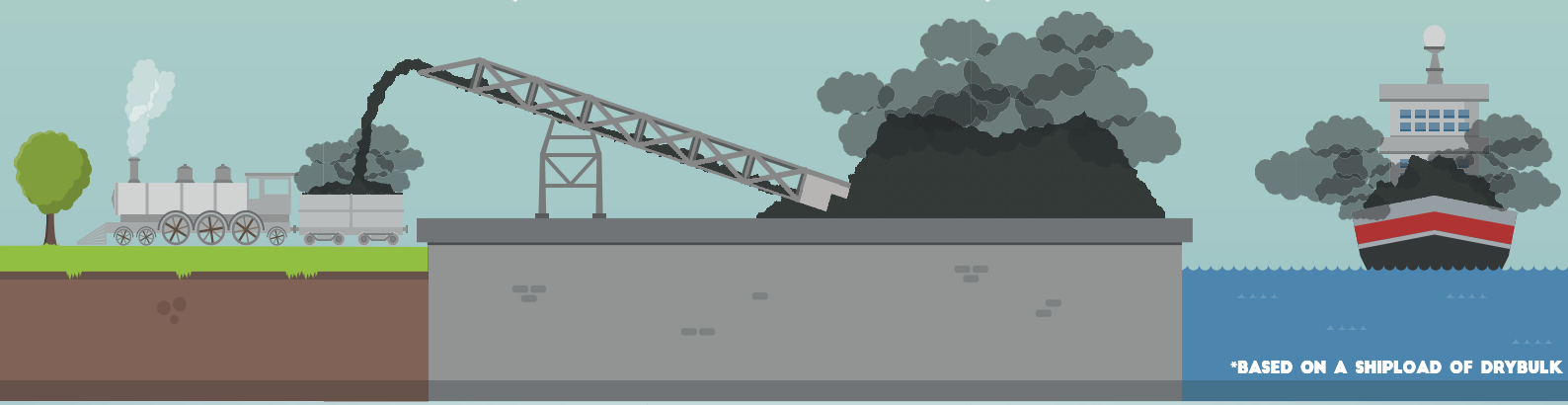

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LIEBHERR

New powerful JCB 457 wheeled loader is perfect for ports

JCB's brand new 457 wheeled loading shovel — the flagship of the range — is offering ports a powerful solution to demanding bulk handling applications.

Firstly, the new machine comes complete with the 'JCB CommandPlus' cab which provides users fantastic visibility, lower noise levels, increased internal space and an enhanced working environment for the operator together with improved maintenance, reduced dust ingress and enhanced safety and productivity.

In addition, the 457 is the first large JCB wheeled loader to meet Tier 4 Final emissions standards, with the adoption of a powerful MTU diesel engine that is perfectly matched to the machine's operating duties. The engine contributes to a massive fuel saving of around 16% compared with the previous model. As with other JCB machines, the engine in the 457 meets Tier 4 Final without the need for a costly and complex diesel particulate filter (DPF), relying on an efficient combustion process, with a selective catalytic reduction (SCR) system and an exhaust fluid additive to meet the regulations.

This reduces cost and service time for customers, increasing uptime and profitability and minimizes the fire risk through the regeneration process. No DPF results in reduced under bonnet temperatures. A key benefit for ports is the wide core cooling pack with epoxy coating, which protects against corrosion and minimizes debris build up and dust accumulation in the cooling pack. This allow the machine to cool efficiently in dusty conditions and is extra effective with the reverse fan. The reverse fan can be hinged away from the machine for easier cleaning and can be set to faster or slower intervals allowing customers to tune the machines to their specific application.

Optional extras include factory fitted fire suppression kits

(wet and dry combination) and lagging to insulate hot components in the engine bay. These have been rigorously tested and meet the high standards expected by ports where highly combustible materials are regularly handled, giving peace of mind and ensuring that operative's safety is maximized.

New JCB CommandPlus cab

The 457 is the first machine from JCB to utilize the company's next-generation JCB CommandPlus cab, offering operators the ultimate in comfort. The 457 has two full colour LCD screens, one in the central console and a second at the top of the right hand cab pillar. This second screen incorporates access to the loader's operating menus and acts as a monitor for the machine's rear view camera. The operator can now benefit from 'in-cab' daily checks using the CommandPlus LED menu and monitor.

The JCB CommandPlus cab delivers increased internal space as the heating, ventilation and air conditioning system has been repositioned outside the main cab structure. The cab door is hinged at the front, allowing easier access and exit from the machine for the operator from the steps. There is additional storage for the operator, both behind the seat and in pockets in the front and side consoles. The new cab gives a huge reduction in internal noise levels, from 71dB(A) to a class-leading 68dB(A). A positive cab pressure and improved sealing ensures the operator benefits from noise and reduction in dust ingress.

Operators also benefit from LED lighting all round and the option of electrically adjustable and heated mirrors, for maximum visibility in all operating conditions. The rear view mirrors are now repositioned, making it easier for the operator to see all around the machine teamed with the rear object detection system which gives a warning to the operator when in close proximity to personnel and hazards. This was an important requirement for improved safe working particularly in confined spaces such as ship trimming or inside storage sheds.

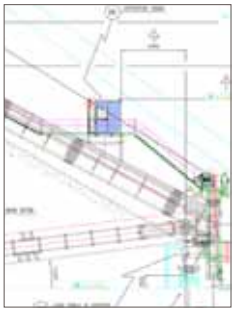
The most visible change to the 457, aside from the new cab, is the adoption of a sloping one-piece engine canopy. This engine cover can be electrically raised away from the cab to provide improved access to the engine and drivetrain for regular maintenance. The machine has a specially sealed bulk head which prevents dust settlement onto engine components reducing combustion risk in the engine bay and reducing the need for regular cleaning.

More Power, Lower Emissions

The JCB 457 is powered by a 7.7-litre MTU Tier 4 Final engine, delivering 193kW (258hp), up from 186kW (250hp) on the previous machine, despite the smaller engine capacity. More importantly, the engine delivers this increased output at lower rated engine revs, cutting fuel consumption, noise and emissions. JCB has also fine-tuned the match between engine, torque converter and transmission, to perfectly match the engine with both the standard four-speed and optional five-speed transmissions.

The Tier 4 JCB 457 will come as standard with JCB's LiveLink telematic system. This provides fleet managers and owners with remote access to real-time fuel consumption and machine working data, including operating hours and fault codes. JCB LiveLink also allows customers to set working hour curfews, outside of which the machine will not function, along with geofencing. This permits the owner to set a geographical area in which the machine can work. If the loader is taken out of this area it will not start, preventing theft from site.

Full-Portal Reclaimer



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Wizard Touch® automation expanded for enhanced versatility

KPI-JCI and Astec Mobile Screens has released its new Wizard Touch® stockpile automation system with expanded options for added versatility and enhanced productivity.

The Wizard Touch automation technology is designed to prevent material segregation and degradation. The refined system features an expanded selection of stockpile options and is capable of inputting multiple stockpile recipes for operation diversity, according to Jodi Heirigs, product manager for KPI-JCI and Astec Mobile Screens.

"Our Wizard Touch system truly leads the industry in sophisticated stockpile automation technology," Heirigs said. "The system is engineered for user-friendly diagnostics, comes standard with factory pre-set programming, and can be customized out in the field as well."

The Wizard Touch system includes an easy-to-use, fully-programmable PLC controller and a new, 12-inch coloured touchscreen for enhanced usability.

The Wizard Touch is exclusively available for KPI-JCI and Astec Mobile Screens' SuperStacker® telescoping radial stacker. The road-portable SuperStacker is essential to building a desegregated stockpile, increasing stockpile capacity by 30%, and ensuring the quality of in-spec product. In-spec material prevents costly expenses associated with reprocessing materials, eliminating re-blending and product discounting. By controlling the extension of the stinger conveyor, radial travel and conveyor incline, producers can build layered windrows to minimize stockpile segregation.

KPI-JCI and Astec Mobile Screens is a premier worldwide manufacturer for the aggregate, construction and recycling industries.

About KPI-JCI and Astec Mobile Screens

KPI-JCI and Astec Mobile Screens is a worldwide expert in manufacturing equipment for the aggregate, construction and recycling industries. As an innovative, high integrity manufacturer, KPI-JCI and Astec Mobile Screens develops quality, state-of-the-art products and has the ability to engineer custom products because of a highly qualified engineering staff. KPI-JCI and Astec Mobile Screens proudly manufactures its products in Yankton, South Dakota, Eugene, Oregon and Sterling, Illinois.

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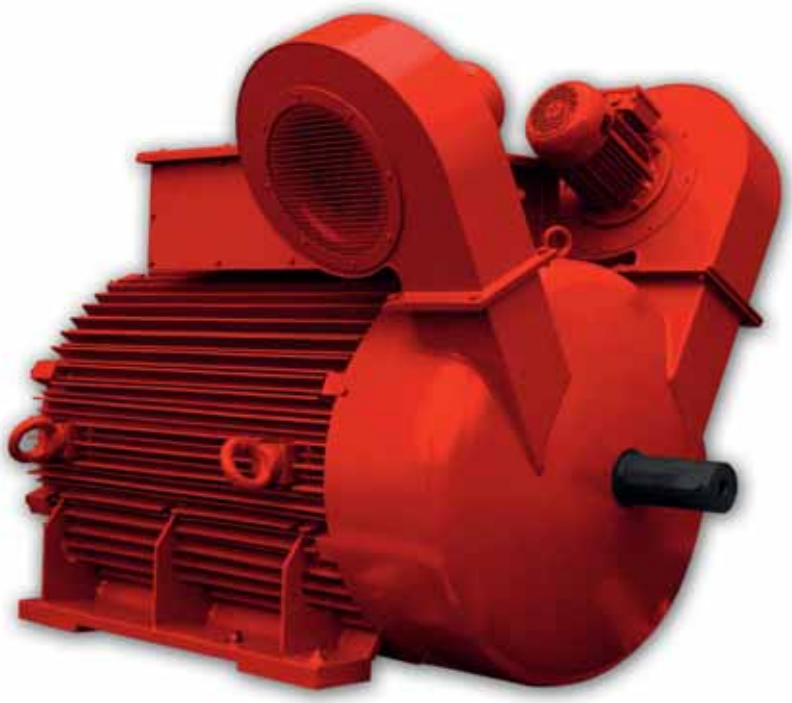

Electrical motors for the use in dry cargo equipment industry need to be powerful and offer high efficiency to reduce energy consumption at the same time, *writes Klaus Sprekelmeyer*. Germany's Franz Wölfer Elektromaschinenfabrik Osnabrück GmbH designs and produces special inverter-driven low-voltage-squirrel-cage-motors for cargo equipment like conveyors and cranes which fulfil both requirements.

A special rotor-geometry leads to a higher pull-out torque of the motor. A Wölfer motor has a pull-out torque of up to 400%, compared with approximately 250% of other motors. In this way, Wölfer motors can handle higher overload requirements and the motor can provide high torque, also at high speeds. With this torque, the motor can also be controlled easily, even if it is operated at speeds of 1,600 or 1,800rpm.

Wölfer's goal is not only to optimize the efficiency of the motor itself, but to minimize energy consumption and maximize the power of the whole equipment with the special motors. The special rotor-design is also effective at a lower inertia. Based on this, the total inertia of the power-train is reduced. This lower total inertia leads to lower energy consumption. On the other hand, it is possible to accelerate the speed of the power-train, with the same energy level as another motor. Based on the faster acceleration and deceleration process, a higher number of goods can be handled. Therefore the user can increase turnover by handling a higher volume of material, or reduce energy cost, thereby protecting the environment.

The lower inertia leads to further advantages, e. g. other components can be downsized. Depending on the design of the equipment, smaller gearboxes, brakes, inverters or cable diameters can be used. As a result, the weight of the application is lower and investment costs are also lower. Finally, not only does the motor operate at a high level of efficiency, the efficiency of the whole system is increased by Wölfer motors.

Beside these technical characteristics, the reliability of a motor is a critical factor. In motors which are driven by frequency-inverters, the windings need to resist partial discharges – so-called voltage peaks. By using material which is designed for inverter operation and handmade windings, Wölfer achieves a very long lifetime of the windings. Also AC-motors reduce the amount of maintenance required when compared with DC. While DC-motors need periodic inspections and reconditioning, especially for brushes, AC-motors get by with inspection of motor connections and lubrication. The AC-motors run very smoothly, so that significant reductions in mechanical wear and mechanical repairs e. g. in cranes have been noticed. The higher reliability of the electric motors results in fewer outages due to motor failure.

"We apply our know-how to produce robust reliable motors for individually adapted drive mechanism solutions," says Klaus Sprekelmeyer, Vice

Klaus Sprekelmeyer, Vice President Sales at Wölfer.

President Sales at Wölfer. "Our motors are built for use in extreme demanding environments, like dust, heat or marine-conditions." For 70 years now Franz Wölfer Elektromaschinenfabrik has been developing and manufacturing electric motors for use in hoisting equipment, in and on ships as well as in general mechanical engineering.

Wölfer provides steel-welded housings in addition to grey-cast-iron-housing for surface-cooled motors; this, for example, makes it as easy and efficient as possible to make technological changes. Using the steel-welded design Wölfer provides 1:1 drop-in motors for retrofits. "Normally the new AC-motor can be offered in a smaller frame size compared to the existing DC-motor. Therefore the machinery house needs to be adjusted to the new dimensions. Wölfer offers a new AC-motor with minimized inertia, but with the same mounting dimensions as the DC-motor. So the motor itself can be changed within one day, without modifying the basement of the machinery house and without shaft adjustments. This leads to a shorter downtime and lower cost", says Sprekelmeyer. This steel-welded housing design is available for surface-cooled applications like conveyor- and excavator-motors.

About the author

Klaus Sprekelmeyer is the Vice President Sales of Franz Wölfer Elektromaschinenfabrik Osnabrück GmbH. He has worked for the company for more than 16 years with over ten of these years in the sales department. In 1999, Mr Sprekelmeyer started an apprenticeship for three years as a blue collar employee and white collar employee in parallel. After achieving several technical and commercial skill enhancements, Sprekelmeyer took over responsibility for the sales department in 2007. Since beginning of 2014 Sprekelmeyer is member of board.

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New Bobcat backhoe loader range for Middle East and Africa

Bobcat has launched a new range of backhoe loaders for sale in markets in the Middle East and Africa. Comprising four models — the B700, B730, B750 and B780 — the new Bobcat backhoe loader range offers a choice of different specifications for diverse applications in construction, utility, rental, roadworks, demolition, excavation, landscaping and agriculture.

All four models are powered by the highly efficient, Perkins 1104C-44T 4.4 l engine with direct fuel injection and a best-in-class output of 74.5kW (100HP) of power at 2,200rpm and maximum torque of 408Nm at 1,350rpm, providing more than enough muscle for the most demanding applications while delivering low operating costs due to low fuel/oil consumption. The Perkins engine features a high-quality filtration system for longer life, and its single-side service components mean that maintenance and daily checks are easy to carry out as they are on the rest of the machine.

Standard 2-Year Powertrain Warranty

The standard two-year powertrain warranty is a testament to the reliability and durability of the components and the design of the powertrain in the backhoe loaders, providing extra protection and peace of mind.

There is a choice of four-speed synchroshuttle, powershift or auto powershift transmissions in the different models to meet various applications including those requiring a significant amount of directional changes on site. Gear shifts are smooth and precise and help to maximize fuel efficiency. This is combined with a top speed of 40km/h and extra added features/options such as return to dig, ride control and more for increased productivity.

All the models have an open centre hydraulic system and are equipped with tandem gear pumps with high flow capacities of 136 l/min in the B700 and 154 l/min in the B730, B750 and B780 models, respectively. An unloader valve is featured as standard on all the models as is the electrohydraulic differential lock, with a limited slip differential being used on the B730 and B750 models. All the new Bobcat backhoe loaders are supplied with

SPECIFICATIONS

Bobcat B700 backhoe loader	
Bucket capacity (loader):	1.0m³
Breakout force shovel:	44kN
Breakout force arm:	47kN
Height to hinge pin:	3,500mm
Dump height:	2,740mm
Bucket capacity (backhoe):	0.2m³
Bucket tearout:	44.0kN
Digging depth retracted/extended:	4,005/4,805mm
Length in travel position:	5,710mm
Overall width (bucket):	2,230mm
Overall transport height:	3,553mm
Maximum speed:	40km/h
Engine:	4-cylinder Perkins 1104C-44T, delivering 74.5kW at 2,200rpm
Operating weight:	6,600kg

SPECIFICATIONS

Bobcat B730 backhoe loader	
Bucket capacity (loader):	1.1m³
Breakout force shovel:	81.5kN
Breakout force arm:	60.5kN
Height to hinge pin:	3520mm
Dump height:	2810mm
Bucket capacity (backhoe):	0.2m³
Bucket tearout:	59.1kN
Digging depth retracted/extended:	4,600/5,800mm
Length in travel position:	5,950mm
Overall width (bucket):	2,280mm
Overall transport height:	3,900mm
Maximum speed:	40km/h
Engine:	4-cylinder Perkins 1104C-44T, delivering 74.5kW at 2,200rpm
Operating weight:	7,800kg

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The backhoe loaders provide a spacious and comfortable operator environment — the B700 and B730 offer a choice of an open canopy or an enclosed cab, whilst the B750 and B780 are all equipped as standard with an enclosed cab. The cab is easy to enter/exit; has a fully adjustable operator's seat with all the controls within close reach, leading to less fatigue through greater comfort and more productivity; a tiltable steering column; a high performing optional HVAC system and excellent all-round visibility for the operator.

The driver also benefits because they can learn to operate the loaders very quickly, with simple, ergonomic controls, clear dashboard layouts and audible and visual warnings for guidance.

All four backhoe loaders are very manoeuvrable and they can easily negotiate obstacles on job site.

The new Bobcat backhoe loaders are versatile and, whatever the application — digging, trenching, breaking and material handling (just to name a few), they have the power, combined with a wide range of Bobcat optional equipment to be readily configured to carry out these applications with ease.

Similarly for loader applications, the B700 to B780 offer premium performance with powerful breakout forces, strong full lift capacities and enhanced load over height and reach to meet the most demanding material handling jobs. There is a choice of general-purpose or 6-in-1 buckets or other optional equipment to enhance both versatility and productivity.

The B700 is an entry-level machine which includes many of the features of the next model in the range, the B730 — it is

driven via a synchroshuttle transmission; it has 'Cab and Canopy' and '2WD or 4WD' options; and it has a single loader bucket cylinder with a full cylinder diameter to increase breakout force and reduce maintenance costs with fewer hoses and fittings.

The B730 is driven through a standard powershift transmission, and controlled by mechanical levers — this model is equipped with 18 inch front tyres and has two-wheel steer. Double loader bucket cylinders provide superior breakout force and reduce maintenance costs by using a bolt type cylinder head design. The B750 has the same features as the B730, except for 20 inch front tyres and a hydraulic joystick control system.

The B780 has the same features as the B750 and is driven through a standard auto powershift transmission, producing a highly manoeuvrable, four equal-sized wheel backhoe loader that can be steered using three different modes: two-wheel steer, four-wheel steer and crab steer.

The low-effort loader joystick controls in the B750 and B780 provide precise control and superior comfort to enable operators to work for longer periods and increase productivity.

Superior ground clearances of 385mm in the B780 and 400mm in the B700, B730 and B750, together with a 25° back ramp angle, provide excellent climbing performance over steep slopes.

Bobcat backhoe loaders are designed to provide easy and quick access to the engine compartment and other locations to service and maintain components at ground level by simply removing the side panels. Refuelling of the tanks is also accomplished from ground level and the tanks are protected with a lock matching with the ignition key.

SPECIFICATIONS

Bobcat B780 backhoe loader	
Bucket capacity (loader):	1.1m³
Breakout force shovel:	81.6kN
Breakout force arm:	56.1kN
Height to hinge pin:	3,590mm
Dump height:	2,865mm
Bucket capacity (backhoe):	0.2m³
Bucket tearout:	59.1kN
Digging depth retracted/extended:	4,600/5,800mm
Length in travel position:	6,375mm
Overall width (bucket):	2,400mm
Overall transport height:	3,880mm
Maximum speed:	40km/h
Engine:	4-cylinder Perkins 1104C-44T, delivering 74.5kW at 2,200rpm
Operating weight:	8,700kg

SPECIFICATIONS

Bobcat B750 backhoe loader	
Bucket capacity (loader):	1.1m³
Breakout force shovel:	81.6kN
Breakout force arm:	56.1kN
Height to hinge pin:	3,670mm
Dump height:	2,950mm
Bucket capacity (backhoe):	0.2m³
Bucket tearout:	59.1kN
Digging depth retracted/extended:	4,600/5,800mm
Length in travel position:	6,100mm
Overall width (bucket):	2,280mm
Overall transport height:	3,900mm
Maximum speed:	40km/h
Engine:	4-cylinder Perkins 1104C-44T, delivering 74.5kW at 2,200rpm
Operating weight:	8,000kg

Mobile solutions in the bulk materials handling stockyard

Stormajor® for bulk materials handling.

SAMSON Materials Handling Limited specializes in the design and manufacture of mobile bulk materials handling equipment for surface installation across multiple industrial segments representing flexible and cost saving solutions. In a highly competitive bulk materials industry, the SAMSON range of mobile equipment offers: high performance with total reliability, a compelling alternative to fixed installations, no need for dedicated civil works and excellent return on capital equipment.

SAMSON Materials Handling Limited is proud to supply ports and terminals, mining industries and agricultural markets across the globe and forms part of the world renowned AUMUND Group.

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A universal bulk loader, the conveyor offers very high handling rates.

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The Samson® material feeder — a unique concept.

integral Samson® material feeder allows even faster truck unloading allowing a high average rate to be maintained even taking into account delays in positioning the vehicles.

Available with a wide range of specification options suitable for handling materials from cereals through to heavy mineral ores.

The Samson® material feeder — a unique concept

The concept of the Samson® material feeder was developed to satisfy the demands of clients requiring a mobile solution to receive general bulk materials such as coal and aggregates direct from tipping trucks where fixed plant was not a viable option.

The Samson® material feeder concept eliminated the need for any truck ramps, or fixed civil work and was rapidly extended to fixed plant projects where the flexibility of surface installation is a clear benefit. This is particularly realized in port applications where the high ground water level makes conventional underground pits expensive to construct and maintain and in quarry and mining environments where the positioning of the feeder needs to be flexible to serve the active areas of operation.

For extra heavy duty applications SAMSON has developed the MFD range using sealed and lubricated tracked (SALT) vehicle chains designed to receive bulk aggregates with the density of 1.4–3.0t/m³.

Shiploading system

SAMSON creates complete conveying solutions from mine to ship, effective systems for exporting and importing materials without the need for expensive civil works, effectively saving time and space.

Fully mobile shiploaders with their associated feeding and transfer systems offer the possibility to occupy a berth only during the loading of the vessel. After loading the complete equipment may easily be travelled clear and stored elsewhere allowing the berth to be utilized for other cargoes or even container handling.

Used effectively, systems can trim the whole hold from a single machine position and eliminate the need to move the equipment during operation. Consequently the effective through-ship loading rate is significantly increased as the lost time in manoeuvring the machinery is eliminated. This is particularly important with relatively light cargoes, where capacity loading of every hold is critical. Using a variable speed control for the trajectory, loading may be varied to place the material wherever the operator wishes for effective level trimming.

About the AUMUND Group

The AUMUND Group is active worldwide. The conveying and storage specialist has special expertise at its disposal when dealing with bulk materials. With their high degree of individuality, both its technically sophisticated as well as innovative products have contributed to the AUMUND Group today being a market leader in many areas of conveying and storage technology. The manufacturing companies AUMUND Fördertechnik GmbH (Rheinberg, Germany), SCHADE Lagertechnik GmbH (Gelsenkirchen, Germany), SAMSON Materials Handling Ltd. (Ely, England), as well as AUMUND Logistic GmbH (Rheinberg, Germany) are consolidated under the umbrella of the AUMUND Group. In conjunction with the headquarters of the manufacturing companies, the global conveying and storage technology business is spearheaded through a total of ten subsidiaries in Europe, Asia, North and South America and supported by four warehouses in Germany, Hong Kong, USA and Brazil.

