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featuring...

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Improved grain trade prospects

Contrasting changes among events affecting dry bulk commodity trade have been seen recently. Many countries' imports of raw materials and industrial products during 2012 have become more uncertain, and there are intensified doubts about growth prospects, although some growth is still foreseeable. Conversely, the grain import outlook, at least up to mid-2012, has improved.

Gloomy predictions of a difficult year ahead for most parts of the world economy were underlined by the latest statistics. There is particular anxiety about the European Union. Signs of recession in the EU as a whole are already visible, and very subdued activity could continue in the early months of 2012. But it is widely expected that a gradual recovery will follow later this year, assuming that the sovereign debt crisis does not worsen.

Grain

Over the past few months grain trade prospects have improved greatly. Earlier indications pointed to little or no growth in world wheat and coarse grains trade during the current 2011/12 crop year ending June. Since then import demand has strengthened, and the latest International Grains Council estimates, shown in the table below, suggest an 11mt (million tonnes) (5%) increase, to 254mt.

One of the positive elements envisaged is Middle East imports. These are likely to rise after two years of sharp decline, reaching 38.9mt in 2011/12, a 4mt (11%) increase. Another feature is a forecast 3mt rise in China's relatively small wheat and coarse grains imports, which could reach 7.6mt. Also, sub-Saharan African countries could raise their purchases by about 3mt (19%), to 19.3mt.

Iron ore

Another increase in iron ore trade seems quite possible during the year ahead, but potential for this to occur is becoming more restricted. Convincing signs of an upturn in Japan's imports are still awaited, while Europe's prospects have deteriorated noticeably. Whether China will see sustained robust expansion is also somewhat unclear.

Yet there are optimistic views. Recent estimates by Australia's BREE suggested that global iron ore trade (including land movements, but mostly seaborne) could grow robustly by 79mt or 7% in 2012, reaching 1,172mt, after an estimated 4% increase during the past twelve months. A large expansion of China's imports is envisaged this year, accompanied by extra demand elsewhere, including in Europe, Japan, South Korea and Taiwan.

Coal

The outlook for coal trade remains quite promising because many countries are still raising coal-fired electricity generation by building more power stations. Also, in some countries such as India and China, indigenous coal supplies are not likely to be adequate and a greater dependence on imports is evolving.

In 2011 world seaborne coal trade may have attained the symbolic 1 billion tonnes volume for the first time, after estimated growth in imports by South Korea, China, India and some European countries. Within the coking coal category (about one-quarter of the total) a decrease apparently occurred. By contrast, in the much larger steam coal sector, import demand strengthened.

Minor bulks

Within the agricultural minor bulks trades, sugar is a large element. Reports indicate that during the present crop year, seaborne movements could decline, reflecting reduced import demand in a number of countries and lower exports from Brazil. Consequently the world trade volume may be about 7% lower at just over 48mt in 2011/12.

Bulk carrier fleet

Among bulk carrier size groups, the Handysize (10–39,999dwt) fleet has seen the least rapid expansion over the past twelve months. Newbuilding deliveries apparently rose in 2011, but scrapping increased by over two-thirds, greatly limiting the fleet's growth rate which may have been about 5%, as shown by the table. During 2012, tentative signs point to similar, but possibly slightly slower growth if demolition sales remain very buoyant.

TABLE 1: GLOBAL WHEAT & COARSE GRAINS IMPORTS (MILLION TONNES)

	2006/07	2007/08	2008/09	2009/10
Asia (excluding Japan)	48.2	44.3	45.2	50.1
Japan	24.7	23.4	23.8	25.4
Middle East	30.3	32.3	50.1	42.5
Africa	43.1	46.2	55.0	52.4
Others	75.4	93.2	75.4	69.6
World total	**221