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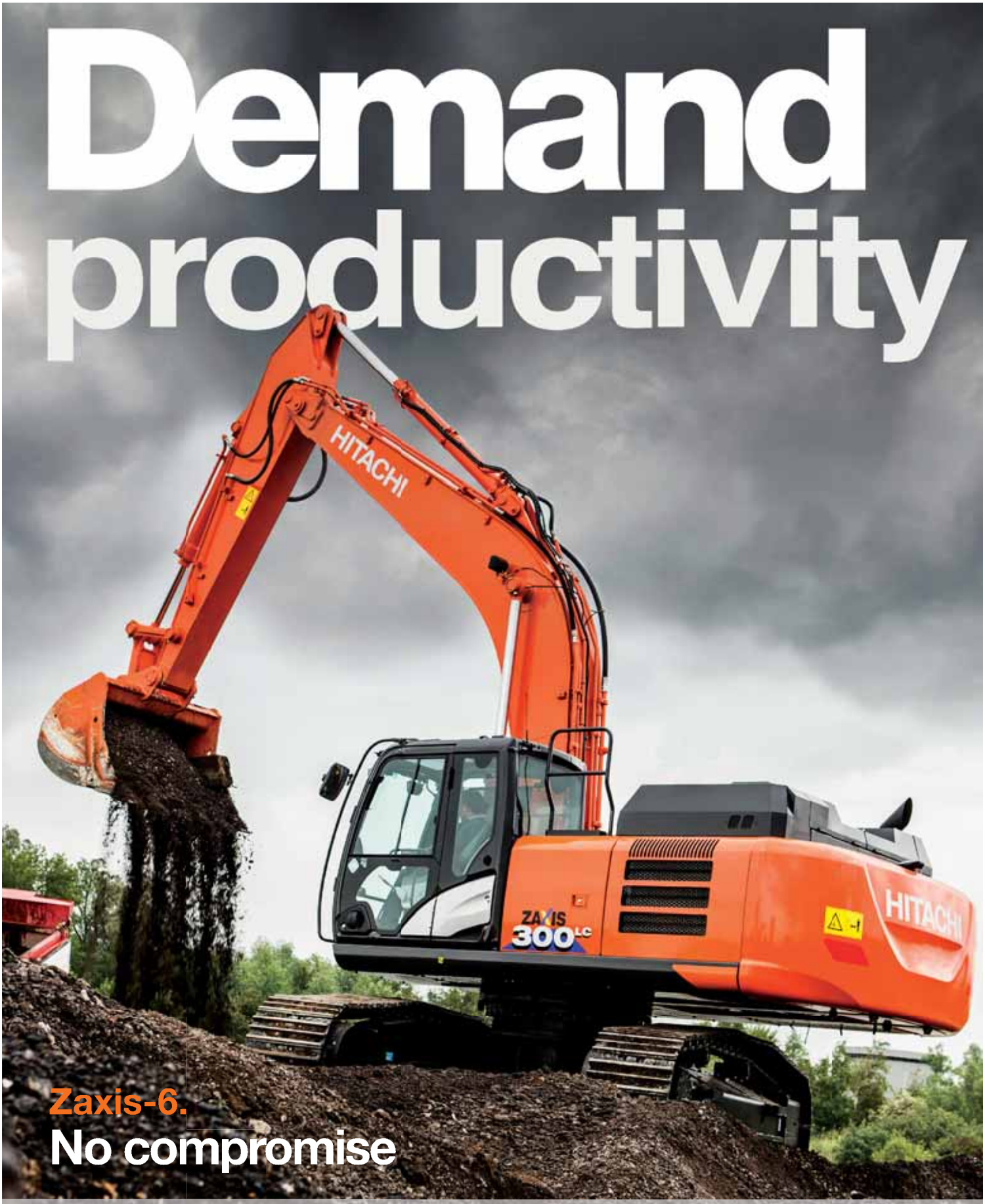

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Hitachi presents the new ZW310-6 wheel loader

Hitachi Construction Machinery (Europe) NV (HCME) exhibited the new ZW310-6 wheel loader at the Bauma trade fair, which took place in Munich, Germany, in mid-April. Designed and engineered to meet the demands of the European market, the new model offers exceptional levels of performance without compromising on efficiency, thanks to low levels of fuel consumption.

Built using market-leading technology in Japan, the ZW310-6 has been developed with the environment, and operator comfort and safety in mind. Ideal for a wide range of applications, it is extremely versatile and offers an exceptional standard of reliability.

The new engine is EU Stage IV-compliant and does not require a diesel particulate filter, which reduces maintenance costs. Combined with the lock-up transmission, it enhances fuel efficiency while travelling and when driving uphill the machine speed is further enhanced.

Hitachi's selective catalytic reduction (SCR) system is also designed to comply with EU Stage IV emission regulations and lessen the wheel loader's impact on the environment. The SCR system injects urea into exhaust gas to reduce nitrogen oxide from emissions.

Several features of the ZW310-6 ensure it is one of the safest wheel loaders in its class. Visibility of the job site is excellent thanks to the 360° panoramic view from the spacious cab and the rear-view camera. Changes to the wheel loader's design, such as the repositioning of the muffler and air intake, have also enhanced the rear-view visibility.

The comfort of operators is also considered in the design. Noise levels in the cab are reduced by improved sound insulation, providing a quieter working environment.

SPECIFICATIONS ZW310-6 WHEEL LOADER

Engine rated power (kW):	232 (ISO14396)/ 225 (ISO9249)
Operating weight (kg):	24,140–24,590
Bucket capacity ISO heaped (m^3):	3.20–4.50m^3
Breakout force 183–223kN	
Static tipping load, straight (Standard Lift Arm)	19,000–19,510kg
Static tipping load, straight (High Lift Arm)	15,910kg

To ensure a smooth driving experience on all kinds of terrain, the ride control feature minimizes pitching via the movement of lift arm cylinders.

A smooth operation and exceptional control are ensured by the optional Joystick Steering System, which enables operators to reach high levels of productivity with effortless steering. The multifunctional LCD monitor in the cab also makes life easier, showing vital information at a glance.

A number of features contribute to the versatility of the ZW310-6. The quick power switch increases engine output when more power is instantly required, or for driving uphill. The simultaneous movement of the bucket and lift arm ensures an efficient digging operation. Efficient loading is ensured by a 25% improvement in traction force compared to the previous model.

Robust materials and strengthened components have enhanced the durability of the new wheel loader. These include high-quality aluminium radiators, which improve resistance to corrosion. The ZW310-6 also has easy maintenance features for a high level of reliable performance. The covers open fully for convenient access to the engine and downtime for scheduled maintenance has been reduced to a minimum.

HCME Wheel Loader Specialist Vasilis Drougkas says, "The all-round visibility and low-noise performance of Hitachi wheel loaders makes them stand out from the competition. They offer a comfortable working environment for operators, and a smooth and efficient operation for a variety of job sites."

Bedeschi products deliver highest performances with moist and sticky material

Considering the chain process of handling raw materials, it is clear that use of state-of-the-art technology — able to reduce costs and allow for faster operations — is an essential part in any type of bulk activity, *writes Pietro de Michieli, Chief Operating Officer Bedeschi Spa.* This is the reason why Bedeschi constantly invests in developing its products, increasing efficiency and enhancing technologies, to help customers choose the best equipment in every field of application and with different kind of raw materials, both hard and sticky.

Nowadays another important aspect to be considered is the need for eco-friendly solutions that focus on sustainability and optimization. Bedeschi products are at the cutting-edge of technology, and manufactured to a high quality. They are also sealed to avoid dust emissions to the external environment.

The following case studies shows how Bedeschi has been able to meet customers' quality requirements with its complete range of products, from bucketwheel and stacker/reclaimers for use with dry material, to bucket reclaimers that can be used with any type of raw material, but especially with moist, plastic and sticky ones.

Case study – Votorantim Primavera project (Brazil)

Thanks to its great expertise in the handling and crushing of sticky bulk material, and the experience gained over more than 100 years, Bedeschi was selected to supply the equipment to the Primavera Project, a limestone storage facility for Votorantim Cimentos in the city of Curimba (Brazil). The supply consisted of a storage system with two STKP (Tripper TRP 16/1400) stacking bridges and a BEL C reclaimer with a stacking capacity of 700tph (tonnes per hour) and a reclaiming capacity of 100tph to 500tph.

The BEL C system, based on the creation of rectangular section piles, is composed of an interconnected system with a tripper, two bridge stackers and one overhead self-cleaning special technology bucket reclaimer, to provide a complete remote automatic material stacking and reclaiming process. The storage process foresees the making of two piles, one pile in stacking operation and the other one in reclaiming operation at the same time. The system has an automatic co-ordination of stacker and reclaimer to ensure safe operation without any risk of collision. This special Bedeschi technology makes it possible to achieve a very high blending effect. This type of solution is the only one able to stack, reclaim and blend efficiently sticky and not free-flowing material.

The supply includes also a crushing group with an apron feeder (CNA 10/2200 B), a primary and a secondary toothed

VOTORANTIM PRIMAVERA PROJECT DATA

Material:	Limestone
Bulk density:	31.4t/m³
Grain size:	98% <100mm, 100% <150mm
Moisture:	10% to 25%
Total stored volume:	40,000t
Stacking capacity:	700tph
Reclaiming capacity:	100 to 500tph

Votorantim BEL C system.

roller crushers (RL 650/2200). This particular type of technology uses two slow-speed extra rotating rolls with teeth. The main features are high reliability, wear reduction, reduced energy consumption, small overall dimensions, constant output size and fewer fines.

The machines were commissioned by the end of last year. This contract shows how Bedeschi is strengthening its presence in the bulk handling and mining industries in the South America marketplace.

BASTAS CIMENT (TURKEY) PROJECT DATA

Material:	Clay	Trass	Gypsum	Iron ore	Limestone
Bulk density (t/m³):	1.4	1.1	1.3	2.4	1.4
Moisture (%)	7.12	8	10	15	2.31
Output nominal (tph)	400				
Inlet size (mm)	0–600				
Outlet size 90% (mm)	50				

Case study — Bastas Ciment in Turkey

The Bedeschi double roller crusher technology was chosen by Bastas Ciment in Turkey last year. The plant, 35km from Ankara, is part of the Vicat Group, an international cement company with expertise acquired through more than 160 years of research, discoveries and participation in countless construction projects.

The customer wanted to replace the existing crusher with a new one with lower energy consumption and with minimum civil investment, and able to crush 760,000 tonnes of material per year. The choice was a Bedeschi RL 650/2200 with technology studied to crush different raw materials, also sticky and moist like additives. Indeed, roller crushers are ideal for processing sticky and wet materials with moisture contents of up to 25–30%.

Bedeschi crusher.

Bedeschi toothed roller crushers have rotors that turn in opposite directions in order to allow the material to flow through the gap between the two rollers. The rotating speed of the two rollers is different so as to guarantee not only a compression effect but also a shear and tensile stress process. Of course, the exact rotation speed depends on the type of material processed and, thanks to its extensive experience, Bedeschi's engineering team is able to perfectly meet the needs of the final client on this point.

To further exploit this strength, Bedeschi double crusher are equipped with scrapers to keep the surface of the roller clean, avoiding any type of clogging. Another fundamental advantage is the high operational efficiency that allows for the generation of a low quantity of fines during the process.

One of Bedeschi's workshops — more than 50,000m² of covered manufacturing facilities in three different locations, with a total surface of more than 70,000m².

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Custom-made solutions from RHC

The stockyard is only a part of the total material flow concept. Larger terminals for bulk material are most of the time combined with shiploading, ship-unloading (e.g barges), or with equipment for unloading trucks or railcars.

Stockyards are normally used for coal, iron ore, limestone, slag, clinker, bauxite, gypsum, fertilizer, salt, phosphates, soya beans, grain, etc. For the handling of all kind of bulk material RHC specializes in supplying custom-made solutions, even for very different applications.

RHC provides custom-made solutions for the complete material handling concept. The company supports its customers by the planning and engineering of the terminal and stockyard, shipment and installation, supervision for commissioning, etc. Technical and operational support are provided for start-up of new equipment.

Stockyard equipment must consider for the design the material input and output as well. This is an integrated part of the RHC material flow concept. A good example is the design of a larger coal terminal with a storage capacity of up to 50mt (million tonnes). The coal arrives by barges. Unloading of the barges is by special high-performance cranes via fixed installed hoppers to the conveyor system. The incoming coal will go to the stockyard via belt conveyors and divided in different qualities to different locations. Several stackers with a performance of 1,700tph (tonnes per hour) — the same performance as the barge unloaders — with an outreach of 50 metres. The outgoing coal will be handled by reclaimers with a capacity of 5,000tph, which is the same capacity as the shiploaders. This stockyard is designed as a buffer storage between the incoming barges and the outgoing large size vessels. The hoppers for the incoming coal and the shiploaders are equipped with dust collection systems as per latest environmental regulations.

Supply of blending stackers, high-capacity stackers, reclaimers, with a capacity of up to 8,000tph and more, with a radius up to 60 metres. Combined stacker/reclaimers could increase the efficiency by a multiple of 1.5 to 2.5 compared with a single bucket loader.

The scope of supply includes also indoor circular stockyard equipment, ranging in diameter from 60 to 150 metres. For these indoor systems, RHC can provide different types of reclaimer: cantilever, portal and bridge type. For the stacker amplitude-varied and fixed types, RHC can carry out stacking and reclaiming at same time, which significantly improves the material processing efficiency.

For all its material handling systems, RHC provides the engineering input from Europe, all the key components are from international brands with world-wide after sales service support. The after-sales service of RHC and its partners is working world-wide.

The manufacturing of RHC material handling systems will be at top ranking manufacturing facilities in China with strict quality and process controls, or at some of its partner companies in Europe. DCi

Layout of a new coal terminal.

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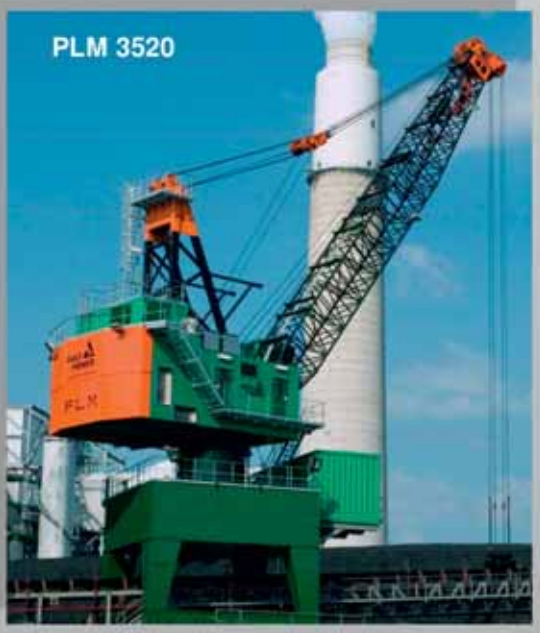
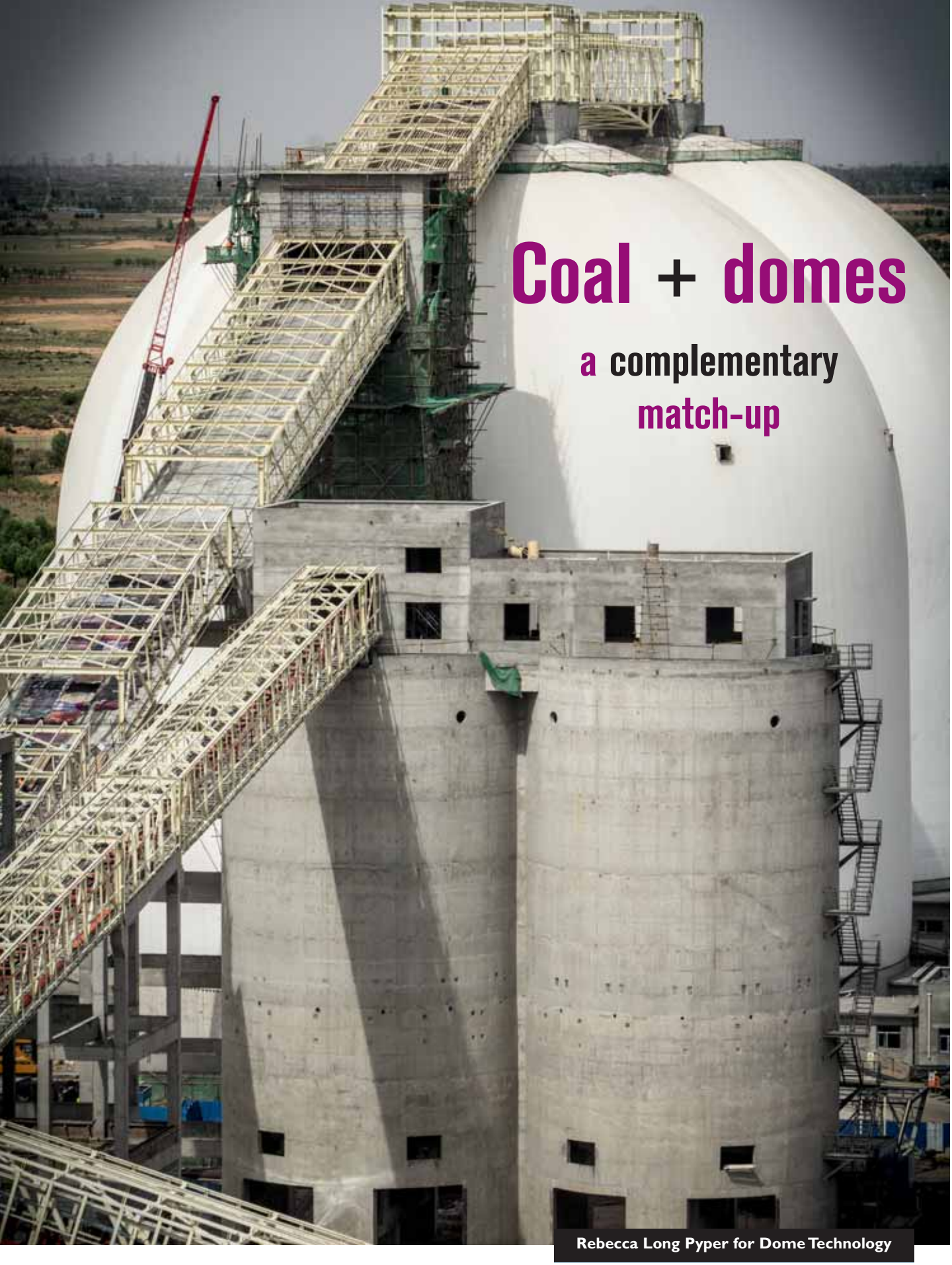


Purpose-built bulk handling, dredging and hoisting cranes.



Coal + domes

a complementary match-up

Rebecca Long Pyper for Dome Technology

In August 2015 Dome Technology completed a dual-site project for China Coal, building six bulk-storage domes, each with a throughput rate of 60,000 metric tonnes of coal every three days. The dome is an ideal storage solution for coal, providing speed and safety in operations.

In the coal industry quick and reliable reclaim is a must, but so is maintaining an ideal environment for safely storing product. One without the other isn't any good, and companies like China Coal are getting the best of both worlds by selecting a dome for bulk storage.

China Coal contracted with Dome Technology of Idaho Falls, Idaho, USA, to design and construct three domes for its Hulusu

site and three more for its Menkeqing site, both located at coal mines in north China's Inner Mongolia province. Completed in August 2015, the domes can store 60,000 metric tonnes of coal apiece; 100% live-reclaim systems make it possible to process 60,000 metric tonnes of coal at each silo every three days.

A full-floor hopper system similar to a series of funnels situated side by side allows coal to flow through each dome under gravity rather than by loader. "Inside these domes it's a 100% live-reclaim system, which is not new to the industry, but on this magnitude, it's advanced," Dome Technology CEO Bradley Bateman said.

Moving product is just one part of the equation for companies like China Coal. Monitoring stored product, preventing deflagration and selecting the best material-handling system for each project are also major matters. Domes provide options and strengths in all these areas.

Geometry and construction method: the dome's sources of strength

For a temperamental product like coal, domes offer a consistent environment based on geometry and construction. Warehouses and flat-storage structures can only be built so tall before their strength is compromised; with domes, customers can safely store more product in a smaller footprint, stacking it deeper and taking up less property at the site. The dome's unique double curvature lends itself to strength with the ability to build up, rather than out.

The continuous dome shape is sealed, so nitrogen pumped inside the structure as required for stabilizing product stays contained. Concrete combined with insulation dramatically reduces temperature fluctuation regardless of weather outside and impedes condensation from forming on the interior surface.

Inventory management

Point-level monitors identify the height of the product in the dome, and specialized 3D monitors chart the surface of the pile and its shape — information crucial for inventory management and knowing how much product is being stored. Conveyor systems also weigh product as it enters the structure and as it exits to verify the amounts being transferred.

Fighting explosion with housekeeping and smart systems

When storing coal there's always the possibility of spontaneous combustion and explosion, and according to Zhao Jiapeng of China Coal, the possibility of coal self-igniting in the domes was

one of the company's main concerns. Domes are less likely to experience this because the interiors are truss and support free — the fewer the horizontal surfaces, the fewer places available for dust accumulation.

Housekeeping and maintenance are the two most important elements in a fire-prevention system and are critical to safe and productive operations. When equipment is well maintained, it is less likely to fail, throw sparks or overheat. When the facility is clean and free of considerable dust buildup, the potential for fire spread or secondary deflagrations is greatly reduced. Dome Technology's team recommends developing a schedule for full-system cleaning and regular maintenance. Worn items should be replaced immediately, and spare parts should be kept on hand at all times.

A host of systems exists to promote fire protection and prevent deflagration. Infrared cameras check coal temperatures while on the belt to ensure no off-spec product enters the dome. Linear heat cables along the conveyor monitor for fire on the belt; this cable might detect fire travelling along the belt before reaching the thermal scanner. The Dome Technology team incorporates multiple points where off-spec coal can be rejected before entering the storage space. Specialized admixtures, such as F-500 Encapsulator Agent by Hazard Control Technologies, can be added to water systems to aid in quicker cooling and fire extinguishing.

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Common dust-collection options include a baghouse system that pulls particulates through a fabric filter. Because it's a dry system collecting dust and storing it in high concentration, the chance of combustion within the system is still real, said Adam Aagard, an engineer for Dome Technology.

The more-preferred approach is misting with water or another wetting agent or utilizing a wet scrubber, "which essentially pulls the dust through a water system so it becomes wet, and that's what pulls out the dust rather than a bag, so now the dust is wet and not nearly as combustible," Aagard said. The system pulls the dust through a duct until it can be removed from the facility or destroyed.

Regardless of the type of dust collection, an automatic system can be installed to convey dust away, whether pneumatically or on a belt, to a combustor. Dust can also be collected in a bin or a super sack to be hauled away.

Proper coal storage and handling are critical for the success of a project. "Great care should be given to make sure there is a first-in, first-out rotation of coal," Dome Technology sales manager Lane Roberts said. "Housekeeping policies should be strictly followed, not allowing dust build-up in (the) conveyor or conveyor galleries. Keeping the tunnel clean from accumulating dust by vacuum systems or other means is essential."

Material-handling options

How fast and how well a company moves product will translate into how fast it makes money. Throughput rate is of utmost importance as it determines the material-handling systems and may influence the likelihood of fire since some types of coal become more volatile the longer they sit.

Regardless of storage time, with both low- and high-volatility coal, "the goal is first-in, first-out. That helps to minimize residence time," Aagard said. "Time is more of a factor than volume." Engineers can design first-in, first-out reclaim as a means of preventing self-heating from coal aging in pile.

The stacker reclaimer is common for more highly combustible varieties of coal handled by a mechanized system, and "the nice thing about a stacker reclaimer is you have quite a bit of control of where you're building your pile and reclaiming it," Aagard said. For example, when a hot spot is detected, site managers can remove product from a specific area of the pile.

For some types of coal another option is a full hopper system similar to a series of funnels situated side by side to comprise the 'floor' of the facility. This model allows coal to flow through the structure under gravity rather than by loader. Dome Technology has installed this type of 100% live-reclaim system for relatively low volatility coals, with the largest being the 60,000-metric-tonne China Coal domes. The design allows product to be completely emptied to match a company's throughput needs.

With smart systems that meet throughput needs and provide safer operations, companies like China Coal can operate completely custom facilities that protect their bottom line, their product and their employees. DCi

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Welland Canal Lock 2 (photo: The St. Lawrence Seaway Management Corporation).

Louise Dodds-Ely

Seaway System opens 58th navigation season

The Great Lakes St. Lawrence Seaway System is a deep draught waterway extending 3,700km (2,340 miles) from the Atlantic Ocean to the head of the Great Lakes, in the heart of North America. The St. Lawrence Seaway portion of the System extends from Montreal to mid-Lake Erie. Ranked as one of the outstanding engineering feats of the twentieth century, the St. Lawrence Seaway includes 13 Canadian and 2 US locks.

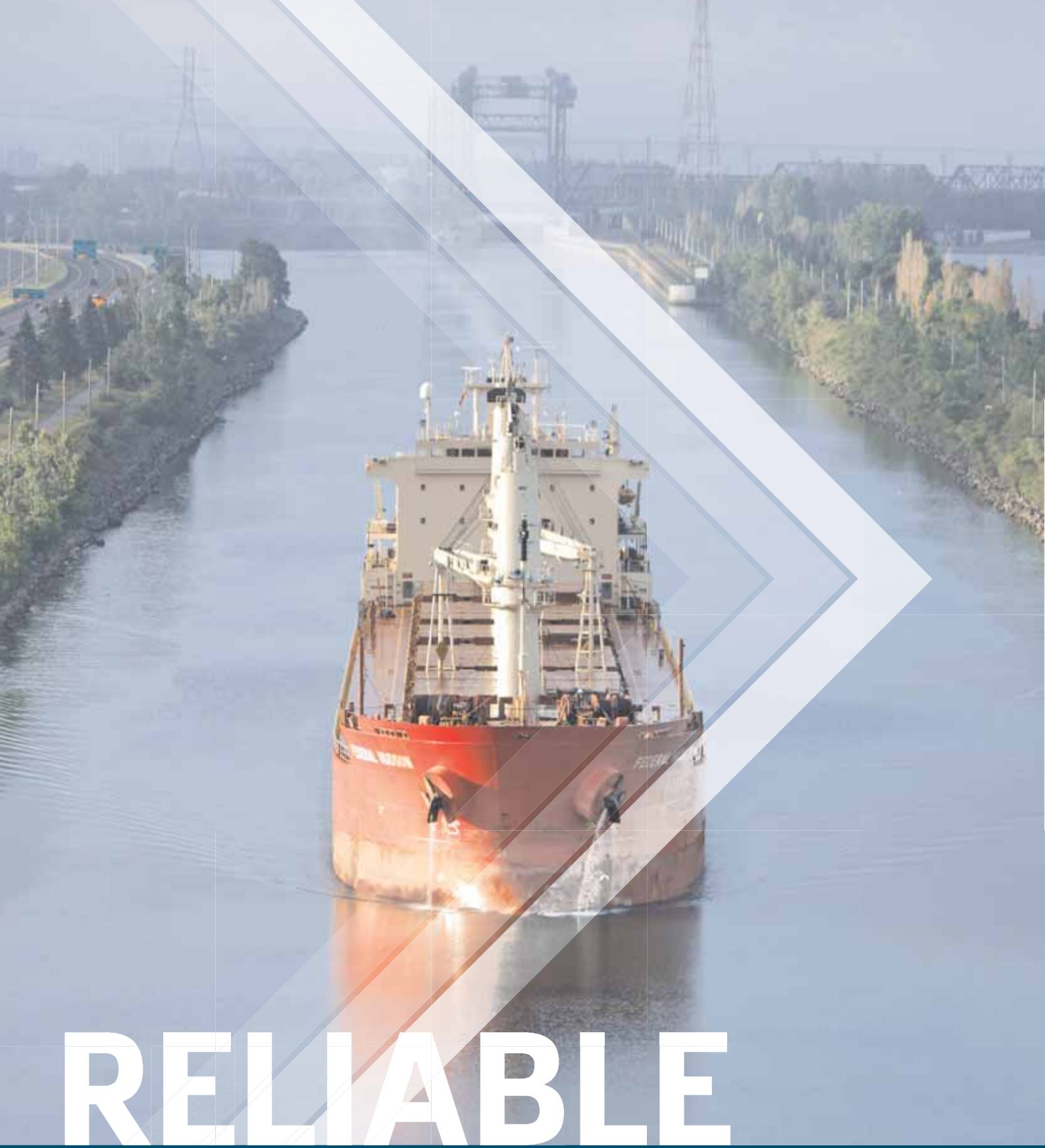
The Great Lakes and St. Lawrence River have been major North American trade arteries since long before the US or Canada achieved nationhood. Today, this integrated navigation system serves miners, farmers, factory workers and commercial interests from the western prairies to the eastern seaboard.

Virtually every commodity imaginable moves on the Great Lakes Seaway System. Annual commerce on the System exceeds 180mt (million metric tonnes), and there is still ample room for growth. Some commodities are dominant:

- iron ore for the steel industry;
- coal for power generation and steel production;
- limestone for construction and steel industries;
- grain for overseas markets;
- general cargo, such as iron and steel products and heavy machinery; and
- cement, salt and stone aggregates for agriculture and industry.

The primary carrier vessels fall into three main groups: the resident Great Lakes bulk carriers or 'lakers'; ocean ships or 'salties'; and tug-propelled barges. US and Canadian lakers move cargo among Great Lakes ports, with both nations' laws reserving domestic commerce to their own flag carriers. Salties flying the flags of other nations connect the Lakes with all parts of the world.

To realize the magnitude of this commerce, consider the impact of some typical cargoes:



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- one 1,000ft-long Great Lakes vessel carries enough iron ore to operate a giant steel mill for more than four days;
- a similar 'super laker' carries enough coal to power Greater Detroit for one day; and
- a Seaway-size vessel moves enough wheat to make bread for every resident of New York City for nearly a month.

For every tonne of cargo, there are scores — often hundreds — of human faces behind the scenes. On board, there are the mariners themselves, while shore side there are lock operators and longshoremen, vessel agents and freight forwarders, ship chandlers and shipyard workers, stevedores and terminal operators, Coast Guard personnel and port officials, railroad workers and truck drivers — a wide web of service providers.

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.

MANAGEMENT OF THE SEAWAY

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 Corp. in the US, a federal agency within the US Department of Transportation, and the St. Lawrence Seaway Management Corporation 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

Seaway traffic 2015

CLASS AND TYPE OF VESSEL		VESSEL TRANSITS			GROSS REGISTERED TONNAGE	CARGO TONNES (1)								
		Loaded	Ballast	Total		Bulk	Coal	Grains	Govt. Aid	Containers	General	Steel Slabs	Total	%
UPBOUND:														
Ocean:	Cargo	300	50	350	5,583,568	1,351,383	15,769	73,876	-	24,468	2,153,784	202,870	3,822,150	10.5
	Barge	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tanker	99	10	109	1,169,302	1,004,991	-	-	-	-	-	-	1,004,991	2.8
	Total Ocean	399	60	459	6,752,870	2,356,374	15,769	73,876	-	24,468	2,153,784	202,870	4,827,141	13.3
Laker:	Cargo	346	409	755	13,417,016	7,707,850	-	32,652	-	4,624	1,749	-	7,746,875	21.4
	Barge	121	68	189	1,230,200	1,131,305	-	-	-	-	-	-	1,131,305	3.1
	Tanker	72	20	92	788,177	621,033	-	-	-	-	-	-	621,033	1.7
	Total Laker	539	497	1,036	15,435,393	9,460,188	-	32,652	-	4,624	1,749	-	9,499,213	26.2
Non-Cargo		-	361	361	149,968	-	-	-	-	-	-	-	-	-
Passenger		39	8	47	96,940	-	-	-	-	-	-	-	-	-
Total Upbound		977	926	1,903	22,435,191	11,816,562	15,769	106,528	-	29,092	2,155,533	202,870	14,326,354	39.5
DOWNBOUND:														
Ocean:	Cargo	288	57	345	5,508,701	127,532	-	4,440,944	-	9,430	4,726	-	4,582,632	12.6
	Barge	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tanker	49	56	105	1,126,997	422,020	-	-	-	-	-	-	422,020	1.2
	Total Ocean	337	113	450	6,635,698	549,552	-	4,440,944	-	9,430	4,726	-	5,004,652	13.8
Laker:	Cargo	657	82	739	13,120,186	7,150,021	2,473,299	6,252,034	-	31,275	916	-	15,907,545	43.9
	Barge	88	111	199	1,277,626	596,698	7,961	59,043	-	-	-	-	663,700	1.8
	Tanker	40	52	92	786,764	347,321	-	-	-	-	-	-	347,321	1.0
	Total Laker	785	245	1,030	15,184,576	8,094,038	2,481,260	6,311,077	-	31,275	916	-	16,918,566	46.7
Non-Cargo		-	351	351	152,110	-	-	-	-	-	-	-	-	-
Passenger		38	9	47	96,338	-	-	-	-	-	-	-	-	-
Total Downbound		1,160	718	1,878	22,068,722	8,643,590	2,481,260	10,752,021	-	40,705	5,642	-	21,923,218	60.5
TOTALS:														
Ocean:	Cargo	588	107	695	11,092,269	1,478,915	15,769	4,514,820	-	33,898	2,158,510	202,870	8,404,782	23.2
	Barge	-	-	-	-	-	-	-	-	-	-	-	-	-
	Tanker	148	66	214	2,296,299	1,427,011	-	-	-	-	-	-	1,427,011	3.9
	Total Ocean	736	173	909	13,388,568	2,905,926	15,769	4,514,820	-	33,898	2,158,510	202,870	9,831,793	27.1
Laker:	Cargo	1,003	491	1,494	26,537,202	14,857,871	2,473,299	6,284,686	-	35,899	2,665	-	23,654,420	65.3
	Barge	209	179	388	2,507,826	1,728,001	7,961	59,043	-	-	-	-	1,795,005	5.0
	Tanker	112	72	184	1,574,941	968,354	-	-	-	-	-	-	968,354	2.7
	Total Laker	1,324	742	2,066	30,619,969	17,554,226	2,481,260	6,343,729	-	35,899	2,665	-	26,417,779	72.9
Non-Cargo		-	712	712	302,098	-	-	-	-	-	-	-	-	-
Passenger		77	17	94	193,278	-	-	-	-	-	-	-	-	-
GRAND TOTAL		2,137	1,644	3,781	44,503,913	20,460,152	2,497,029	10,858,549	-	69,797	2,161,175	202,870	36,249,572	100.0

(1) Bulk, as per previous years, includes domestic general and domestic steel slabs, as per the definition of domestic in the Tariff of Tolls.

Commodities through the system in 2015

COMMODITY	CARGO TONNES (1)								% of Total
	Bulk	Coal	Grains	Govt. Aid	Containers	General	Steel Slabs	Total	
Wheat	-	-	6,534,398	-	-	-	-	6,534,398	18.0
Corn	-	-	779,762	-	-	-	-	779,762	2.2
Rye	-	-	-	-	-	-	-	-	-
Oats	-	-	20,434	-	-	-	-	20,434	0.1
Barley	-	-	29,336	-	-	-	-	29,336	0.1
Canola (Rapeseed)	-	-	915,304	-	-	-	-	915,304	2.5
Canola Meal, Pellets	-	-	46,287	-	-	-	-	46,287	0.1
Flour, Wheat & Other Edible	-	-	-	-	-	-	-	-	-
Soybeans	-	-	1,959,092	-	376	-	-	1,959,468	5.4
Soybean Oil Cake, Meal, Pellets	-	-	123,723	-	-	-	-	123,723	0.3
Beans and Peas	-	-	182,378	-	-	-	-	182,378	0.5
Flaxseed	-	-	117,975	-	-	-	-	117,975	0.3
Sunflower Seeds	-	-	-	-	-	-	-	-	-
Other Agricultural Products	-	-	149,860	-	-	-	-	149,860	0.4
Total Agricultural Products	-	-	10,858,549	-	376	-	-	10,858,925	30.0
Packing House Products, Edible	-	-	-	-	-	-	-	-	-
Hides, Skins, Pelts, Wool	-	-	-	-	-	-	-	-	-
Other Animal Products	-	-	-	-	-	-	-	-	-
Total Animal Products	-	-	-	-	-	-	-	-	-
Bituminous Coal	-	2,497,029	-	-	-	-	-	2,497,029	6.9
Coke	1,358,506	-	-	-	-	-	-	1,358,506	3.7
Iron Ore	7,180,976	-	-	-	-	-	-	7,180,976	19.8
Aluminum Ore and Concentrates	101,342	-	-	-	-	-	-	101,342	0.3
Clay and Bentonite	43,126	-	-	-	-	-	-	43,126	0.1
Gravel and Sand	137,535	-	-	-	-	-	-	137,535	0.4
Stone	471,306	-	-	-	-	-	-	471,306	1.3
Salt	3,088,967	-	-	-	-	-	-	3,088,967	8.5
Potash	99,696	-	-	-	-	-	-	99,696	0.3
Gypsum	462,529	-	-	-	-	-	-	462,529	1.3
Asphalt	308,736	-	-	-	-	-	-	308,736	0.9
Other Mine Products	127,522	-	-	-	2,526	-	-	130,048	0.4
Total Mine Products	13,380,241	2,497,029	-	-	2,526	-	-	15,879,796	43.8
Lumber	-	-	-	-	-	-	-	-	-
Other Forest Products	7,712	-	-	-	74	-	-	7,786	0.0
Total Forest Products	7,712	-	-	-	74	-	-	7,786	0.0
Gasoline	738,893	-	-	-	-	-	-	738,893	2.0
Fuel Oil	720,556	-	-	-	-	-	-	720,556	2.0
Other Petroleum Products	493,824	-	-	-	17	-	-	493,841	1.4
Chemicals	897,344	-	-	-	5,119	1	-	902,464	2.5
Sodium Products	4,209	-	-	-	-	-	-	4,209	0.0
Tar, Pitch and Creosote	93,630	-	-	-	-	-	-	93,630	0.3
Pig Iron	113,628	-	-	-	-	-	-	113,628	0.3
Iron and Steel	-	-	-	-	2,202	2,054,485	-	2,056,687	5.7
Steel Slabs	-	-	-	-	-	-	202,870	202,870	0.6
Machinery and Machines	3,451	-	-	-	1,167	36,045	-	40,663	0.1
Cement	970,650	-	-	-	-	-	-	970,650	2.7
Cement Clinkers	764,423	-	-	-	-	-	-	764,423	2.1
Woodpulp	9,418	-	-	-	-	-	-	9,418	0.0
Newsprint and Paper Products	-	-	-	-	69	-	-	69	0.0
Syrup and Molasses	-	-	-	-	-	-	-	-	-
Sugar	586,885	-	-	-	-	-	-	586,885	1.6
Food Products	-	-	-	-	118	-	-	118	0.0
Furnace Slags	877,050	-	-	-	-	-	-	877,050	2.4
Scrap Iron and Steel	124,700	-	-	-	19	-	-	124,719	0.3
Other Manufactures and Misc. (2)	673,538	-	-	-	58,110	70,644	-	802,292	2.2
Total Manufactures and Misc.	7,072,199	-	-	-	66,821	2,161,175	202,870	9,503,065	26.2
GRAND TOTAL	20,460,152	2,497,029	10,858,549	-	69,797	2,161,175	202,870	36,249,572	100.0

(1) Bulk, as per previous years, includes domestic general and domestic steel slabs, as per the definition of domestic in the Tariff of Tolls.
(2) Includes unclassified cargoes.

wholly owned government corporation created by statute 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 United States. Trade development functions aim to enhance Great Lakes/St. Lawrence Seaway System utilization 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 cooperation 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, D.C. Operations are located at the two U.S. Seaway locks (Eisenhower and Snell) in Massena, NY.

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-to-day operations, traffic management, navigation aids, safety, environmental programmes, operating dates, and trade development programs. The unique bi-national nature of the System requires 24-hour, year-round co-ordination between the two Seaway entities.

Seaway opens 58th navigation season ice free

'Clear sailing ahead' as Seaway opens two weeks earlier

The St. Lawrence Seaway Management Corporation (SLSMC) marked the opening of the Seaway's 58th navigation season on 21 March, with the transit of Canada Steamship Lines' *Thunder Bay* through Lock 3 on the Welland Canal. The ship, carrying a load of road salt, will be replenishing stocks depleted by ice storms which repeatedly struck Eastern Canada over the winter.

"We certainly welcome the warmer weather. A return to an opening in the third week of March provides our clients with the opportunity to move cargo in a timely manner, and make the most of the navigation season" said Terence Bowles, President and CEO of the SLSMC.

Allister Paterson, President of Canada Steamship Lines, served as the keynote speaker at the opening. "It's an honour for CSL to be opening the Seaway this year with Thunder Bay, one of our state-of-the-art *Trillium-class* self-unloading Lakers. Like her five sister ships, this vessel is part of a new generation of vessels in the Lakes that are more energy efficient, environmentally-friendly, reliable and safe" said Paterson.

"The ongoing investment in new vessels by a variety of Seaway carriers underscores our customers' faith in the future of the waterway" said the SLSMC's Bowles. "In parallel with our customers' investments, the Seaway's award winning modernization program is now well-over 50% complete, with hands-free mooring operational at eight of the Seaway's locks. We are making steady progress in bringing about gains in efficiency and safety for all concerned, ensuring a highly competitive transportation system for years to come."

K+S Windsor Salt ships the majority of the production coming from its Ojibway Mine in Windsor via the Great Lakes/Seaway System. Francois Allard, Director Marine Distribution for K+S Windsor Salt Ltd., said: "Not only is the Seaway transportation system the most cost-effective way to reach our markets, it also minimizes our impact on the environment. The *Thunder Bay*'s transit from the Ojibway mine to Bowmanville takes almost 1,000 truckloads off Ontario highways. It's important that all levels of government continue to invest in infrastructure along this waterway and we applaud the modernization of the lock system."

"The Great Lakes St. Lawrence Seaway System continues to be an environmentally sustainable, vital route for commerce in the global supply chain," said Betty Sutton, Administrator of the US Saint Lawrence Seaway Development Corporation. "The Great Lakes region, North America's 'Opportunity Belt', is a thriving and influential destination and the Seaway System connects this region to the world. Businesses are choosing to move their cargo through the Seaway System because of the economic benefits, safety, and reliability of our waterway, and its direct access to the heartland of North America."

In terms of the outlook for 2016, the SLSMC's Terence Bowles noted that a lower Canadian dollar may spur more Canadian exports this year. "The combination of a rebound in Canadian manufacturing activity, a solid US economy, and the prospect of more trade with Europe brings about several catalysts which may boost Seaway tonnage," said Bowles.

Icebreakers and commercial vessels on Lake Huron.

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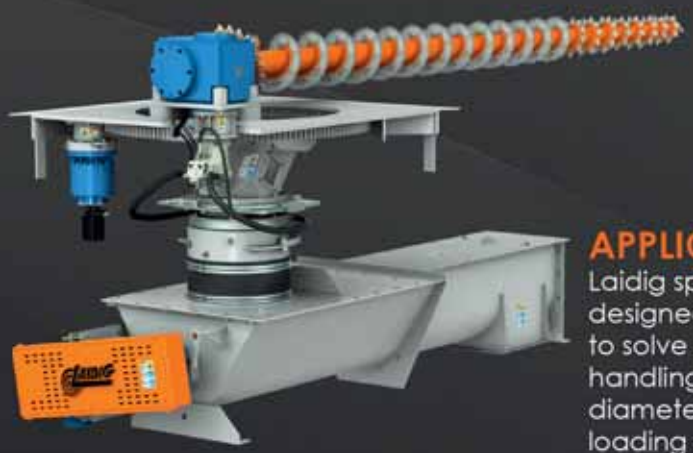
MATERIAL HANDLING SOLUTIONS

FULLY AUTOMATED TURNKEY SYSTEMS

Laidig's turnkey storage and reclaim systems offer superior material handling performance and dependability in the harshest environments.



APPLICATION SPECIFIC

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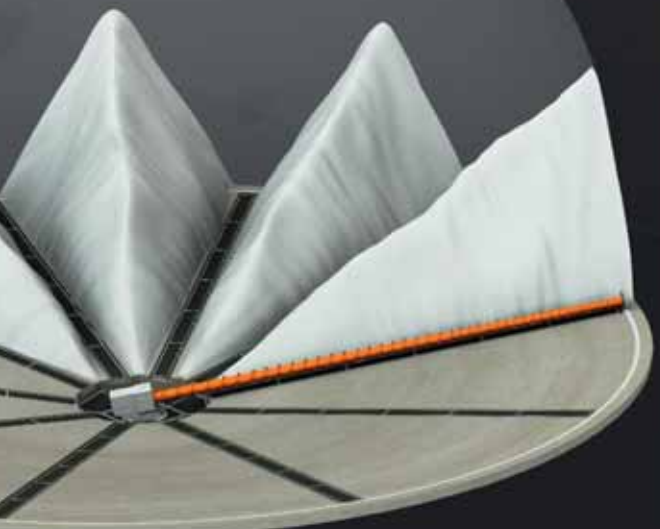
EXCEPTIONAL ENGINEERING

Laidig's systems are engineered to provide **completely automated, near-total clean out,** while maintaining first-in-first-out (FIFO) material distribution.



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The fluidizable material solution: Laidig Systems for St Marys Cement

One of the challenges of storing cement in large quantities is efficient handling of those materials out of the storage structure. When St Marys Cement evaluated options for its new storage projects, Laidig Systems, Inc. was able to provide it with an innovative solution.

St Marys Cement is a leading manufacturer of cement and related construction products in the United States and Canada. Headquartered in Toronto, Canada, St Marys Cement supplies cementitious materials to the Great Lakes Region and is also a significant producer of concrete and aggregates to various markets in the Great Lakes Region. St Marys Cement (Canada) is part of the North American operations of Votorantim Cimentos, an international cement, aggregates and concrete manufacturer based in San Paulo, Brazil.

For more than 100 years, St Marys Cement has been contributing to the construction industry around the Great Lakes. Today the company has manufacturing plants located strategically to serve the Canadian and United States markets and has docking facilities in both countries to take advantage of efficient water transportation. This association enables it to achieve synergies and economies of scale, strengthening its ability to provide excellent service and top products to builders of all sizes in all of its locations. Products of Votorantim Cimentos in North America include cementitious materials from St Marys Cement and Suwanee American Cement, decorative and high-performance concretes from Prairie Material and CBM (Canada Building Materials) in Ontario, as well as aggregate products and concrete, block and Gunite from Prestige Concrete Products.

There have been several traditional methods of reclaiming cement from large-capacity structures. The methods vary significantly from the complete aeration of structure floors, to partial aeration with manual final clean out (using front end loaders), to large mechanical reclaim systems. All of these options offer advantages and disadvantages, which primarily involve overall cost, level of automation and safety.

Laidig Systems worked with other cement companies and with St Marys to develop a solution that best fit the needs of the industry. After considerable research and development, Laidig manufactured the Fluidized Screw Series Reclaim System as a cost-effective and automated solution to unload fluidizable materials in large-capacity storage structures. Laidig's Fluidized Screw series offers superior performance and dependability for a wide range of fluidizable materials, such as cement, fly ash, talc, and other powders. The Laidig Fluidized Screw system is engineered to provide a fully-automated, near-total clean out while breaking up the hard pack and avoiding the dead zones.

The Fluidized Screw Reclaim System was developed to satisfy the needs of St Marys Cement and, in doing so, was engineered

and manufactured with various features that were paramount in the efficient and effective operation of this particular system. At Laidig, it all begins with state-of-the-art engineering and design specific to the customer and its needs. For St Marys Cement, the Fluidized Screw Reclaim System was designed to meet their difficult material challenges and did so.

The Fluidized Screw Reclaim System has been engineered and manufactured with a variety of features that not only satisfied the needs of St Marys Cement, but the system also provided some other key features, including: a fully automated system with dependable push button operation, a fully reversible sweep auger for maximum process flexibility, the ability to support storage diameters up to 164 feet (50 metres), the integration of an efficient air-gravity conveyor with a rugged mechanical screw reclaimer, and access to Laidig's lifetime technical support.

At Laidig, it all begins with state-of-the-art engineering and design specific to the customer and their needs. The Fluidized Screw Reclaim System that Laidig provided to St Marys Cement integrates the best of two proven technologies to solve material handling needs — a rugged mechanical screw along with an efficient air-gravity conveyor system.

This totally automated reclaim system provides the efficiency of air-gravity conveyors along with the ruggedness of mechanical screw reclaimers. In this process, air gravity conveyors, which

consist of an aerated centre hub and radial spokes, reclaim a large percentage of the total stored material. A series of air slides is used to fluidize the floor and cleanout a portion of the material in the dome. The air slide system is comprised of radial air conveyors — designed like spokes on a bicycle wheel — extending out from the centre. The air slides operate sequentially around the dome — not all working at once — which reduces the amount of power to operate them, and reduces uneven loads on the dome and foundation. This process will reclaim approximately 80% of the stored material, leaving behind large pie-shaped piles of material between each air slide.

To ensure final cleanout, the Laidig FS1010 Fluidized Screw Reclaim System is engaged to unload the dome, further break down the material, and clean out the remaining hard packed piles to complete the clean-out process. To assist in activating the air-gravity zones within the storage facility, the Laidig System provides an Intelligent Control System that sequentially activates the air-gravity zones to coincide with the location of the Laidig Fluidized Screw Reclaimer, to aid in the completion of the final cleanout.

Safety is also a high priority for companies storing materials in silos and domes, and one of the challenges is to ensure that plant personnel have safe and easy access into the structure. Laidig was proactive in their approach to ensure that this wouldn't be a concern for St Marys Cement and other companies that are storing and transporting fluidizable materials. Laidig has engineered and developed new product innovations and pioneering technology that have changed how companies

approach material storage from a safety perspective. The Laidig FS1010 Fluidized Screw Reclaim System has been designed as an automated storage and reclaim system process that requires no personnel entry — keeping safety as a top priority.

Laidig's Fluidized Screw Reclaim Systems are designed specifically for heavy-duty applications requiring high-volume storage and reclaim of fluidizable materials. Laidig provides turnkey installations including the storage dome, the mechanical reclaim system, blowers, air gravity conveyors, and a customized fully-automated control system. With dome diameters up to 164 feet (50m) and discharge rates up to 250 metric tonnes per hour, the Fluidized Screw system is able to store and efficiently reclaim a high volume of fluidizable material in an automated process with zero personnel entry.

This rugged, extreme-duty reclaimer promotes First-In-First-Out (FIFO) material delivery to maintain material quality standards. Laidig Systems, Inc. has proven to be a trusted partner, and is committed to pioneering a total solution for industry-specific storage and material handling needs. The Laidig Fluidized Screw reclaimer is built with longevity and flexibility in mind. Designed to handle a wide variety of materials, the Fluidized Screw is ideal for fluidizable materials, including cement, fly ash, talc and powders. The Fluidized Screw provides a cost-effective alternative to traditional fully fluidized floors, utilizing fluidized radial spokes to clean out a large portion of the storage vessel and a mechanical screw to reclaim the remaining piles of material.

At the core of Laidig Systems, there exists the product guarantee that the company was founded on and still is in practice today: "If we design, build, and install your materials handling system, we guarantee it will work."

Many customers partner and work with Laidig because they value the straight-forward, no-nonsense guarantee. Even when partnering with customers to pioneer new methods of material handling, Laidig remains committed to that guarantee.

"We won't walk away from problems — whether they are yours or ours. If we design, build, and install your material handling system, we guarantee it will work." — It's that simple.

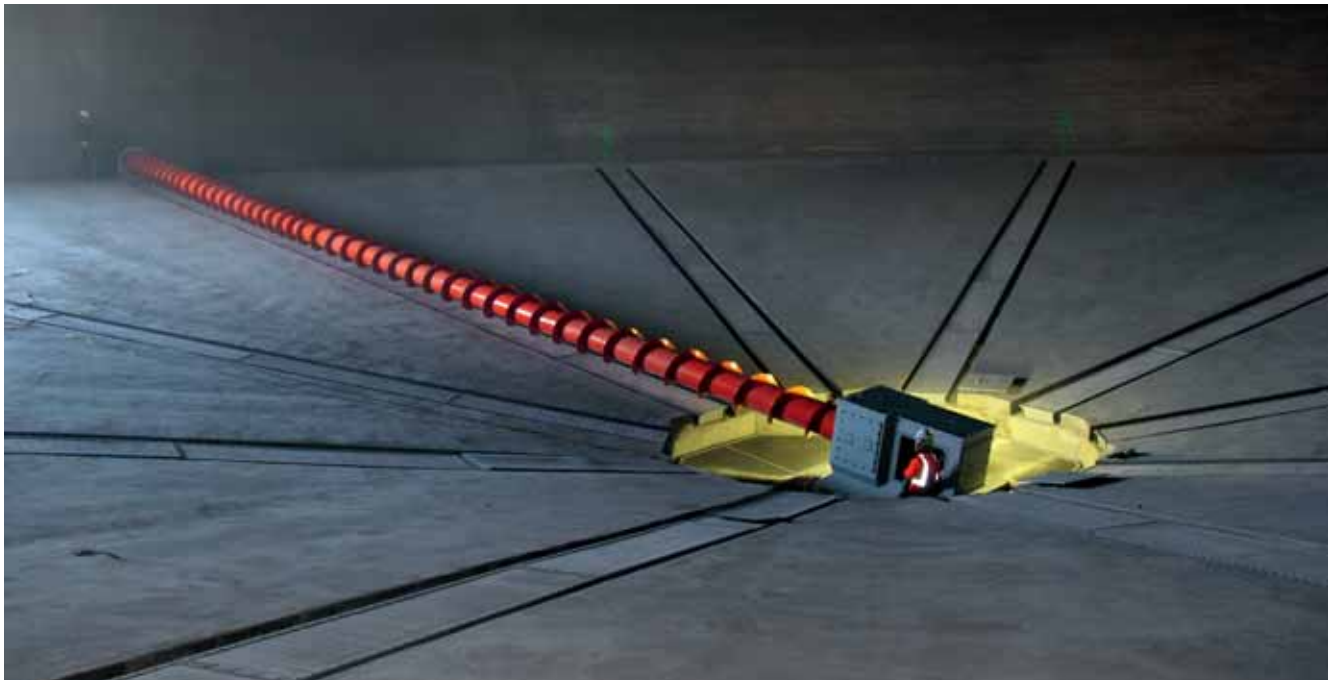
Laidig is the world leader in the bulk storage and reclaim industry, specializing in screw-type bottom reclaimers in silos, domes, and open piles. Thousands of bulk storage and reclaim systems are installed worldwide, with new system designs continuously introduced to incorporate the latest technology and meet the challenges of today's world. Laidig is proud to be setting the standards in the bulk storage and reclaim industry.

Known throughout the industry for their rugged, high-quality systems, Laidig excels in providing customized solutions for the storage and reclaim of materials with poor material flow characteristics or other special handling requirements. All over the World, Laidig provides solutions that assist in bulk storage and material handling problems that other companies are unable or unwilling to provide. Such materials include biomass (i.e. wood chips, corn cobs, cellulosic material), trona, petcoke, crushed coal, FGD gypsum, limestone, fly ash, cement, grains, grain meals, powders, fertilizers, pellets, and a variety of recycled materials.

According to Daniel Laidig, Laidig Systems CEO, the commitment to being the best still stands today.

"We are providing solutions for large automated storage and reclaim needs with designs that are innovative, sound and guaranteed to work. This continues to illustrate the pioneering spirit, experience and leadership Laidig has throughout the world. It continues to prove that we can develop and deploy storage and reclaim solutions that no other company can."

Laidig is a leader and key partner in developing solutions for the storage and reclaim of bulk materials. With over 50 years of experience, Laidig continues to pioneer the industries and develop innovative material handling solutions.



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Change afoot at Great Lakes' region shipping company Rand Logistics

Rand Logistics, Inc. is a leading provider of bulk freight shipping services throughout the Great Lakes region. Through its subsidiaries, the company operates a fleet of four conventional bulk carriers and twelve self-unloading bulk carriers including three tug/barge units. The company is the only carrier able to offer significant domestic port-to-port services in both Canada and the US on the Great Lakes. Its vessels operate under the US Jones Act — which dictates that only ships that are built, crewed and owned by US citizens can operate between US ports – and the Canada Marine Act, which requires Canadian commissioned ships to operate between Canadian ports.

Headquartered in Jersey City, New Jersey, USA, Rand Logistics was formed in 2006 through the acquisition of the outstanding shares of capital stock of Lower Lakes Towing Ltd. Common shares of Rand Logistics trade on the NASDAQ Capital Market under the symbol RLOG.

Rand Logistics introduces newest Canadian-flagged self-unloader into service

On 1 December last year, Rand Logistics announced that it had introduced its newest Canadian self-unloading vessel, the *Manitoulin*, into service. The new vessel has the largest carrying capacity of any existing *River*-class self-unloader and is anticipated to be the most efficient vessel of its class on the Great Lakes.

The new addition increases the size of Rand's fleet to 16, including ten Canadian-flagged and six US-flagged vessels, and supports recent new long-term contracts, which took effect in April 2015.

"As reported in our second quarter fiscal 2016 financials, the new vessel will service existing business that was being delivered through a third party time charter," commented Mark Hiltwein, Rand's CFO. "Tonnage has been transferred to this new vessel, ending the third party time charter agreement that has been in place throughout the current sailing season. We do not expect that our newest vessel will have a meaningful impact on our fiscal 2016 financial results. In the 2016 sailing season, we expect per day profitability generated from our newest vessel to exceed that of any of our existing assets."

Hiltwein added, "We estimate that the new vessel will increase our overall return on invested capital by approximately 1% and our free cash flow per basic shares outstanding at the current Fx rate by between $0.18 and $0.22 on a full year basis."

"The *Manitoulin* is officially in operation in the Great Lakes Region after successfully completing the voyage from China to Canada over the last two months, travelling across the Pacific Ocean, through the Panama Canal, along the East Coast, and down the St. Lawrence River. We are pleased with the vessel's performance and are thankful for our skilled crews and all who contributed to delivering the vessel into service safely and within the expected timeframe," said Scott Bravener, President of Lower Lakes Towing Ltd. and Grand River Navigation Company, both subsidiaries of Rand.

Rand Logistics announces appointments of Vice Presidents of Operations for the US and Canadian fleets

On 4 January this year, Rand Logistics announced the appointment of Captain Paul J. Joaquin and Captain Gerald "Gerry" J. Ray as Vice Presidents of Operations for the US and Canadian fleet, respectively, effectively immediately. Captains Joaquin and Ray have assumed executive responsibility for the co-ordination, execution and optimization of vessel operations to fulfill annual operating plan commitments. This includes workforce and resource planning, fleet safety, regulatory and environmental compliance, vessel expense management and driving operating excellence initiatives.

"We continue to strengthen our management team with the appointment of Captains Joaquin and Ray to lead day-to-day operations for our US and Canadian fleets, respectively," commented Ed Levy, Rand's President and CEO. "Both Paul and Gerry are seasoned captains who bring significant operations expertise to their new roles. Both consistently illustrate a

collaborative management style and an operating philosophy centred on operational metrics management, which remains a focus for our company as we pursue operational excellence throughout our organization." Both Captain Joaquin and Captain Ray joined the company in 2001.

Captain Joaquin is a graduate of the Great Lakes Maritime Academy in Traverse City, Michigan, USA, where he received a degree in Marine Technology. He is a US Coast Guard licensed pilot of all waters west of Cape Vincent.

Captain Ray is a graduate of Georgian College in Owen Sound, Ontario, Canada, where he received a diploma in Marine Navigation Technology, and holds several licences and certifications specific to the marine industry.

"We are pleased that Captain Joaquin and Captain Ray are beginning the next phase of their careers together. Their experience within, and dedication to, our company and the marine industry will allow us to better share best practices and further align activities between our US and Canadian fleets. Collaboration will allow us to capitalize on operational efficiencies across both fleets," said Captain Scott Bravener, President of Grand River Navigation Company and Lower Lakes Towing, Ltd.

Rand Logistics announces appointment of Aaron H. Degodny to Chief Commercial Officer

On 3 February this year, Rand Logistics announced the appointment of Mr. Aaron H. Degodny to the position of Chief Commercial Officer.

"The role of Chief Commercial Officer is a new one for our company and reaffirms our commitment to growth, strengthening our business relationships and continuing to create shareholder value," stated Ed Levy, President and Chief Executive Officer of Rand. "In conjunction with our existing senior executive team and sales and marketing group, Aaron will enable us to continue to improve our customer's experience. Aaron's proven leadership experience will augment our company's business development activities and enable our organization to achieve our long-term objectives."

Aaron Degodny has over 25 years of experience in the transportation and logistics industry, with the majority of his career in the bulk commodities and industrial products sectors. Prior to joining Rand, Degodny was employed with Canadian National (CN) Railway for 20 years, where he served as Director of Sales for Bulk Commodities for the United States and Canada, one of the railroad's largest business segments. At CN, he also held the positions of Director of Sales for Industrial Products and National Account Manager for Grain and Fertilizer. Earlier in his career, he held various positions focused on commodity trading, logistics and transportation at Cargill, Inc.

He is a graduate of Iowa State University in Ames, Iowa, where he received his Bachelor's Degree in Business Administration with a focus on transportation logistics and economics. He has been affiliated with a variety of organizations including the National Grain and Feed Association, the National Grain Car Council, and the Transportation, Elevator and Grain Merchants Association.

Rand logistics announces new corporate headquarters

On 5 February this year, Rand Logistics announced the company was relocating its headquarters office from New York City to New Jersey, effective 1 March 2016. The company's headquarters relocation is one of several initiatives under way as part of its previously disclosed programme to increase its return on invested capital.

"After many years in Manhattan, we have made the decision to base our company in New Jersey, as part of our sharpened focus on our return on invested capital. Our new location provides us with a dedicated office space for Rand and will result in the termination of our Reimbursement Agreement with Hyde Park Real Estate, LLC, an affiliate of one of our directors. It will also result in an attractive annual lease cost savings," stated Mark S. Hiltwein, Chief Financial Officer of Rand.

Rand Logistics announces plans for 2016 Sailing Season

On 6 April, Rand Logistics announced the company's plans for operation in the 2016 Sailing Season, which includes operating 13 of its 16 vessels, $2 to $4 million of annual cost savings and improved financial performance over the 2015 Sailing Season.

"The company is projecting to sail approximately 3,405 days and operate 13 vessels in the 2016 season, including all six of our Canadian-flagged self-unloaders and five of our six US-flagged self-unloaders. At such time as we believe we can generate a consistently appropriate return on invested capital on our sixth US-flagged self-unloader, we will reintroduce it back into service. Average vessel margin per day for the last three years has been approximately $13,000. In addition, we presently do not expect to utilize any third party vessels to haul our customer tonnage in the 2016 sailing season," stated Ed Levy, Rand's President and CEO.

"During the quarter ended 31 March 2016, we agreed to a favourable buyout of a customer time charter contract on one of our bulk carriers. We have begun to remarket this vessel but are assuming that it, as well as a second of our four bulk carriers, will not sail in the 2016 season. We believe that market conditions, including the size of the Canadian grain harvest, will dictate if either of these two vessels operates in 2016. The two bulk carriers that we currently project will not operate in the 2016 sailing season are amongst the lowest vessel margin per day contributors in our fleet, and therefore the decision to not operate the vessels is likely to be accretive to our overall vessel margin per day," Levy continued.

During its fiscal fourth quarter ended 31 March, 2016, the company's performance exceeded expectations. "We were pleased with our vessel operating performance in our fiscal fourth quarter ended 31 March 2016. While we operated for 113 days in the quarter versus 248 in the same quarter in the prior year period, as a result of weather conditions and a more disciplined operating approach, we are expecting that both our vessel margin and vessel margin per day will be improved as compared to the quarter ended 31 March 2015," stated Mark Hiltwein, Rand's Chief Financial Officer.

"We have identified between $2 million and $4 million of annual cost savings which we hope to realize over the next 12 months. These cost reduction opportunities include savings in a number of areas including insurance, provisions, spare parts, and general and administration expenses. Our cost savings programme is part of our initiative to improve return on invested capital," stated Hiltwein.

"Our 2016 initiatives which include the introduction of our newest vessel, rationalizing our cost structure, managing capital expenses, improving operational efficiencies and achieving higher value added revenue will position us to continue to repay debt and increase our return on capital as we operate through the 2016 sailing season," Hiltwein concluded.

World Shipping expands Great Lakes operations network and opens new office

The maritime concierge for all US Great Lakes ports now provides vessel operations to Canadian ports

World Shipping, Inc. is proudly expanding its Great Lakes Vessel Operations Agency Network to now include Canadian ports in addition to all US Great Lakes ports. On 1 March this year, World Shipping Inc. opened a fully staffed agency office in Hamilton, Ontario to provide vessel owners and operators the same world-class service at Canadian ports as the company has provided to US Great Lakes ports since its founding in 1960.

The Canadian Great Lakes Vessel Operations Network includes the ports of:

- Hamilton;
- Mississauga;
- Oakville;
- Toronto;
- Oshawa;
- Picton;
- Welland Canal;
- Port Weller;
- Port Colborne;
- Thorold; and
- Nanticoke.

A Single Vessel Operations Agent

The expansion of the Great Lakes Vessel Operations Network closes a gap in the Eastern region of the Great Lakes by creating a continuous network of vessel operating offices servicing Lake Ontario and the Welland Canal ports, providing the customers of World Shipping, Inc. with the opportunity to use a single agent, while transiting beyond the St. Lawrence Seaway for all Great Lakes ports on both the US and Canadian side.

Canadian Leadership

The Canadian Great Lakes Vessel Operations Network will be managed by Canadian, J.F. Walker. J.F. will serve as General Manager at the Vessel Operations Office in Hamilton, Ontario. "J.F. brings a wealth of experience stemming from 14 years in the vessel husbandry industry. His knowledge and reputation has earned widespread industry respect — we are extremely pleased to have him as a part of our team," says Fred Hunger, Chief Executive Officer, World Shipping, Inc.

Vessel Agents Since 1960

Inspired by opening of the St. Lawrence Seaway in 1959, Jack Hunger founded World Shipping, Inc. in 1960. Over 55 years later, his legacy continues with The World Group of Companies providing innovative cargo transportation and freight services while delivering the highest level of customer service available in the industry. Headquartered in Cleveland, OH, The World Group companies include World Shipping, Inc., ContainerPort Group, UWL, World Distribution Services, and NewPort Tank Containers.

World Shipping, Inc. is an independent shipping agency specializing in vessel operations, APIS/AMS/ACI/ENOA/D, grain forwarding and project logistics. As the maritime concierge for all Great Lakes Ports, ship owners, ship operators, time charters, voyage charterers will experience excellent customer service, ensuring each port call and every voyage is performed in the safest, quickest and most cost efficient manner. The World Shipping, Inc. vessel operations and port agency staff provide the largest, most comprehensive geographic scope and depth of experience in the Great Lakes.

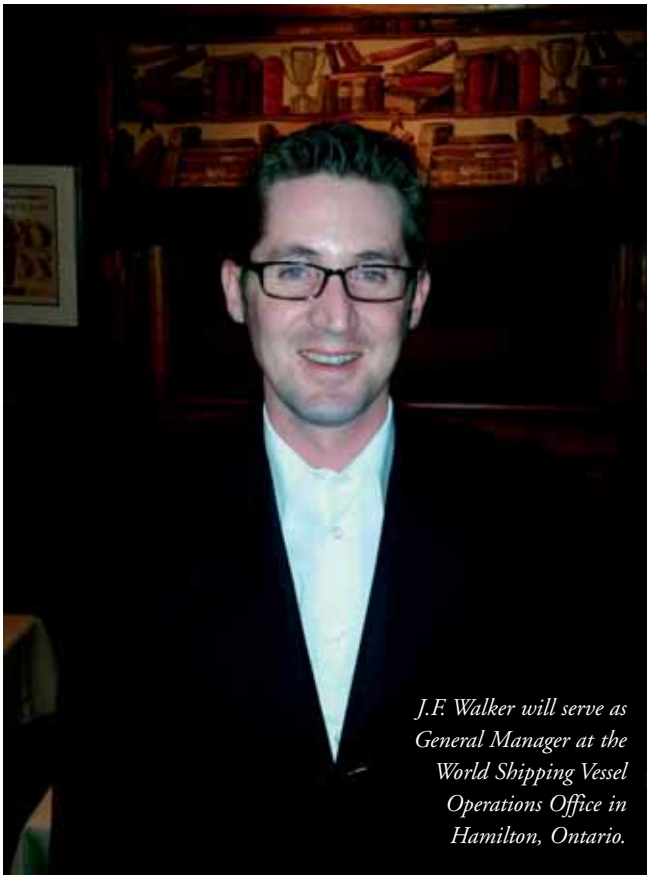
US Great Lakes Vessel Operations Network include the ports of:

- Ashtabula;
- Bay City;
- Buffalo;
- Burns Harbor;
- Chicago;
- Cleveland;
- Conneaut;
- Detroit;
- Erie;
- Green Bay;
- Lorain;
- Ludington;
- Marinette and Menominee;
- Milwaukee;
- Muskegon;
- Ogdensburg;
- Oswego;
- Port Huron; and
- Toledo.

About World Shipping, Inc.

Since 1960, World Shipping, Inc. has been active in serving shippers and receivers of international cargo operating in multiple segments, including freight forwarding, ocean freight, trucking, rail operations, warehousing and distribution, bulk liquid international logistics, and customs clearance.

Headquartered in Cleveland, OH, The World Group companies include World Shipping, Inc., ContainerPort Group, UWL, World Distribution Services, and NewPort Tank Containers.



J.F. Walker will serve as General Manager at the World Shipping Vessel Operations Office in Hamilton, Ontario.

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Port of Indiana-Burns Harbor handles second-highest tonnage since 1994

The Port of Indiana-Burns Harbor handled 2.8mt of cargo in 2015, the second highest tonnage in over two decades.

The Port of Indiana-Burns Harbor handled 2.8mt (million tonnes) of cargo in 2015, the second-highest tonnage in over two decades. Following 2014's all-time record volume, the year marked only the third time the port handled 2.8mt or more in the port's 45-year history.

Increased shipments of heavy-lift project cargoes (up 96%), carbon products (up 37%), limestone (up nearly 12%) and oils (up 72%) helped drive the increased volume.

"Our port continues to be a major inland hub for heavy-lift cargoes as our terminal operators handled nearly double the

The Port of Indiana-Burns Harbor received 36 beer fermentation tanks in 2015, including 20 for Lagunitas Brewing Co. in Chicago, one of the largest craft breweries in the US.

number of large dimensional shipments during 2015 over the previous year," said Port Director Rick Heimann. "The port has received multiple shipments for regional breweries in recent years, including 36 beer fermentation tanks in 2015. Many of these are 20,000 gallon tanks or larger.

"The port's strategic location at the intersection of two of the world's busiest waterways and all of the nation's Class I rail lines provides significant competitive advantages for multimodal companies moving international cargo to and from the Midwest."

Lagunitas Brewing Co. in Chicago, one of the largest craft breweries in the US, received 20 more tanks through the port from Europe in 2015 after receiving 29 in 2014. In 2015, the port also handled 12 brewery tanks for Bells Brewery in Kalamazoo, Mich., and four tanks for Revolution Brewery in Chicago.

Steel shipments, a key driver for 2014's record, were below that year's total but well ahead of the five-year average. Other significant cargoes handled by the port in 2015 included fertilizer, grain and salt.

"Last year was a very good year for the port and the credit goes to our port companies who helped attract the cargoes," said Heimann. "We continue to look for new opportunities to grow and diversify our product mix to withstand market swings and further improve our business. Nearly $2 million was invested in port infrastructure in 2015 to increase cargo-handling capacity and improve multimodal connections for our port companies."

Projects included construction of a new mooring space for barge fleeting, upgrades to multiple dock areas, replacement of over 1,300 feet of rail track and rebuilding two railroad crossings.

Ocean ships and Great Lakes vessels carry critical cargoes for port companies, but river barges also provide the port with a vital year-round link to over 20 states through 12,000 miles of rivers and to global markets by connecting with ocean vessels in the Gulf of Mexico.

Additional 2015 port highlights included the September announcement of a new Great Lakes shipping partnership between Indiana and Québec. Indiana Lieutenant Governor Sue Ellspermann and Québec Minister of International Relations and La Francophonie Christine St-Pierre met at the port to explain the new partnership designed to explore the development of increased maritime trade between the districts. The new partnership is designed to identify new cargoes and boost existing shipping volumes. The port also played host to a trade mission from Québec in October and celebrated multiple bulk export shipments to Québec ports in the fourth quarter.

In November, Betty Sutton, Administrator of the St. Lawrence Seaway Development Corporation, presented Gov. Mike Pence with the "Robert J. Lewis Pacesetter Award" in recognition of the Port of Indiana-Burns Harbor's recent increase in international shipments through the St. Lawrence Seaway.

The Port of Indiana-Burns Harbor contributes over $4.6 billion in total economic activity per year to the regional economy and supports over 36,000 total jobs.

About the Port

The Port of Indiana-Burns Harbor opened in 1970 and is operated by Ports of Indiana, a statewide port authority managing three ports on the Ohio River and Lake Michigan. Established in 1961, the Ports of Indiana is a self-funded enterprise dedicated to growing Indiana's economy by developing and maintaining a world-class port system.

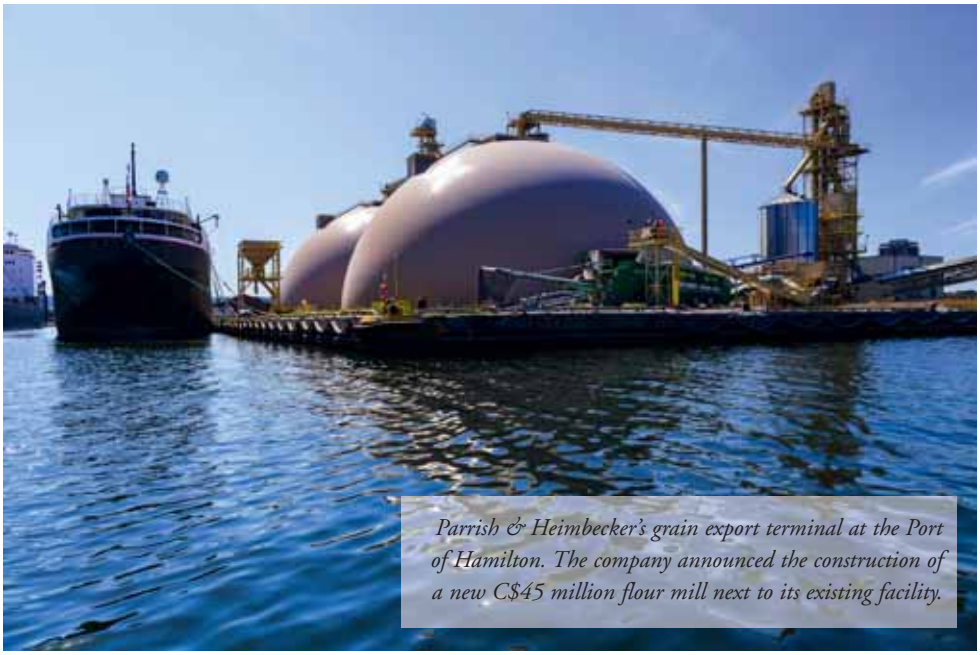
Port of Hamilton hungry for more agri-food investments

The Port of Hamilton is the largest Canadian port on the Great Lakes, with a focus on dry and liquid bulk commodities.

The port's 2015 tonnage exceeded 9mt (million tonnes).

Hamilton Port Authority made two major announcements in 2015, both related to the port's role as a burgeoning agri-food cluster within North America.

In October, G3Canada Ltd. announced the construction of a new, C$50 million grain export terminal, designed to get southern Ontario's grain crop — wheat, corn and soyabeans — to export markets in Europe and beyond. The new G3 terminal will be one of three now located at the port.



Parrish & Heimbecker's grain export terminal at the Port of Hamilton. The company announced the construction of a new C$45 million flour mill next to its existing facility.

The Port of Hamilton is well-positioned as an export hub, vessels have direct access through the St. Lawrence Seaway to the Atlantic. More than 1.7mt of agricultural commodities transited the port in 2015.

In December 2015, Port of Hamilton tenant Parrish & Heimbecker announced the development of a new C$45 million flour mill, to be located next to the company's existing grain export terminal. The new flour mill will service the domestic commercial market for flour.

These two announcements contribute to more than $200 million in agri-food-related investments at the Port of Hamilton since 2009.

"The Port of Hamilton has been growing in leaps and bounds in recent years, and the agri-food sector has been the primary driver of that growth," said Hamilton Port Authority President & CEO Bruce Wood. "We work closely with our tenant companies to accommodate business expansion and new lines of business. It is an entrepreneurial approach to business that serves the port and its partners."

Port of Milwaukee: revenues remain strong despite loss of coal throughput

The Port of Milwaukee is a diverse transportation hub in the centre of North America, a vital component of the Great Lakes economic engine. It serves the Midwest region of the United States with 'laker' traffic delivering bulk products, ocean-going 'salties' exchanging commerce with Europe, and barges transiting between the Gulf of Mexico via the inland river system.

Salt continues to be the largest bulk commodity by volume delivered to Milwaukee by lakers, with cement constituting the most deliveries each year. Montreal-based Fednav's Falline Liner Service makes Milwaukee a scheduled port of call from Europe through the St. Lawrence Seaway with additional ocean carriers such as Polsteam, BBC Shipping, Hansa Heavy Lift, Wagenborg, and Spliethoff being regular visitors as well.

International vessels carry a variety of cargoes into the port throughout the Seaway season. These consist of steel and heavy equipment for the region's manufacturing base, project cargo such as wind towers for energy generation, and agricultural products such as barley for the local brewing industry, a market that has seen growth in recent years. Vessels load out export products such as large equipment from Milwaukee area manufacturers and Wisconsin agricultural products including grain, wheat, and soybeans all grown within 90 miles of the port.

Salt continues to be the largest bulk commodity by volume delivered to Milwaukee by lakers.

Approximately 50 salties annually arrive at the Port of Milwaukee by sailing through the St. Lawrence Seaway System, 'climbing' almost 600 feet from the Atlantic Ocean through its series of 15 locks managed jointly by the governments of Canada and the United States.

Milwaukee's terminals bustle with the commercial vessel traffic of

lakers and salties that combined make well over 300 port calls each year. The lakers are both US and Canadian flag ships that can carry up to 30,000 tonnes of bulk commodities including grain, limestone, cement, scrap metal, and salt. Cement volume has been particularly strong into Milwaukee in recent years through the LaFargeHolcim and St Mary's terminals.

After receiving 17mt (million tonnes) over the past several decades, coal deliveries ended in 2015, the result of two Milwaukee power plant conversions to natural gas. Re-purposing the port's deep draught coal dock and its 13-acre parcel is at the top of the port's priority list in 2016.

Liquid bulk transportation will be enhanced when the current refurbishment of the port's liquid cargo pier is completed, increasing transit of products such as ethanol and asphalt. Port tenants U.S. Oil and South Harbor LLC are the liquid bulk operators.

While overall port tonnage has been impacted by the end of the coal deliveries, port revenue remains strong. As landlord to a diverse group of 20 tenants including Federal Marine Terminals, Kinder Morgan, LaFargeHolcim Corporation, St Mary's Cement, and salt companies Morton, Cargill, and Compass Minerals, Milwaukee has maintained its position as a profitable port.

Milwaukee's year round activity is exemplified by its annual 'winter fleet' of lakers that arrive in mid-January, providing added revenue through their maintenance work, supported by the port-owned and -operated cranes. This past winter saw the 1,000ft-long (304.80 metres) bulk carriers *Stewart J. Cort* and *Burns Harbor*, and the integrated tub/barge *Lakes Contender* arrive for maintenance between mid-January and mid-March. Other winter activities at the port include the delivery of road salt to local municipalities, steel shipments, and bagging and shipping operations of both salt and fertilizer. The port's duties as Grantee of Foreign Trade Zone No. 41 in SE Wisconsin are continuous throughout the year as well.

Perhaps less well known, Milwaukee, Wisconsin is also an inland river port, being the northern most transit point on Lake Michigan for inland river barges travelling to and from the inland river system. River barges carry steel, manufactured goods, scrap metal, asphalt, and agricultural products between Milwaukee and the Gulf of Mexico. A typical transit time between Milwaukee and the Gulf ports of Houston, TX or New Orleans, LA is 30 days via the Mississippi River.

The water access is critical but being a transportation hub requires equally robust ground transportation within the Midwest region served by the port. The Port of Milwaukee is a conduit into the heartland of the United States via the direct truck access it has to the United States Interstate Highway System.

This spring the port completed over $2 million in rail upgrades to its Lake Classification Yard to bolster opportunities for the two main railroads, the Canadian Pacific and the Union Pacific, that serve its 15 miles of track daily. This rail connectivity as well as its geographic location are two unique advantages that make the Port of Milwaukee both an attractive destination for inbound vessel cargo and a port of origin for exporting.

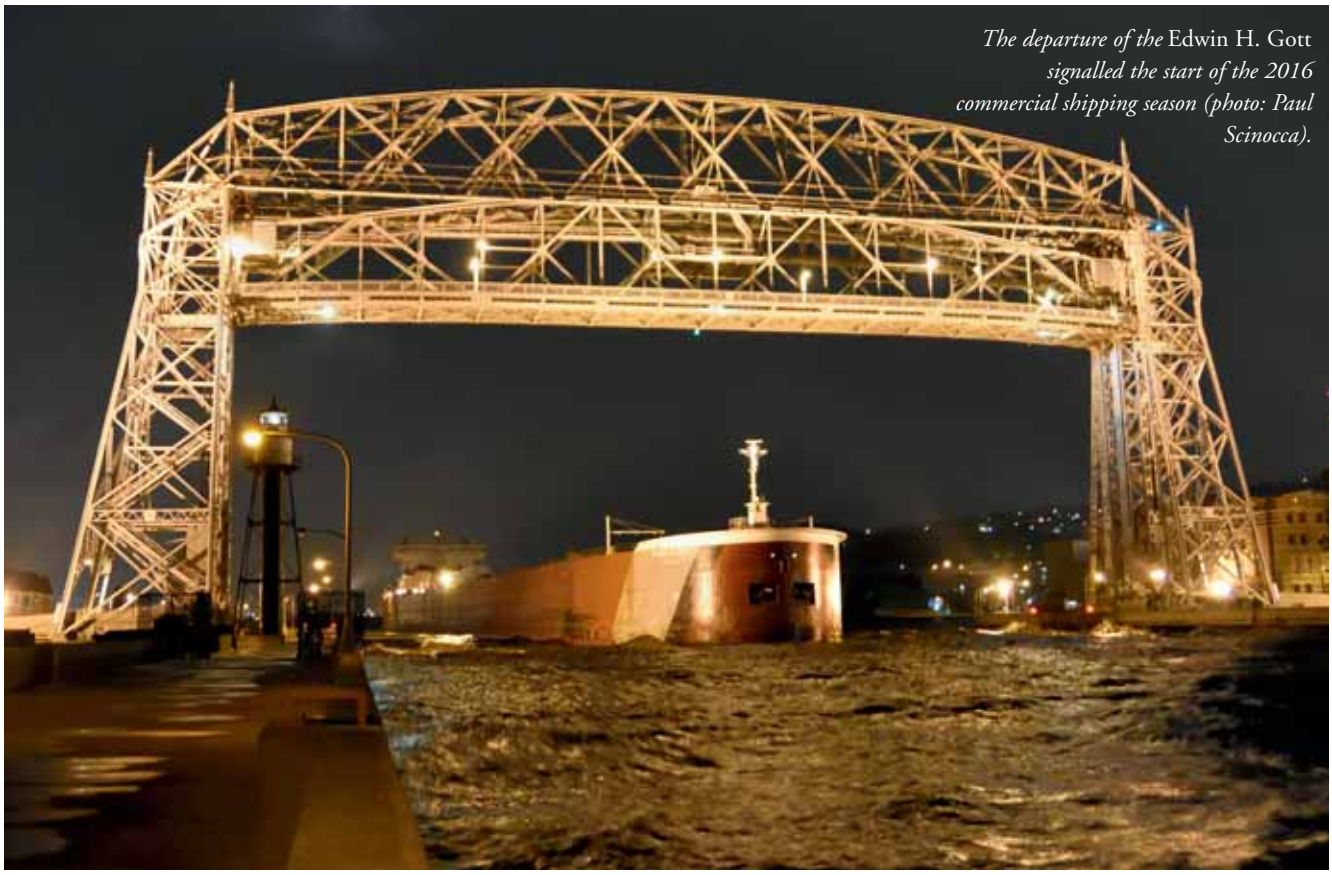
Unloading barley directly to a waiting truck.

Loading out export soybeans.

Steel handling.

Project cargo: wind tower components.

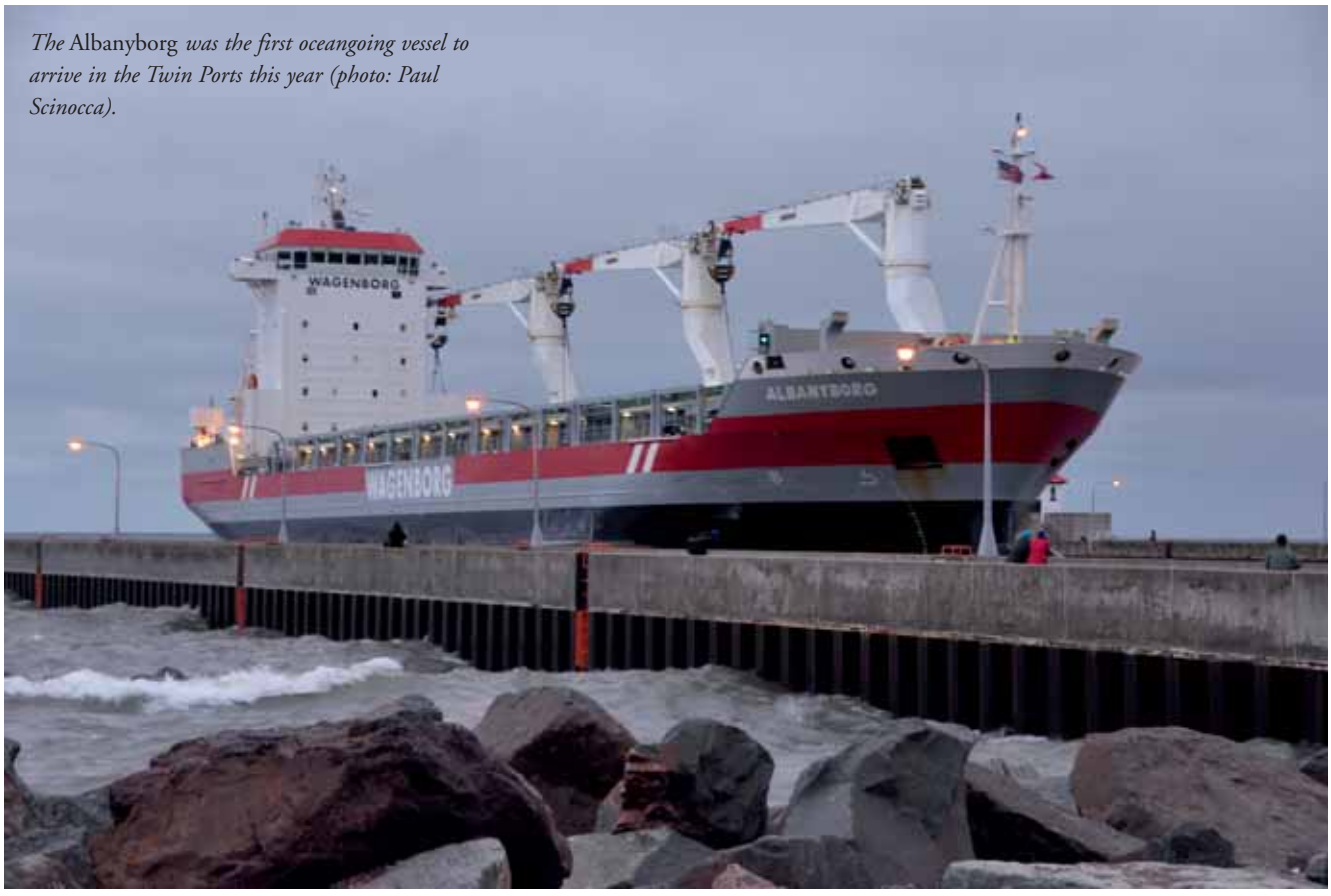
Commercial shipping season gets underway in Port of Duluth-Superior



The departure of the Edwin H. Gott *signalled the start of the 2016 commercial shipping season (photo: Paul Scinocca).*

The first two US-flag lakers departed the Port of Duluth-Superior on Tuesday 22 March, signalling the start of the 2016 commercial shipping season at this, the farthest inland port on the Great Lakes St. Lawrence Seaway (GLSLS) system.

The *Edwin H. Gott* departed in the early hours of 22 March. The previous day, the vessel moved from its winter berth at the Clure Public Marine Terminal — first to fuel, then to depart early morning beneath Duluth's famed Aerial Bridge en route to the CN Dock in Two Harbors to load iron ore pellets. Shortly thereafter, another ship in the Great Lakes Fleet, the *Philip R.*



The Albanyborg *was the first oceangoing vessel to arrive in the Twin Ports this year (photo: Paul Scinocca).*

The Albanyborg *passing through Duluth's Aerial Bridge (photo: Paul Scinocca).*

Clark, also fuelled and headed to Two Harbors. Both vessels, with deliveries to make to steel mills on the Lower Lakes, proceeded across Lake Superior toward Sault Ste. Marie, Mich., to 'line up' in a downbound queue to await the opening of the Soo Locks at 12:01 a.m. on Friday 25 March. [Note: The Welland Canal opened on 21 March; the Montreal/Lake Ontario section of the St. Lawrence Seaway opened on 23 March.]

The *Paul R. Tregurtha*, which spent winter layup at the Superior Midwest Energy Terminal, loaded coal there on Thursday 24 March before departing that evening for the St. Clair Power Plant in Michigan.

Two additional vessels that wintered over in the Twin Ports — the *Kaye E. Barker* and the *American Century* — departed later in March. The *Herbert C. Jackson*, which is undergoing a major repowering project at Fraser Shipyards, won't sail until sea trials are completed in June.

The first saltie of the 2016 season, the *Albanyborg*, sailed into the Port of Duluth-Superior on Sunday 3 April. The ship passed through the Duluth Ship Canal and beneath the Aerial Bridge before making its way to the Clure Public Marine Terminal to dock overnight.

The 472-foot *Albanyborg*, which flies the flag of the Netherlands, was the first oceangoing vessel to arrive in the Twin Ports this year after transiting the full length of the Great Lakes St. Lawrence Seaway system. It also was the first foreign-flag vessel to enter the Seaway after it opened on 23 March. The multipurpose carrier, part of the Royal Wagenborg fleet, made one stop along the way to deliver a cargo of wind turbine components from Germany to Port Colborne, Ontario, Canada.

Built in 2010, the *Albanyborg* has 12 crew members onboard and is under the command of Captain Igor Bunenkov. Local vessel agent is Guthrie Hubner; stevedoring provided by Ceres Terminals.

The vessel spent Monday 4 April docked at the Port Terminal while bulkheads were erected inside its cargo hold to prepare for loading grain, then proceeded to the CHS terminal on the Superior side of the harbour to load 10,000 metric tonnes of spring wheat for Italy.

The Soo Locks provide a pivotal gateway for lakers — some of which measure more than 1,000 feet in length — to move raw materials like iron ore, coal, limestone, cement and salt between Lake Superior and Lakes Michigan, Huron and Erie. It is one of a total of 16 sets of locks along the entire Great Lakes St. Lawrence Seaway that allow salties to move breakbulk and project cargoes in and out of North America's heartland and deliver Midwestern grains to Europe, the Middle East and North Africa.

"Despite warm temps and virtually ice-free conditions across the Lakes, we couldn't compensate for the downturn in iron ore last year. Sub-par growth in China coupled with the dumping of foreign steel into US markets caused a commodity recession across the board," said Vanta Coda, Duluth Seaway Port Authority executive director.

"There are still some formidable challenges along the Great Lakes, but nowhere near what the fleets were facing last year," he added. "We all anticipate a slow start to the 2016 shipping season as headwinds still exist in commodity pricing, but the steel market and US producers should begin to stabilize this year."

Close to 1,000 ships visit the Port of Duluth-Superior each year, moving roughly 38 million tonnes of cargo on average each year — iron ore, coal, grain, limestone, cement, salt, plus project cargo and more. As the largest tonnage port on the Great Lakes-Seaway, cargo movements through the Port of Duluth-Superior support 11,500 jobs and contribute over $1.5 billion in business revenues to the local/regional economy.

US government study anticipates unemployment rate topping Great Recession if Poe Lock fails

photo: The Interlake Steamship Company.

The Lake Carriers' Association has reported that almost 11 million unemployed Americans and a $1.1 trillion decrease in economic activity are just two of many catastrophic consequences forecast by a US Department of Homeland Security's (DHS) Office of Cyber and Infrastructure Analysis report on a six-month failure of the 47-year-old Poe Lock at Sault Ste. Marie, Michigan. Titled *The Perils of Efficiency: An Analysis of an Unexpected Closure of the Poe Lock and its Impact*, the report is an in-depth look at the ramifications of a failure of the largest of the locks at the 'Soo' which connect Lake Superior to the lower four Great Lakes and St. Lawrence Seaway.

The analysis finds a failure of the Poe Lock would quickly cripple the economy. Approximately 75% of US integrated steel production would cease within two to six weeks of the lock failing. Roughly 80% of iron ore mining and nearly 100% of North American production of automobiles, appliances, heavy equipment and railcars would then shut down. Almost 11 million people in the US and millions more in Canada and Mexico would be unemployed and plunge the economy into a recession more severe than the 'Great Recession' of 2008/09.

Michigan and Indiana would suffer the highest unemployment rates, 22.6% and 22.0% respectively. Ohio's unemployment rate would jump to 17.2%. Kentucky and Tennessee would follow at 16.7% and 15.3%, respectively.

California, Illinois, New York, and Texas would each lose more than 500,000 jobs.

Four thousand commercial vessels transit the locks at Sault Ste. Marie, Michigan, each year carrying more than 80 million tonnes of iron ore, low-sulphur coal, grain, limestone and breakbulk cargoes from, or destined for, domestic and foreign ports. However, 70% of all tonnage moved in US-flag vessels funnels through the Poe Lock because it alone can accommodate the largest and most efficient vessels working the Lakes.

Last summer emergency repairs closed the 73-year-old MacArthur Lock, the smaller of the two functional locks at the Soo, for 20 days. Nearly 2mt (million tonnes) of various cargoes were delayed, but had the Poe Lock suffered a similar outage, the delays and cascading ramifications would have been much greater.

A second Poe-sized lock to provide redundancy at the Soo has twice been authorized by Congress, the second time in 2007 at full federal expense. However, funds for its construction have not been appropriated because of a flawed analysis of the project's benefit/cost ratio.

The report's release comes as the US Army Corps of Engineers (Corps) undertakes an economic reevaluation of that flawed benefit-to-cost analysis. The original analysis erroneously assumed iron ore and other materials currently moved on the Lakes through the Soo Locks had unlimited alternate modes of transportation available, but further research has proved neither trains nor trucks could fill the void if the Poe Lock failed for any period of time.

Responding to a question at a recent Congressional hearing on the Corps' budget, Assistant Secretary of the Army for Civil Works Jo-Ellen Darcy stated that the Corps would take the DHS study into account in conducting that economic reevaluation.

Lake Carriers' Association

Lake Carriers' Association represents 15 American companies that operate 56 US-flag vessels on the Great Lakes and carry the raw materials that drive the nation's economy: iron ore and fluxstone for the steel industry, aggregate and cement for the construction industry, coal for power generation, as well as salt, sand and grain. Collectively, these vessels can transport more than 100mt of cargo per year.

South Africa Regional Review

El Niño drought provides unexpected relief in otherwise declining market

Cape Orchid, *the first merchant ship flagged under RSA since 1985.*

Iain McIntosh

Whilst the global trend for bulk cargo entered a low growth phase, South African Bulk export tonnage showed a significant growth against this trend with an 8% increase in 2015 rising by nearly 13mt (million tonnes). The irony is that this growth came from two sectors [coal and iron ore] both of which are showing significant global decline over the last year. Whilst we have seen an increase in volumes to new markets the strength of the RSA bulk market volume does continue to rely heavily on the China market although the RSA coal export market does highlight how this does not have to be the case.

Saldanha port volumes grew significantly in 2015 but this was not the result of iron ore which showed some decline. The additional bulk volume was mainly a result of increasing manganese ore volume using the rail line from the Northern Cape.

This is an interesting development and could have a major impact on how Transnet develops its Eastern Cape strategy. Richards Bay volume also grew substantially with a new record lift through the Richards Bay Coal Terminal however a further 18mt of other bulks moved through this port with a growth in chrome ore and iron ore being significant.

It is anticipated that volume growth will be negative in 2016 as a result of the downward swing in iron ore exports and whilst there is only export data for the first two months of 2016

Transnet Port Terminals — forward focused and solution oriented

Transnet Port Terminals (TPT) is a division of Transnet SOC Limited; South Africa's state-owned freight transport company which owns and operates 16 terminal operations situated across seven South African Ports. Operations are divided into major market sectors, namely containers, bulk, breakbulk and automotive and are organized into three geographical regions, namely the Eastern Cape, Western Cape and Kwa-Zulu Natal.

With the global economy being in decline, this is proving to be a challenging time for logistics service providers, particularly for those that hold the responsibility of the well-being of an entire nation that depends on their success. However, trying times are often the springboard a company needs to find new ideas and solutions that might not otherwise have been explored. TPT's focus is to look forward and decide what it is going to do differently that will positively impact its customers and stimulate economic growth.

This will include:

- packaging its service offerings to exceed customers' expectations, such as incorporating value added services and offering a "one stop shop";
- adoption of the Transnet Value Chain Coordination (TVCC) initiative which co-ordinates the activities of operating divisions within Transnet and other key role players to maximize delivery of service to customers;
- realizing Ngqura Container Terminals' full potential as a transshipment hub through closer engagement with shipping companies;
- ensuring that its customers maintain their global schedules through the improvement in TPT's productivity levels and adoption of advanced planning techniques that will set South Africa apart from the rest; and
- Gcos3, TPT internally developed cargo handling system originally used for the bulk and dry bulk sector has been reconfigured and sold to Benin to operate their container terminal as part of TPT's strategy to tap into Africa.

Testament to TPT's commitment to explore new avenues and solutions to the current economic challenges transpired recently when a highly skilled Transnet Port Terminals' team took occupation at the Port of Cotonou in Benin to deliver on the Benisa Maritime Project. Transnet Port Terminals (TPT) is indeed extending its footprint beyond the borders of South Africa by having sent this project team with wide-ranging credentials and 46 years of accumulated experience in port operations, planning, safety, continuous improvement consulting and Lean Six Sigma methodology to kick-start the stabilization phase of the project.

Transnet Port Terminals' combined maritime experience and in-house knowledge of bulk handling technology and equipment enables it to support customers across all commodity sectors with the most efficient infrastructure and operation, while maximizing performance through TPT's tailored service packages.

TPT handles a variety of commodities that facilitate the growth of the country's Economy and operate terminals and facilities in Richards Bay, Saldanha, East London and Durban's Maydon Wharf.

TPT's Port Elizabeth terminal handles South Africa's bulk minerals with major bulk cargoes including iron ore, manganese, magnetite, coal and chrome ore. It is also the largest manganese export facility in Africa that handles bulk and skiptainer vessels. Richards Bay handles over 15 different bulk commodities which collectively amount to 20mtpa (million tonnes per annum). Maydon Wharf MPT has the capacity and facilities to handle Bulk commodities via the Multi-purpose Terminal with a tailor-made service offering. Saldanha facilitates bulk capacity of 60mtpa (million tonnes per annum) and breakbulk capacity of 3mtpa.

TPT strives to tailor-make and customize its service offerings to suit all its customers' requirements.

TPT's services include:

- sampling
- blending
- wet screening
- grade facilitation/management
- stockpile management
- bin management
- common user loading facilities for junior miners
- weighbridge facilities for road
- warehousing for weather sensitive commodities

TPT remains committed to the Transnet Market Demand strategy; whose objectives include creating and providing capacity ahead of demand, promoting skills development, providing world class infrastructure and technology and improving global and regional maritime connectivity.

Investing in new infrastructure and assets will improve and increase TPT's capacity and capabilities to handle freight volume. This means we will remain a sustainable business that can continue to serve the transport needs of the bulk economy.

the overall volume decline is 14% so far, so we could expect to see a decline of 6–7% by year end as volume picks up after the traditionally slow 1st quarter.

In terms of opportunities South Africa is largely an export demand location for bulk cargo and notably the major bulks of coal and iron ore which require a large amount of Capesize and Panamax supply. These vessels of course move to RSA in ballast as is the case with other major bulk supply countries. It is in the Handysize and Handymax sector where opportunities for balanced loads in and out could develop and this would be attractive for owners of tonnage in this sector.

Bulk imports — South African grain swing

Whilst traditionally South Africa has been an importer of wheat, rice, soya flour and fertilizer in large quantities, generally speaking the country can be considered self-sufficient in the majority of foodstuffs. This has changed radically in the last two years due to drought which following poor summer rainfall caused by a deepening *El Niño* in 2015/2016 has severely limited crop production. The impact was greater in the last year as it affected a wider range of crops but the deepest effect was felt in the maize crop which dropped to just over 7mt a 27% reduction on 2014/2015 crop and this followed a 30% drop from a crop of

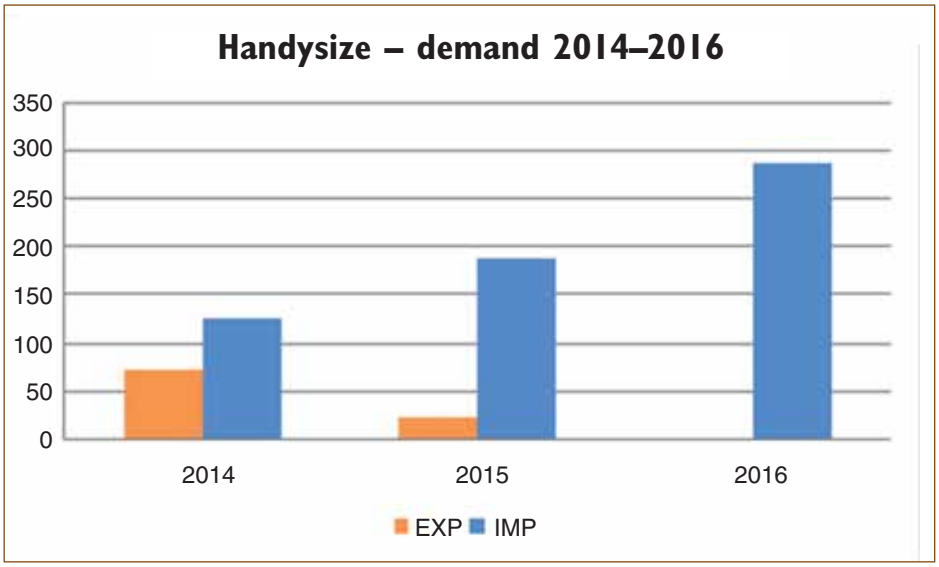
SOUTH AFRICAN DRY BULK EXPORTS 2009–2015 (MT)

Port/year	2010	2011	2012	2013	2014	2015
Richards Bay	75.0	76.0	80.0	85.1	85.5	93.0
Durban	5.6	7.0	6.8	8.1	7.6	5.3
Port Elizabeth	4.1	4.6	5.3	5.7	6.1	5.9
Saldanha	43.6	47.4	53.3	55.7	53.4	63.4
Other	0.6	0.6	0.5	0.2	0.4	0.4
Total bulk	132.7	141.5	148.3	152.5	155.6	168.0
Growth (%)	9.0	6.6	4.8	2.8	2.0	8.0

Source: TNPA monthly data

over 14mt the previous season. This has therefore turned the maize trade from one of 2mt of exports into 3.8mt of imports in two years.

The drought and general pressure on the grain sector has also forced increasing volumes of import demand from the wheat sector in spite of this being a winter crop as this harvest starts to decline and supplemented by increasing imports now expected to reach 2mt in 2016. The latest crop estimates also point to a weaker soya bean crop which will increase imports of this product to supplement bean crushing demand. With a weak local currency this is a cost that South Africa can ill afford.



We have shown the flow comparison in the below table for each key agri product over the last three years and this highlights the swing from export to import demand. With *El Niño* breaking in 2016 this may mean some recovery in 2017 but it will take time as the farming sector rebuilds so it is likely the trend could continue for another one to two years.

What does this mean for the wider bulk trade in the RSA Handymax sector? The key factor to remember is that most of South Africa's bulk exports are handled by Capesize and Panamax tonnage to service coal and iron ore exports. This market has to be served by inbound ballast vessels. There is however a large demand for Handy sector tonnage in the minor bulk sector which has an export demands of approximately 25mt of cargo. The swing to a larger number of Handysize vessels for imports will mean a significantly larger availability of this class of vessel for the minor bulk trade. The graph above highlights this with the potential for 280 vessels available for export in 2016

Signs of this trend are already appearing and with increased availability without ballast this reduced ballast bonus cost and a massive reduction in cost for export of bulk commodities like manganese and chrome ore.

The place where the impact of this is most felt is ironically in the container trade which is seeing enormous declines in export volume as this tonnage increasingly swings back to Handysize vessels. At present most of the maize is being sourced from Brazil and Argentina whilst wheat arrives from North/South Europe depending on pricing parity. The overall situation is that this market is providing welcome relief for owners of Handysize and Handymax tonnage.

Whilst the industrial front has in the past been difficult 2015 looked quite settled in spite of the turmoil in the mining sector as business cuts back and markets like China which are key for SA bulk exports move into a lower growth cycle. There have however been significant cuts in mining production in the iron ore and manganese ore mines in the Northern Cape as well as large labour reductions. The power supply through ESKOM stabilized mid-way through the year and that allowed some growth in the mining sector after a weak 1H 2016.

Whilst overall bulk exports are likely to show decline in 2016 this could mean a slow-down in investment upgrades by Transnet state-owned freight transport and Logistics Company so far this is not presenting any major challenges as yet. The swing in import grain however is providing some concern for Transnet as they

SOUTH AFRICAN AGRICULTURAL TRADE

Port/year	Exp 14	Imp14	Exp15	Imp15	Exp16	Imp16
Maize	2.2	0.1	0.7	1.7	0.0	3.8
Wheat	0.0	1.6	0.0	1.8	0.0	2.0
Fertilizer	0.0	1.2	0.0	1.2	0.0	1.4
Rice	0.0	0.4	0.0	0.4	0.0	0.6
Other products	0.0	0.5	0.0	0.5	0.0	0.8
Total	2.2	3.8	0.7	5.6	0.0	8.6
Handysize 30K equiv	73	127	23	187	0	287

Growth 47.4%

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

Total SA coal (mtpa)	2009	2010	2011	2012	2013	2014	2015
Richards Bay Coal Terminal	61.1	63.8	65.5	68.3	70.2	71.2	75.4
Durban	1.2	1.0	1.2	1.4	1.1	0.5	0.3
Maputo	1.4	1.6	2.2	3.5	2.5	3.5	2.1
Total SA coal	**63.7**	**66.4**	**68.9**	**73.2**	**73.8**	**75.2**	**77.8**
Growth (%)	–1.2	4.2	3.8	6.2	0.8	1.9	3.5

look at ways to best handle the increasing volume of maize through Durban which has limited capacity. Whilst more grain could divert to Cape Town and Port Elizabeth/East London, this will simply add more to cost as product demand is in the Durban–Johannesburg corridor.

So whilst there is the appearance of some stability there are numerous concerns in the labour market as mines cut back and that could set the scene for a more volatile labour market in 2016-2017.

Review of South Africa's Major Bulk Cargo

Coal trade

Exports from South Africa grew faster during 2015 at 3.5% to 77.8mt which was actually quite an impressive performance set against the global reduction in steam coal trade of over 7%. The lack of exposure in supply to China may have helped the figures as South Africa did not supply China with any steam coal in 2015 after previously supplying 8–10mt per annum.

Richards Bay Coal Terminal again led the way with another a new record of exports reaching 75.4mt up 5.8% on 2014. Given the backdrop of global coal trade it will be a figure that is difficult to break however overall forecasts for South Africa through all gateways suggest this year's exports could reach 78.6mt which is moderate growth in what is a soft global market from all importing countries.

Figures through the three export gateways of RBCT, Durban and Matola terminal Maputo are detailed above.

Looking at main markets for RSA steam coal the summary on our market split graph show clearly how the market has changed and adapted over recent years and notably maintaining growth in spite of being exposed by the exit of China demand from late 2013 onwards. What is interesting is that India has maintained support and also still increased imports in spite of Indian demand for imports also declining due to Coal India increasing domestic production with large stockpiles building. The Europe volume has also held up but changed in diversity with demand shifting away from traditional North Europe destinations like Netherlands, Germany and UK to Turkey, Morocco and Italy making it more of a Med market for vessels.

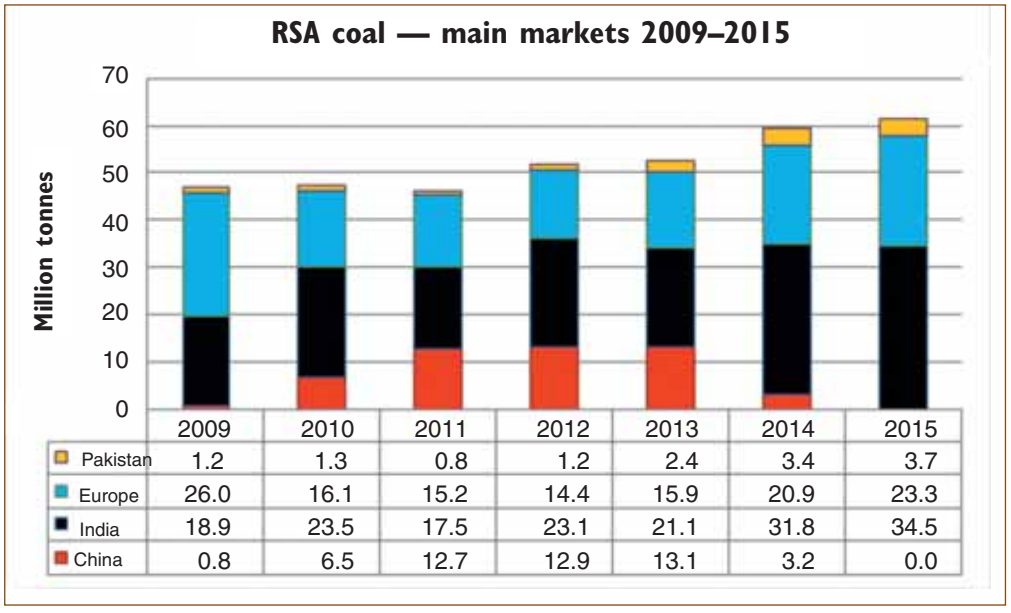
What does support RSA coal is its high calorific value making it very popular in markets that require this for cement production popular both in India and Pakistan. This set against the fact that South Africa still only has a global market share of 8% for steam coal suggests there is room still for further growth at the expense of other suppliers. RBCT has room to move greater volume and Maputo and Durban can both also handle more. Transnet Freight rail can still ramp up further rail capacity to meet this.

The exiting 'new' bar on the graph is Pakistan which rose to nearly 4mt supplied by RSA in 2015. In fact this was the bulk of Pakistan's total steam coal imports in 2015 and all were used in the production of cement. There is opportunity to grow volume further as Pakistan is looking to install over 7000mW of coal fired power so coal imports will increase. This is something to watch over the coming years but it all helps diversify the RSA coal mix.

Iron ore trade

The trade volume of iron ore started to show rapid decline in 2015 and finished the year just marginally up by 1.6% and this was directly related to a global slow-down in steel production and notably in China. South African volumes declined slightly by 2.7% but only 1.8mt. There were no real major changes in market distribution with China volume actually increasing but India notably declining on steel production.

The real pressure and decline will come in 2016 onwards as it is clear there is over capacity globally which has forced the iron ore price below US$45 per tonne and made many mines uneconomic. In this respect the Anglo American-owned Kumba iron ore mine in Sishen is retrenching 4000 workers as it downgrades and restructures the mine. As a result this will see South African exports of iron ore decline to 56mt in 2016 which is a significant drop in volume. Also linked the Anglo and South 32 JV in Kalahari is shedding a further 690 jobs due to excess capacity and this has resulted in a



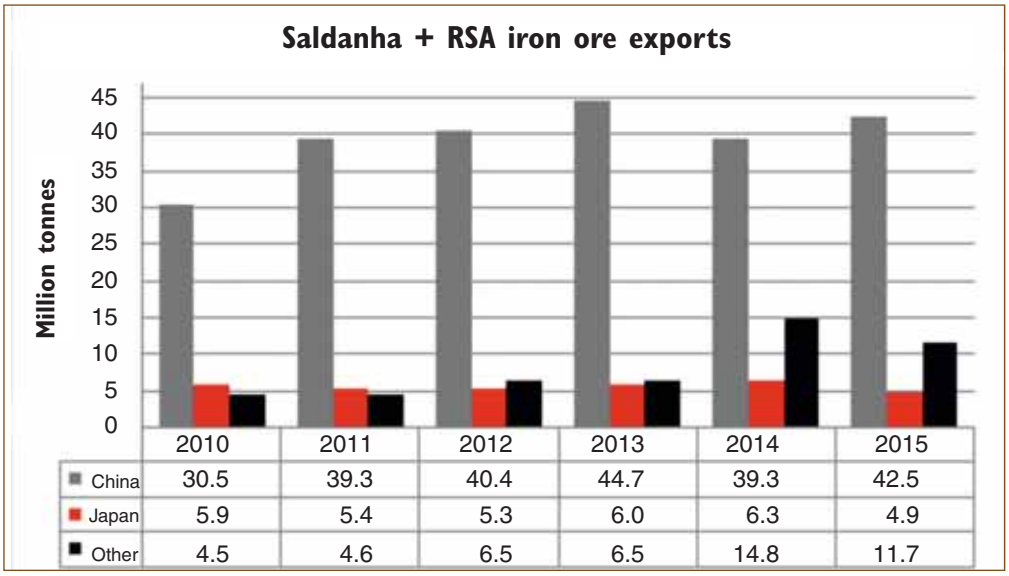
RSA IRON ORE EXPORTS (MT)

Year	2010	2011	2012	2013	2014	2015
Europe	7.6	6.7	6.3	7.8	6.7	6.2
China	30.5	39.3	40.4	44.7	39.3	42.5
Japan	5.9	5.4	5.3	6.0	6.3	4.9
Other	4.5	4.6	6.5	6.5	14.8	11.7
Total	**48.5**	**56.0**	**58.5**	**65.0**	**67.1**	**65.3**
Growth (%)	8.8	15.5	4.5	11.1	3.2	–2.7
Global trade	**991**	**1,052**	**1,109**	**1,189**	**1,338**	**1,360**
Growth (%)	10.4	6.2	5.4	7.2	12.5	1.6

Source: UNCTAD/Trademap.org

reduction the production of manganese alloy due to reduced supply.

This presents some interesting numbers when looking at iron and manganese ore development in respect of Transnet ports/rail. Due to the reduction of iron ore exports [or flat growth] Transnet allowed manganese ore to rail through to Saldanha where this was previously excluded due to the iron ore line being exclusive. With iron ore exports declining so heavily in 2016 we could start to see increased volumes of manganese ore through the Saldanha gateway. Whilst it is not being commented on the Port Elizabeth terminal which handles 6mt per annum could now easily be accommodated on the Sishen–Saldanha rail line.



Whilst it comes against some negative numbers one positive to report was South Africa registering two Capesize bulk vessels for Vuka Marine. The *Cape Orchid* and *Cape Enterprise* are the first two merchant vessels to be registered in South Africa since 1985. The photograph on p124 aptly shows the 170,000dwt *Cape Orchid* loading iron ore in Saldanha late in 2015.

Manganese ore trade

Whilst there was marginal decline in manganese ore trade this was expected given the downturn in steel production. The linkage to iron ore exposure is large and with South Africa owning 80% of global resource and nearly 50% of trade the exposure is high and in some ways South Africa could be responsible for over supply causing price collapse.

The challenges continue to come from the logistic area and it can be seen by port distribution that whilst Port Elizabeth remains the main gateway there has been a swing away from Durban to Saldanha as mentioned under iron ore. Durban is a high-cost operation and use of the rail via Saldanha is the cheapest option ex mine so we could expect to see a decline first in Durban before Port Elizabeth changes. The manganese terminal in Port Elizabeth could run until 2019 and there is still time to take a longer-term view on the future of rail and port development for this product over the next few years.

The decline in volume can be seen in the distribution graph and China continues to remain a growth area and key market. India showed the main decline in 2015 after promising 2014 growth but this is likely to do with steel production. The significant swing in this market was the move away from containerized shipments. This represented over 1.3mt of containerized cargo in 2014 but fell rapidly in 2015 as prices collapsed and volumes and logistics changed. The availability of much cheaper Handymax would be a factor as well.

Manganese ore trade therefore represents quite a challenge over the next one to two years. Trade growth was at such a strong pace in the last two to three years that this placed enormous strain on the various gateways that could be used for exports.

MANGANESE ORE (MILLION TONNES)

Year	2010	2011	2012	2013	2014	2015
Port Elizabeth	4.1	4.6	5.3	5.7	6.2	5.9
Saldanha	0.0	0.0	0.0	0.0	0.5	2.4
Durban	1.5	1.8	1.9	2.8	3.1	2.3
Total exports	7.3	6.8	7.9	9.9	12.1	11.1
World export	20.2	21.0	21.1	24.6	25.8	25.3
RSA share (%)	36.1	32.2	37.5	40.2	46.9	43.9

With an easing in volume of export this will allow the industry time to pause and reflect on options in the coming years without the high costs that were incurred by using notably Durban and also containers.

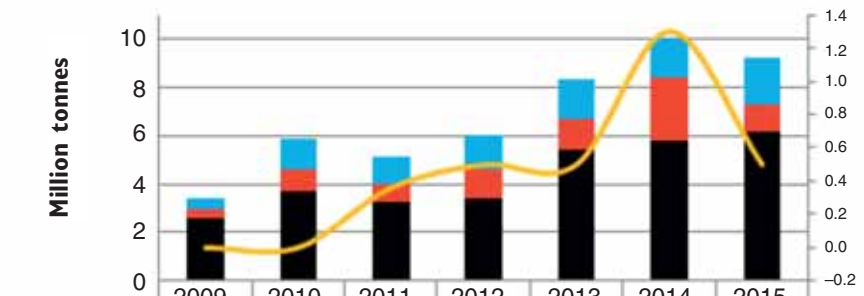
Chrome ore trade

The chrome ore exports trade from South Africa completely turned around in 2015 and grew against all odds by 28.4% to a record 9mt. The platinum sector being strike free would have helped production in this regard and even with the mess in global resource markets this is one which held up and South Africa re-established its position in the China market. Also Europe showed some growth in 2015 breaking 1mt for the first time and although off a low base India continues to import increasing volumes of this product.

What was interesting and covered under grain trade was in spite of a growth of 2mt of chrome ore the container trade in exports declined rapidly to Asia in 2015. This highlights that in spite of containers in particular handling a lot of the Durban export all growth would have accrued to bulk vessels. Greater availability after discharge of grain will assist this further.

South Africa had a less turbulent year in bulk terms during 2015 whilst this could not be said for the wider RSA economy. The outlook for 2016 is less positive as volumes will decline but at the same time the structure of the market import and export will present numerous opportunities and notably in the Handy sector. DCi

Manganese ore ex-South Africa 2008–2014



	2009	2010	2011	2012	2013	2014	2015
Europe	0.4	1.3	1.1	1.4	1.6	1.6	1.9
India	0.4	0.9	0.7	1.2	1.3	2.6	1.1
China	2.6	3.7	3.3	3.4	5.4	5.8	6.2
Container	0.0	0.0	0.4	0.5	0.5	1.3	0.5

RBCT stacking area increasingly geared to India and Pakistan.

CHROME ORE EXPORTS (MILLION TONNES)

Year	2010	2011	2012	2013	2014	2015
China	3.59	4.47	4.23	6.37	4.62	6.10
Europe	0.41	0.51	0.71	0.51	0.71	1.10
Other Asia	0.32	0.35	0.49	0.56	0.58	0.80
Others	0.38	0.37	0.41	0.96	1.10	1.00
Total	**4.70**	**5.70**	**5.84**	**8.40**	**7.01**	**9.00**
Growth (%)	–9.1	21.3	2.5	43.8	–16.5	28.4

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DCi

COAL TERMINAL *directory*

2016

A comprehensive listing of the world's coal terminals, including information on throughput, facilities, storage capacity, vessel size limitation and much more.

European Bulk Services Rotterdam

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

Elbeweg 117 • Europoort Rotterdam • Port no. 5820 • P.O. Box 1204 • 3180 AE • Rozenburg • The Netherlands

T +31(0)181-258121 • F +31(0)181-258154 • E sales@ebsbulk.nl • W www.ebsbulk.nl

The port of Richard's Bay commemorated its 40th anniversary on 1 April. Established in 1976 for the purpose of transporting locally mined coal to international shores, the port has expanded to include a variety of exports. Today it routinely handles a diverse mix of commodities: magnetite, chrome ore, alumina, coking coal and ferro alloys in addition to coal. During the 2015/16 financial year, the port handled 99.23 million tonnes of bulk and breakbulk cargo.

Australia

Brisbane
North Queensland Bulk Ports Corporation Limited

GPO Box 409
Brisbane
Queensland
4001
Australia
Contact: Mr Steve Lewis
Job Title: 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 the trading ports of Weipa, Abbot Point, Mackay, Hay Point & the non trading port of Maryborough
Ownership: Queensland Government Owned Corporation
Name of Port Authority: North Queensland Bulk Ports Corporation Limited
Throughput Capacity: Please see the Port Handbooks located on our website for details of each of these ports.
Total Storage: Please see the Port Handbooks located on our website for details of each of these ports.
Vessel Size Limitation: Please see the Port Handbooks located on our website for details of each of these ports.
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
Job Title: 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
Job Title: 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: Port of Newcastle
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: Port Waratah 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
Job Title: 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 Annabel Hawkins
Job Title: 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

Kooragang Island
Newcastle Coal Infrastructure Group

Locked Bag 6003
Hunter Region Mail Centre
Kooragang Island
NSW
2310
Australia
Contact: Mr Aaron Johansen
Job Title: CEO
T: + 61 2 4920 3900
E: enquiries@ncig.com.au
W: www.ncig.com.au
Export: Yes
Location: Kooragang Island, Australia
Name of Port Authority: Port Authority of NSW
Throughput Capacity: 66Mtpa
Additional Information: 66Mtpa Coal Export Terminal

Mackay
BMA Hay Point Services

MS 283
Mackay
Queensland
4740
Australia
Contact: Mr Peter Hanrahan
Job Title: 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.

Mackay
Dalrymple Bay Coal Terminal (DBCT)

Martin Armstrong Drive
Hay Point
Mackay
QLD
4740
Australia
Contact: Ms Sharon Johnston
Job Title: Senior Specialist Public Relations
T: + 61 7 4943 5645
F: + 61 7 4943 8466
E: sharon.johnston@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
Job Title: 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; 200,000dwt
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
Job Title: 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
Job Title: 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 terminals and 3 Panamax bulk terminals.
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
Job Title: 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
Job Title: 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
Job Title: Shipping Manager
T: + 32 59 331 133
F: + 32 59 331 433
E: steven.verhelst@verhelst.be
W: www.verhelstlogistics.be

Seraing
CTB Logistics SA
Rue du Pont du Val
Seraing
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Contact: Mrs Muriel Baugnee
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F: + 32 4337 1008
E: muriel.baugnee@euroports.com
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
Job Title: 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: Compania 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
Job Title: 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.

Bulgaria

Bourgas
Bulk Terminal 2A
Port of Burgas JSC
1 Al. Battenberg Str.
Bourgas
8000
Bulgaria
Contact: Mr Dimitar Terziev
Job Title: 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 Denis D. Caron
Job Title: 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
Job Title: 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 Glenn Dudar
Job Title: Vice President and General Manager
T: + 1 604 946 3494
F: + 1 604 946 1388
E: gdudar@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
Job Title: 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
Job Title: 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
Job Title: President
T: + 1 514 731 6951 x 123
F: + 1 514 737 4146
E: h.nowodworski@strudes.ca
W: www.strudes.ca

Prince Rupert
Ridley Terminals Inc
2110 Ridley Island
PO Bag 8000
Prince Rupert
BC
V8J 4H3
Canada
Contact: Mr Dennis Blake
Job Title: 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: Prince Rupert Port Authority
Throughput Capacity: 18 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
Job Title: 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
Porlier Express Inc
315 Ave Otis
Sept-Iles
Quebec
G4R 1K9
Canada
Contact: Mr Michael Lachance
Job Title: Vice President
T: + 1 418 962 3073
F: + 1 418 962 3067
E: mlachance@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.

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

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
Job Title: 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
Job Title: 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
Job Title: 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.
Job Title: 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: Complejo Portuario Mejillones S.A.
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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Compas SA
Via 40 Las Flores
Former Cementos Argos SA
Barranquilla
Atlantico
575
Colombia
Contact: Mr Uriel Duarte
Job Title: 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
Job Title: 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
Job Title: 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
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
Job Title: 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
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
Port of Santa Marta
Carrera 1 No. 10 A – 12
Santa Marta
Magdalena
AA655
Colombia
Contact: Mr Rodolfo Schmulson
Job Title: Commercial Director
T: + 57 5 4217970 ext 103
F: + 57 5 4212161
E: comercial@spsm.com.co
W: www.spsm.com.co

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

SOCEIDAD PORTUARIA SANTA MARTA
CTS de Colombia
Crra. La. #10A-12
Muelle 6
Soceidad Portuaria Santa Marta
Colombia
Contact: Mr Scott Harcourt
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: Port Manager
T: + 53 24 88248
F: + 53 24 88127

DENMARK

AABENRAA
Ensted Bulk Terminal A/S
Flensborgvej 185
Aabenraa
Sydjylland
DK-6200
Denmark
Contact: Mr Chresten Nissen
Job Title: Harbour Master
T: + 45 9189 0045
E: chrni@ebt-ensted.dk
W: www.ebt-ensted.dk
Import: Yes
Export: Yes
Location: Denmark, East coast of Jutland
Ownership: Vattenfall Energy Trading
Throughput Capacity: 2,000tph
Total Storage: 155,000sqm
Vessel Size Limitation: LOA 350m, Draught 18m, DWT 180,000

AARHUS
Cargo Service A/S
Oceanvej 13
Aarhus
DK 8000
Denmark
Contact: Mr Lars Krabbe
Job Title: 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
Job Title: 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
Job Title: President of the Board of Directors
T: + 1 809 539 6000
F: + 1 809 539 7200
E: info@mardom.com OR trafico@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
AS Coal Terminal
4a, Joe Street
Tallinn
10151
Estonia
Contact: Ms Nadia Manzhos
Job Title: 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
Muuga (Novotallinskiy)
Maardu tee 57
Tallinn Eesti Vabarifk
Tallinn
EE 0030
Estonia
Contact: Mr Anatoliy Kanaev
Job Title: Port Director
T: + 372 6 319 205
F: + 372 2 234 313
E: tk@tk.ee

TALLINN
PETROMAKS SPEDIITORI AS
Nolva 9A
Tallinn
10416
Estonia
Contact: Mr Mitrofan Pototski
Job Title: 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
Contact: Mr Jan Lipinski
Job Title: Board Member
T: + 372 600 3872
F: + 372 600 3873
E: jl@stivis.ee
W: www.stivis.ee
Location: Eastern shore of Baltic Sea
Ownership: Shareholding company
Name of Port Authority: Port of Tallinn
Throughput Capacity: 2,000,000t
Total Storage: 540,000 sqm
Vessel Size Limitation: Berth 5: 6.8m draught, 100m length
Berth 6: 9.5m draught, 160m length
Berth 6A: 10.5m draught
Additional Information: Railways integrated into International network.

Finland

Pori
Port of Pori Ltd
Merisatamantie 4
Pori
FI-28880
Finland
Contact: Mr Pekka Sundberg
Job Title: Development Manager
T: + 358 44 701 2606
F: + 358 2 634 9498
E: pekka.sundberg@pori.fi
W: www.portofpori.fi/en

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
Job Title: 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
Coal Terminal
Port of Le Havre Authority
Terre Plein de la Barre
PO Box 1413
Le Havre
Cedex
76067
France
Contact: Mr Eric Esneu
Job Title: 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

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)
Total Storage: 1 million tonnes
Vessel Size Limitation: 180,000 dwt, Max length 300m
Additional Information: Screening and crushing facilities

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
Job Title: 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
Montoir Coal Terminal
Port Atlantique Nantes Saint-Nazaire
18 quai Ernest Renaud
BP 18609
Nantes
44186
France
Contact: Mr Pascal Freneau
Job Title: 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

Nantes
Port Atlantique-Montoir Agri-Bulk Terminal
18 quai Ernest Renaud
BP 18609
Nantes
Cedex 4
44186
France
Contact: Mr Pascal Freneau
Job Title: 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

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
HAROPA PORTS
34 Boulevard de Boisguilbert
B.P. 4075
Cedex 3
Rouen
76022
France
Contact: Ms Annie Vandome
Job Title: International Press Relations
T: + 33 2327 471 37
F: + 33 2327 473 90
E: annie.vandome@haropaports.com
W: www.haropa-solutions.com
Import: Yes
Name of Port Authority: HAROPA
Throughput Capacity: Throughput capacity:
HAROPA - Port of Rouen: 20 000 t/day
HAROPA Port of Le Havre: 25 000 t/day
HAROPA Ports of Paris: 2 000 t/day
Coal traffic:
HAROPA Port of Rouen: 490 000 t
HAROPA Port of Le Havre: 419 000 t
HAROPA Ports of Paris: 54 000 t
Total Storage: HAROPA - Port of Rouen: 330 000 t
HAROPA - Port of Le Havre: 490 000 t
HAROPA Ports of Paris: multiple operators and and an increasing storage capacity especially in port of Gennevilliers.
Vessel Size Limitation: HAROPA - Port of Rouen: CAPESIZE and PANAMAX (part cargo). DWT: 180 / LOA: 298 / Draught: 11 meters
HAROPA - Port of Le Havre: CAPESIZE. DTW: 180 / Draught: 17 meters

Rouen
Sogema
Boulevard Maritime - BP 3
Grand-Couronne Terminal
Rouen 76530
France
Contact: Mr Robert Goudon
Job Title: 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
Port of Sète
1 quai Philippe Regy
BP 10853
Sète
Cedex
34201
France
Contact: Mr Arnaud Rieutort
Job Title: Directeur Commercial
T: + 33 4 67 46 34 04
F: + 33 4 67 46 34 07
E: rieutort.arnaud@portsuddefrance-sete.fr
W: www.sete.port.fr

Sète
Sea-invest Sète
Z.I. portuaire Darse 2
B.P. 68
Sète
Cedex 34201
France
Contact: Mr Loic Texier
T: + 33 467 51 63 11
F: + 33 467 48 30 85
E: l.texier@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 draught 13.50m, Max LOA 225m

Georgia

Poti
Poti Sea Port Corporation
52, D. Agmashenebeli Street
Poti
4401
Georgia
Contact: Mr Zviad Chkhartishvili
Job Title: Marketing and Sales Manager
T: + 995 493277 500
E: zviad.chkhartishvili@apmterminals.com
W: http://apmterminalspoti.com/

Germany

Bremen
Weserport GmbH
Huettenstrasse 20
Bremen
28237
Germany
Contact: Mr Heiner Delicat
Job Title: Managing Director
T: + 49 421 64301 84
F: + 49 421 64301 64
E: HDelicat@weserport.de
W: www.weserport.de

Bremerhaven
bremenports GmbH & Co. KG
Am Strom 2
Bremerhaven
27570
Germany
Contact: Mr Ronald Schwarze
Job Title: 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
Job Title: Area Manager
T: + 49 4921 895 150
F: + 49 4921 895 5150
E: torsten.meinke@evag.com
W: www.evag.com

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

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

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: cargo@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: - Panamax and/or partly laden cape size vessel
- arrival draught up to 13,10 m freshwater
- special permission for more than 270 m loa needed
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
Job Title: 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
Job Title: 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
Job Title: 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: BTW (Bulk Terminal Wilhelmshaven former 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: up to 10 Million tpa coal
Total Storage: 900,000 tons coal (160.000 sqm /2 storage beds) - extension up to 3,000,000 tons
Vessel Size Limitation: Fully laden cape size up to 250.000 t;
loa up to 330 m; beam up to 60 m,
draught up to 18.50m sw
Additional Information: Discharging rate up to 100.000 tpd;
Loading into rail wagons up to 4.000 tph incl. weighing and wagon workload > 99%

Ghana

Takoradi
Takoradi Port Authority
Ghana Ports Authority
PO Box 708
Takoradi
Ghana
Contact: Mr J E Quanash
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: Chairman
T: + 91 44 25251666 / 1
F: + 91 44 25251665
E: svm@epl.gov.in
W: www.ennoreport.gov.in

Dist. Nellore
Krishnapatnam Port Company Limited
P.O. Bag No. 1
Muthukur
Dist. Nellore
Andhra Pradesh
524 344
India
Contact: Mr Johnson Martis
Job Title: Manager Brand Communications
T: + 91 22 2551 8865
E: johnson@krishnapatnamport.com
W: www.krishnapatnamport.com

Haldia
TM International Logistics Ltd.
Finger Jetty Road
Chiranjibpur
Haldia
East Midnapore(WB)
721604
India
Contact: Mr K.L Bhowmick
Job Title: 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
Job Title: 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 C Parida
Job Title: Chairman
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F: + 91 824 240 8390
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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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 Terminal
PT Bayan Resources
Office 8 Building 29th Floor
Sudirman Central Business District
(SCBD) Lot 28
Jl. Jendral Sudirman Kav. 52-53
Jakarta
12190
Indonesia
Contact: Mr David Low Yi Ngo
Job Title: Director Sales & Marketing
T: + 62 21 29356888
F: + 62 21 29356999
E: enquiry@bayan.com.sg
W: http://www.bayan.com.sg/

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
P T Indominco Mandiri
Ventura Building
8th Floor
J1 RA Kartini No 26 Cilandak
Jakarta
12430
Indonesia
Contact: Mr Suriya
Job Title: President Director
T: + 62 021 750 8376
F: + 62 021 750 8380
E: dharmasubur@cbn.net.id

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
Job Title: 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 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
Job Title: Commercial and Marketing
T: + 62 21 765 2544
F: + 62 21 765 2627
E: jdrac@mbct.co.id
W: http://www.mbct.co.id

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
Pulau Laut
World Trade Centre 7 Floor
JL Send
Surdiman Kav 31
Jakarta
12920
Indonesia
Contact: Mr B T Kuan
Job Title: General Manager
T: + 62 21 522 9250
F: + 52 21 522 4341

Kotabaru
PT Indonesia Bulk Terminal
Pulau Laut Coal Terminal
PO Box. 118 Kalsel
Kotabaru
Kalimantan Selatan
72111
Indonesia
Contact: Mr Wan Yazid
Job Title: Terminal Manager
T: + 62 5183 8800
F: + 62 5183 8822
E: marketing@ibt.co.id
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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
E: info@moneypoint.ie

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
Job Title: Managing Director
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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
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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
Job Title: 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
F: + 39 010 248 1002
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

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

Savona
Terminal Alti Fondali Savona S.r.l.
Terminal Darsena Alti Fondali 29
Savona
17100
Italy
Contact: Ing. Luca Odero
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E: luca.odero@tafs.it

Vado Ligure (SV)
Terminal Rinfuse Vado
Via Montegrappa 1
Vado Ligure (SV)
17047
Italy
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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. Ildemitsu 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
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F: + 81 846 24 1506

Hokkaido
Tomato Coal Center
622 Aza-Hamaatsuma
Atsuma-cho
Hokkaido
059-17
Japan
Contact: Mr Masatoshi Machida
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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
Job Title: 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
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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
Job Title: 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
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F: + 81 734 51 5150

Latvia

Riga
Riga 1. Saldetava JSC
Eksporta str. 15 k-1,
Riga
LV-1045
Latvia
Contact: Ms Kristine Vizule
Job Title: 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
AS Ventspils Tirdzniecibas Osta
22 Dzintaru Street
Ventspils
LV3602
Latvia
Contact: Ms Julianna Svedenko
Job Title: Secretary
T: +371 63668706
F: + 371 36 68870
E: Julianna.Svedenko@vto.lv
W: hhttp://www.vto.lv

Ventspils
JSC BALTIC COAL TERMINAL
39B Dzintaru Street
Ventspils
LV-3602
Latvia
Contact: Mr Ilya Sokolov
Job Title: 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.

Malaysia

Klang
Westports Malaysia Sdn Bhd
24 Lorong Peria
Taman Radzi
Klang
Selangor
41200
Malaysia
Contact: Mr Sohan Singh
Job Title: Conventional Marketing
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F: + 60 3 3169 4119
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W: www.westportsmalaysia.com/

Kuantan
Kuantan Port Consortium Sdn Bhd
Wisma
PO Box 199
Tanjung Gelang
Kuantan
Pahang
25720
Malaysia
Contact: Mr Haji Khasbullah Bin A. Kadir
Job Title: Chief Operating Officer
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F: + 60 9 583 9393
E: irpkho.kuantanport@ijm.com
W: www.ijm.com/infrastructure/port/KuantanPort/

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
Job Title: 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
Job Title: General Director
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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
Michoacán
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, Michoacán.
Throughput Capacity: 4.0 million metric annually tons on it´s phase I
Total Storage: 10,000 sqm of open yards
Vessel Size Limitation: Cape Size vessels up to 173,500 metric tons of dwt, LOA of 305 meters, and a draught 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 availability 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
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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
Job Title: General Director
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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
Job Title: 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.

Maputo
New Coal Terminal Beira SA
Avenue Armando Tivane
no-1620-R/C
Sommerscheild
Maputo
Maputo City
Mozambique
Contact: Mr Abhishek Mohta
Job Title: Manager
T: + 91 22 66601391
F: + 91 9930136884
E: Abhishek.Mohta@essar.com

Namibia

Walvis Bay
Grindrod Terminals - Walvis Bay
1st Floor Grindrod House
174 Third Street East
Walvis Bay
9000
Namibia
Contact: Mr Shakespeare Masiza
Job Title: 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
Job Title: 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
Job Title: Chief Executive
T: + 64 6 751 0200
F: + 64 6 751 0886
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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
Job Title: 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
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F: + 92 21 561 2230
E: yfarrukh@pakshaheen.com.pk
W: www.pakshaheen.com.pk

Karachi
PIBT Ltd
2nd Floor
Business Plaza
Mumtaz Hassan Road
Off I.I Chundrigar Road
Karachi
Sindh 74000
Pakistan
Contact: Mr Zeeshan Liaqat
Job Title: Manager Project Coordination & Research Analyst
T: + 92 21 3240 0450-53
F: + 92 21 3240 0281
E: info@pibt.com.pk
W: www.pibt.com.pk
Import: Yes
Location: Karachi, Pakistan
Ownership: Marine Group of Companies as a majority stakeholder with some other sponsors
Name of Port Authority: Port Qasim Authority, Karachi
Throughput Capacity: 16 million tons (12 million for coal & 4 million tons for Clinker/Cement) initially
Total Storage: 200,000sqm
Vessel Size Limitation: Simultaneously 2 Vessels of up to 75,000DWT
Additional Information: PIBT is the Country's first Coal, Clinker and Cement handling Terminal to comply with the international standards of environment and pollution control. The terminal will be operational by the end of 2016.

Peru

Callao
ENAPU SA
Port Terminal of Callao
Callao
1No260
Peru
Contact: Mr Luis Vargas Caballero Cooban
Job Title: President and Chief Executive
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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
Job Title: Ofice Manager
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F: + 51 1 465 6717
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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
Job Title: Manager
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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
Job Title: 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

Gda sk
GBT Sp. z o.o.
ul. Promowa 1
Gdańsk
80-702
Poland
Contact: Mr Rafał Różański
Job Title: Terminal Manager
T: + 48 58 77 09 100
F: + 48 58 77 09 119
E: rafal.rozanski@gbtgdansk.com

Gda sk
PPS Port Polnocny Co Ltd
23 Budownicych Portu Polnocnego Str
Gdańsk
80-601
Poland
Contact: Mr Andrzej Kasprzak
Job Title: 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
Job Title: 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: 90,000sqm open stockyards
32,000sqm covered storage
Vessel Size Limitation: - Dutch quay: LOA 300m, Depth 13.0m
- Swedish quay: LOA 300m, Depth 13.0m
- 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 11.0m
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
Job Title: 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 – OT Logistics Group
Name of Port Authority: Zarzad Morskich Portow Szczecin i 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 50% of import. Perfect railroad, barge connection with Germany, Czech and Slovakia.

Szczecin
Bulk Cargo - Port Szczecin Sp. z.o.o.
Gdanska 21
Szczecin
Zachodniopomorskie
70-661
Poland
Contact: Mr Bogdan Walczak
Job Title: 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.

Szczecin
Szczecin and Swinoujscie Seaports Authority
ul Bytomska 7
Szczecin
70-603
Poland
Contact: Mrs Katarzyna Malinowska
Job Title: 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 dedicated quays in both ports, offering modern storage facilities and handling equipment.

Portugal

Aveiro
Socarpor (Aveiro) SA
Av. Dr. Lourenço Peixinho, 15-5B
Apartado 593
Aveiro
3801-901
Portugal
Contact: Capt Ferreira Jorge
Job Title: 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
Job Title: Executive Director
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F: + 351 21 206 6629
E: atlanport@atlanport.pt
W: atlanport@atlanport.pt
www.ete.pt/Grupo/Empresas/Atlanport_E.htm

Lisbon
Portsines - Terminal Multipurpose de Sines
Rua Nova do Carvalho, 71, 4º Floor
Lisbon
1200-291
Portugal
Contact: Eng Francisco Ramalho do Nascimento
Job Title: Executive Director
T: + 351 21 112 8560
F: + 351 21 112 8568
E: sines@portsines.pt
W: http://www.ete.pt/
Import: Yes
Export: Yes
Location: Sines, Portugal
37º 56´ 18´´ N 8º 51´ 00´´ W
Ownership: ETE - Empresas de Tráfego e Estiva, S.A.
Name of Port Authority: Port of Sines
Throughput Capacity: 10 million tons
Total Storage: 700,000t 101,200sqm
Vessel Size Limitation: 190,000 DWT: Max draught 18m
Additional Information: 2 Shipunloaders, 2 stackers reclaimers, 1 shiploader, 1 railway loading station, 1 Wheel Crane capacity 40 tons, 1100 m of quay

Lisbon
Silopor - Empresa de Silos Portuários, S.A
(Beato Bulk Foodstuffs Terminal)
Terminal Portuário do Beato
Rua da Cintura do Porto de Lisboa
Lisbon
1900-263 Lisboa
Portugal
Contact: Mr Carlos Silva
Job Title: Commercial 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

Lisbon
TMPB - Poço Bispo Multipurpose Terminal
Largo do Corpo Santo, 21
Lisbon
1200-129
Portugal
Contact: Eng António Jordão
Job Title: Operations Manager
T: + 351 211 128 048 / + 351 916 892 906
F: + 351 211 128 052
E: antonio.jordao@ete.pt
W: www.ete.pt/
Import: Yes
Export: Yes
Location: Lisbon, Portugal
38º 44´ 12.8´´ N 9º 6´ 4.21´´ W
Ownership: ETE - Empresa de Tráfego e Estiva, S.A.
Name of Port Authority: Port of Lisbon
Throughput Capacity: 1.5 million tpa
Total Storage: 25,000t 20,050sqm
Vessel Size Limitation: Max draught 7.5m
Additional Information: 2x Crane LIEBHERR LHM (64, 40 tons), 3 Front loaders, 3 BOB CATS, 2 Conveyor belts, 3 Hoppers, 2 Road weighbridges 60 tons Midstream operations: floating cranes and barges (45,000 tons capacity)

Sines
Porto de Sines SA
Apartado 16
Sines
750-953
Portugal
Contact: Ms Anna-Rita Rosa
Job Title: 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
Job Title: 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
Job Title: 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

Nakhodka (Vrangel)
Vostochny Port (OJSC)
Vnutriportovaya st. 47
Nakhodka (Vrangel)
Russia
Contact: Mr Anatoliy Lazarev
Job Title: Managing Director
T: + 7 4236 665 271
F: + 7 4236 665 153
E: vp@vpnet.ru
W: http://www.vpnet.ru/eng/index_eng.htm
Export: Yes
Location: Far East of Russia (Southeast of the Nakhodka Bay (Japan Sea)).
Ownership: Private entity
Name of Port Authority: Seaport of Vostochny
Throughput Capacity: 17 million tonnes, increasing to 30 million tonnes
Total Storage: 120,048sqm, increasing to about 170,000sqm
Vessel Size Limitation: LOA: 280, Draught: 16m, DWT: 150,000
Additional Information: Vostochny Port is a high-tech seaport located in the Far East of Russia. It is the largest coal port in Russia which includes Specialized Coal Terminal and General Cargo Terminal. In 2012 Vostochny Port commenced the expansion of the Specialized Coal Terminal which will allow the Port to increase its annual throughput to 33-36 mio t by 2020.

Saint Petersburg
Ust-Luga Coal Terminal "Rosterminalugol", JSC
Moskovsky avenue, 89, office 400
Saint Petersburg
196 084
Russia
Contact: Mr Artur Sedov
Job Title: Operating Director
T: + 7 812 324 54 03
F: + 7 812 324 54 53
E: info@oao-rtu.ru
W: www.oao-rtu.ru
Export: Yes
Location: Eastern coast of the Baltic Sea, 130 km from Saint Petersburg
Ownership: Private entity
Name of Port Authority: Sea port of Ust-Luga Authority
Throughput Capacity: 15.5 million tonnes
Total Storage: 130,644sqm
Vessel Size Limitation: LOA - 260m, Draught - 14.3m, Beam - 40m, DWT - 100 000 tonnes
Additional Information: Rosterminalugol is a high-tech specialized coal terminal which handles over 15.0 million tonnes of coal per year. The advantage of the port is the immediate vicinity of European countries, importing high-quality coal from Kuzbass region and other coal basins.

Saint-Petersburg
Port of Ust-Luga
Novgorodskaya St 13/A
Saint-Petersburg
191144
Russia
Contact: Mr Dmitry Kolomiets
Job Title: General Manager
T: + 7 812 438 18 46
E: info@ust-luga.ru
W: www.ust-luga.ru/

Tuapse
Port of Tuapse Authority
8 Gorkogo Street
Tuapse
352800
Russia
Contact: Mr Oleg Antonov
Job Title: 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
Job Title: General Director
T: + 7 421 37 5 09 23
F: + 7 872 140 26 10
E: market@vcsp.ru
W: www.vcsp.ru

Vladivostok
Aqua-Resources Co.,Ltd
Khersonskaya st. 5
Vladivostok
Primorsky Region
690012
Russia

Contact: Mr Kirill Orekhov
Job Title: Foreign Relations Manager
T: + 7 4 232 499 771
E: orekhov@aquares.ru
W: http://www.terminal-astafiev.com/

Slovenia

Koper
Luka Koper d.d., Dry Bulk Cargo Terminal
Vojkovo Nabrežje 38
Koper
SI-6501
Slovenia
Contact: Mr Bojan Tomisic M. Sc.
Job Title: Terminal Manager
T: + 386 5 6656 631
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, 400,000 tonnes Iron ore
Vessel Size Limitation: The only limitation is arrival draught of 17.2m

South Africa

Durban
Grindrod Terminals
PO Box 1
Durban
KwaZulu Natal
4000
South Africa
Contact: Mr Sean Rowan
Job Title: CEO Grindrod Terminals
T: + 27 31 302 7700
F: + 27 31 302 7701
E: seanr@grindrod.co.za
W: www.grindrod.co.za

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
Import: Yes
Export: Yes
Location: Richards Bay on the Northern Coast of South Africa
Name of Port Authority: Transnet National Ports Authority
Throughput Capacity: 30 million tpa
Total Storage: Multi-Purpose Terminal - 304,000sqm
Dry Bulk Terminal 143,000sqm
Vessel Size Limitation: Draught: Multi-Purpose Terminal has 6 berths in total with a draught restriction of 13.5m
Dry Bulk Terminal has 8 berths in total and boasts a draught restriction of Bulk of 17.5m
LOA:
Multi-Purpose Terminal 6 Series Net LOA is 590m for all 3 berths
Multi-Purpose Terminal 7 Series Net LOA is 550m for all 3 berths
Dry Bulk Terminal differs from berth to berth with maximum 270m and minimum 200m
Additional Information: Transnet Port Terminals services include:
- Blending, on customer request.
- Grade facilitation/management
- Stock pile management (Receiving, stockpiling and monitoring, berth allocations for vessels and shipping)
- Export loading done via conveyor belt fastloading, skip loading and mobile crane.
- Import loading done via conveyor belt and mobile crane
- Container handling facility

Richards Bay
Richards Bay Coal Terminal
PO Box 56
Richards Bay
KwaZulu Natal
3900
South Africa
Contact: Mr Ronald Llale
Job Title: 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

Richard's Bay
Grindrod Terminals - Richard's Bay
PO Box 10744
Meerensee
Richard's Bay
KwaZulu Natal
3901
South Africa
Contact: Mr Christo Coetzer
Job Title: 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
Job Title: Communications Manager
T: + 27 22 703 4204
F: + 27 22 703 4828
E: christopherg@saportops.co.za

South Korea

Gwang Yang-City
Posco Terminal Co., Ltd
Gwang Yang CTS Yard, 861
Geumbo-dong
Gwang Yang-City
Jeonam
South Korea
Contact: Mr Woo Sun-Moon
Job Title: CEO
T: + 82 61 793 7412
F: + 82 61 790 6386
E: info@poscoterminal.com
W: www.poscoterminal.co.kr

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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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 Coruña
15006
Spain
Contact: Mr Iago Mallo Sanz
Job Title: 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
Job Title: 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
Job Title: 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 Maritimos Alcudia
Name of Port Authority: Transportes Maritimos 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
Job Title: Port Director
T: + 34 9 22 605400
F: + 34 9 22 605479
E: comercial@puertosdetenerife.org
W: www.puertosdetenerife.org

Santander
Autoridad Portuaria de Santander
Puerto 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
Job Title: 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.

European Bulk Services Rotterdam

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

Elbeweg 117 • Europoort Rotterdam • Port no. 5820 • P.O. Box 1204 • 3180 AE • Rozenburg • The Netherlands

T +31(0)181-258121 • F +31(0)181-258154 • E sales@ebsbulk.nl • W www.ebsbulk.nl

Sweden

Helsingborg
Helsingborg Coal Terminal
PO Box 821
Helsingborg
S-25108
Sweden
Contact: Mr Andreas Eriksson
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: Marketing Department
T: + 662 385 5335
F: + 662 385 5910
E: info@spintermarine.co.th
W: www.spintermarine.co.th

The Netherlands

Amsterdam
IGMA
Coenhavenweg 3
Amsterdam
1013 BK
The Netherlands
Contact: Mr Rob Hansen
Job Title: General Manager
T: + 31 20 5808 600
F: + 31 20 5808 606
E: info@igma.nl
W: www.igma.nl

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
OBA - Bulk Terminal Amsterdam
Westhavenweg 70
Amsterdam
1042 AL
The Netherlands
Contact: Mr Hans Mattheyer
Job Title: Commercial Manager
T: + 31 20 587 3750
F: + 31 20 611 6908
E: hans.mattheijer@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.

Amsterdam
Rietlanden Terminals BV
PO Box 59191
Amsterdam
1040KD
The Netherlands
Contact: Mr Karl Schot
Job Title: 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

Dordrecht
BV Zeehavenbedrijf Dordrecht (ZHD Stevedoring)
PO Box 12
Dordrecht
3300 AA
The Netherlands
Contact: Mr Leo Lokker
Job Title: 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.

IJmuiden
Tata Steel Logistics & Shipping BV
PO Box 512
Ijmuiden
1970 AM
The Netherlands
Contact: Mr Marcel Botterhuis
Job Title: Operations Manager
T: + 31 251 495521
F: + 31 251 470279
E: marcel.botterhuis@tatasteel.com
W: www.tatasteel-ls.com

Rotterdam
Ertsoverslagbedrijf Europoort C.V. (EECV)
Markweg 131, port number 6250
Europoort
Rotterdam
Zuid-Holland
3198 NB
The Netherlands
Contact: Mr Burkhard Decker
Job Title: Management Board
T: + 31 181 25 77 02
F: + 31 181 25 77 03
E: Info.eecv@thyssenkrupp.com
W: www.eecv.nl
Import: Yes
Export: Yes
Location: Europoort – Rotterdam, Holland
Ownership: Part of ThyssenKrupp Steel Europe A.G. and Hüttenwerke Krupp Mannesmann GmbH
Name of Port Authority: Ertsoverslagbedrijf Europoort C.V. (EECV)
Throughput Capacity: 7 million tons
Total Storage: 1,300,000 tons
Vessel Size Limitation: 180,00 DWT

Rotterdam
European Bulk Services (EBS) BV
Elbeweg 117, Port number 5820
3198 LC Europoort-Rotterdam
Rotterdam
Zuid Holland
3180 AE
The Netherlands
Contact: Mr Taco de Vries
Job Title: 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 nternational
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
Job Title: 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
Marcor Stevedoring BV Rotterdam
Dodewaardstraat 14
(Port Number 2175)
Rotterdam
3087 BA
The Netherlands
Contact: Mr Aad Groenenboom
Job Title: 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
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

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
Job Title: 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
Ovet BV - Terneuzen Terminal
Mr F.J. Haarmanweg 16 d
Terneuzen
Zeeland
NL-4538 AR
The Netherlands
Contact: Mr Bram Peters
Job Title: Commercial 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: 50,1% Oxbow Energy Solutions
49,9% Hes International BV
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

TERNEUZEN
Zeeland Seaports Port Authority
PO Box 132
Schelpenpad 2
Terneuzen
4530 AC
The Netherlands
Contact: Mr Francesco Faes
Job Title: Commercial Manager
T: + 31 115 647 400
F: + 31 115 647 500
E: francesco.faes@zeeland-seaports.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
Vessel Size Limitation: Max draught 17,5 LAT
Additional Information: Terminal operator for coal: OVET B.V.
www.ovet.nl

VLAARDINGEN
Rotterdam Bulk Terminal (R.B.T.) B.V.
Schiedamsedijk 16
(Harbour no. 610)
Vlaardingen
South Holland
3134 KK
The Netherlands
Contact: Mr Boris Sviderski
Job Title: Commercial Manager
T: + 31 10 234 35 55
F: + 31 10 234 21 85
E: b.sviderski@rbtrotterdam.com
W: www.rbtrotterdam.com
Import: Yes
Export: Yes
Location: Rotterdam, The Netherlands
Ownership: HES International 50% / Maja Stevedoring 50%
Name of Port Authority: Port of Rotterdam
Throughput Capacity: 3.2 million tonnes of dry bulk (2007), 5% 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 shed
Vessel Size Limitation: Draught: 11.35m. (High tide 12m)
Quaylength: 440m
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 Bram Peters
Job Title: Commercial Co-ordinator
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: 50,1% Oxbow / 49,9% HES International
Name of Port Authority: Zeeland Seaports
Throughput Capacity: 15 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. / crushing / blending / grinding / truck loading

OVET
Quality in bulk

www.ovet.nl

P.O. Box 1200
4530 GE Terneuzen
The Netherlands

Tel.: +31 115 676 700
Fax: +31 115 620 316
E-mail: info@ovet.nl

Contact: Mr. Bram Peters
Mrs Ilona van Drongelen

- 4 floating cranes
- 80,000 t/day capacity
- Screening/crushing facilities
- Train loading station
- Terminals in Terneuzen and Vlissingen
- Draught: 16.50 m Sw

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
Job Title: 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 main berths.

Sisli
Toros Tarım Sanayi ve Ticaret A.
Tekfen Tower, 4 Levent
Sisli
Instabul
34394
Turkey
Contact: Mr Ismail Turan
Job Title: 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
Job Title: 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 Julie Gough
Job Title: 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 Kennerley
Job Title: Port Director
T: + 44 870 609 6699
F: + 44 2920 835001
E: mkennerley@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
Job Title: 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
Casper Shipping Ltd
2nd Floor
5 Kerse Road
Grangemouth
FK3 8HQ
UK
Contact: Mr Douglas Couser
Job Title: 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

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

Grimsby
Associated British Ports - Grimsby & Immingham
Port Office
Cleethorpe Road
Grimsby
North East Lincolnshire
DN31 3LL
UK
Contact: Mr Simon Bird
Job Title: Port Director
T: + 44 1472 359 181
F: + 44 1472 242 488
E: sbird@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 by four 100-tonne mobile harbour cranes.
Work on the second phase of the terminal has commenced and will provide a dedicated bulk-handling facility due to be operational during 2006.

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

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 Chris Griffin
Job Title: Group Business Development Manager
T: + 44 151 949 6239
F: + 44 151 949 6300
E: chris.griffin@peelports.com
W: www.peelports.com
Import: Yes
Export: Yes
Location: North West England
Name of Port Authority: Port of Liverpool
Throughput Capacity: On request
Total Storage: On request
Vessel Size Limitation: Panamax
Additional Information: We have extensive capabilities in handling dry bulks and are equipped to handle significant coal volumes, as required.

Middlesbrough
Casper Shipping Ltd
Cleveland Business Centre
1 Watson Street
Middlesbrough
Cleveland
TS1 2RQ
UK
Contact: Mr Michael Shakesheff
Job Title: 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

Newport
ABP - Port of Newport
Dock Office
Alexandra Dock
Newport
Gwent
NP20 2UW
UK
Contact: Mr Clive Thomas
Job Title: 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
Job Title: 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
Job Title: 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: Queen Elizabeth Dock, Port of Hull, 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. 700,000 tonne capacity of open storage.
60,000 tonne capacity Covered storage.
Vessel Size Limitation: Max LOA: 198m
Max Beam: 25.5m
Max draught including approach channels 10.4m, basis brackish with an SPG of 1011. 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 blending equipment is 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 Nolan Gray
Job Title: Business Development Director
T: + 44 191 440 7403
E: nolan.gray@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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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 Patrick Mangin
Job Title: Director - CNX Marine Terminal
T: + 1 410 631 6426
E: patrickmangin@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
Job Title: 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
Job Title: 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
Job Title: 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
IC RailMarine Terminal (ICRMT)
7790 LA, Highway 44
Convent
LA
70723
USA
Contact: Mr Bruce Conti
Job Title: 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.

Convent
St. James Stevedoring Partners, LLC
9100 Safety Drive
Convent
LA
70723
USA
Contact: Mr John C Crane
Job Title: 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

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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.

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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
United Bulk Terminals USA, Inc.
14537 Hwy 15
Davant
Louisiana
70040
USA
Contact: Mr Brian Miles
Job Title: 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
ARTCO
4666 Faries Parkway
Decatur
IL
62526
USA
Contact: Mr Kevin Van Meter
Job Title: Director
T: + 1 217 424 5556
F: + 1 217 451 4122
E: kevin.vanmeter@adm.com
W: www.admworld.com

Decatur
Kinder Morgan Terminals - Decatur
Lower River Regional Office
7116 Highway 22
PO Box 625
Sorrento
LA
70778-0625
USA
Contact: Mr Hans Luetkemeier
Job Title: 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.

Duluth
Krech Ojard & Assoc
227 W 1st St
Suite 200
Duluth
Minnesota
55082
USA
Contact: Mr Kevin Ehrenreich
Job Title: 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
Job Title: 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
Job Title: 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
Cooper/T. Smith Stevedoring
2315 McCarty Drive
Houston
Texas
77029
USA
Contact: Mr Britton Cooper
Job Title: 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
Job Title: General Manager
T: + 1 281 457 3131
F: + 1 281 457 3232
E: Info@TexasTerminals.com
W: http://texasterminals.com/

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

Jacksonville
CSX
500 Water St
HQBldg, 6th Floor
Speed Code J842
Jacksonville
FL
32202
USA
Contact: Mr Russ Epting
Job Title: Director Coal Facilities
T: +1 904 366 5493
F: +1 904 359 3341
E: Russ_Epting@csx.com
W: www.csx.com

Jacksonville
Jacksonville Electric Authority
21 West Church St
Jacksonville
FL 32202
USA
Contact: Mr Wanyonyi Kendrick
Job Title: 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
Job Title: 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

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KING MINING

coaltrans.com/asia

Long Beach
Cooper/T. Smith Stevedoring
PO Box 229
Long Beach
California
90801
USA
Contact: Mr Ed Viner
Job Title: Assistant Vice President/Operations Manager
T: + 1 562 436 2259
F: + 1 562 590 0547
E: ed.viner@coopertsmith.com
W: www.coopertsmith.com

Long Beach
Metro Ports
720 East E St
Wilmington
California
CA 90744
USA
Contact: Mr Rob Waterman
Job Title: Vice President, Bulk Operations
T: + 1 310 816 6557
F: + 1 310 816 6519
E: rob.waterman@metroports.com
W: www.metsteco.com

Long Beach
Oxbow Energy Solutions
330 Golden Shore, Suite 210
Long Beach
CA
90802
USA
Contact: Mr Don Covert
Job Title: Facility Manager
T: + 1 409 944 3500
F: + 1 409 944 3523
E: Don.Covert@oxbow.com
W: www.oxbow.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
Job Title: 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 Mo Aleman
Job Title: Director, Business Development
T: + 1 985 871 3590
F: + 1 985 867 3509
E: mo.aleman@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.

Metropolis
AEP/Cook Coal Terminal
PO Box 870 3316 N. US 45 Rd.
Metropolis
IL
62960
USA
Contact: Mr Robert Korte
Job Title: 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
Job Title: 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
Job Title: Director / CEO
T: + 1 334 441 7202
F: + 1 251 441 7216
E: jlyons@asdd.com
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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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 Consolidated, LLC
365 Canal Street
Suite 1450
New Orleans
LA
70130
USA
Contact: Mr Scott Becnel
Job Title: Director Energy Sales & Business Development
T: + 1 504 569 2168
E: Scott.becnel@cooper-consolidated.com
W: www.cooperconsolidated.com
Import: Yes
Export: Yes
Location: US Gulf & Inland River System
Ownership: Cooper Consolidated, LLC
Name of Port Authority: Plaquemines, South Louisiana, Baton Rouge
Throughput Capacity: 5 million tonnes annual
Total Storage: By barge only
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.

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
Job Title: 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
Job Title: 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

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Norfolk
Norfolk Southern - Lamberts Point
Coal Business Group
110 Franklin Rd
Roanoke
VA
24042-0026
USA
Contact: Mr Mark H Bower
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: 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 at Globalplex
1342 Highway 44
Reserve
Louisiana
70084
USA
Contact: Mr Barry Hoth
Job Title: Vice President
T: + 1 985 479 6358
F: + 1 985 479 6360
E: barry@associatedterminals.com
W: www.associatedterminals.com

Reserve
Associated Terminals LLC
1342 Highway 44
Reserve
Louisiana
70084
USA
Contact: Mr Todd Fuller
Job Title: Sr. Vice President
T: + 1 985 536 4520
F: + 1 985 536 4521
E: todd@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
Job Title: Vice President of Marketing
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
Job Title: 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
Job Title: Director Marketing Coal & Petcoke
T: +1 801 944 6600
E: nathans@savagecompanies.com

Sandusky
CT Stevedoring
2705 West Monroe Street
PO Box 2647
Sandusky
Ohio
44870
USA
Contact: Mr Ron House
Job Title: General Manager
T: + 1 419 626 0801
F: + 1 419 626 8248
E: Ron.house@coopertsmith.com
W: www.coopertsmith.com

Sandusky
Sandusky Dock Corporation, Pier #3
2705 West Monroe Street
PO Box #899
Sandusky
Ohio
44870
USA
Contact: Mr Jeff Smith
Job Title: 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

Seattle
Stevedoring Services of America
1131 SW Klickitat Way
Seattle
WA
98134
USA
Job Title: 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
Job Title: 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
Job Title: 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
Job Title: Vice President
T: + 1 715 392 9807
F: + 1 715 392 9137
E: fshusterich@midwestenergy.com
W: www.midwestenergy.com

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.

Tampa
United Maritime Group

601 S Harbour Island Boulevard
Suite 230
Tampa
Florida
33602
USA
Contact: Mr Robin Hastings
Job Title: 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)

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
Job Title: 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
Job Title: 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
Metropolitan Stevedore Company

PO Box 547
Wilmington
California
90748
USA
Contact: Mr Malcolm Pitt
T: + 1 562 983 8425
F: + 1 562 983 8520
E: malcolm.pitt@metsteco.com
W: www.metsteco.com

Venezuela

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
Job Title: 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

Maracaibo
Carbones del Guasare SA

Centro De Operaciones Guasare
Av 9B Edif Banco
Industrial Piso 5
Maracaibo
Zulia
4001
Venezuela
Contact: Mr Jose Rios
Job Title: 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

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
Job Title: 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

OHSAS 18001:2007

TÜVRheinland CERT ISO 9001

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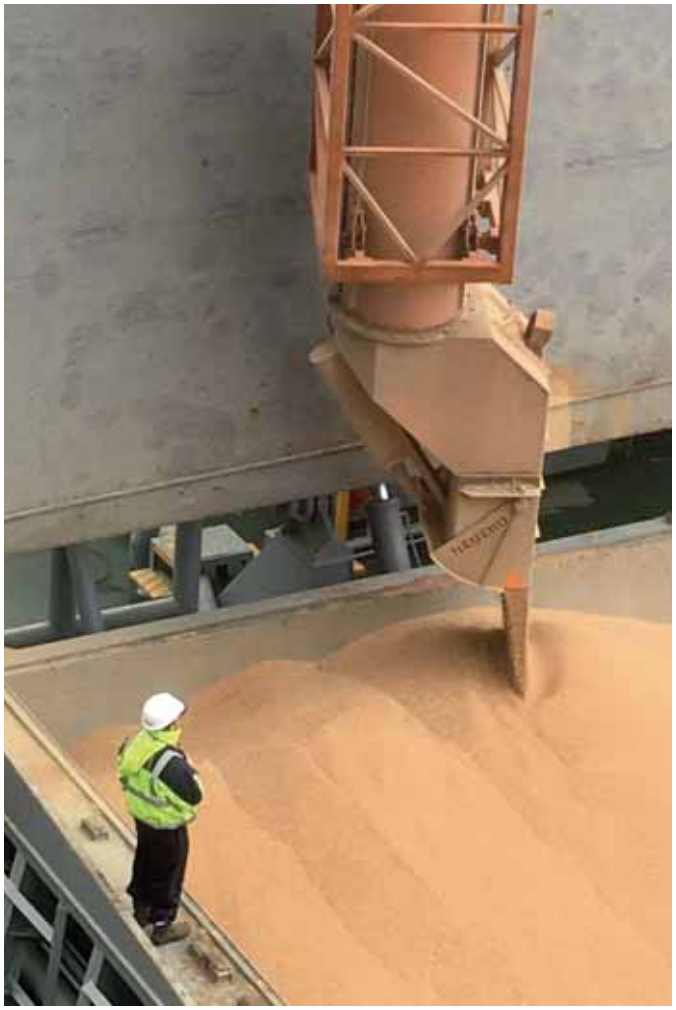
Industrietechnik













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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

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Managing complexity

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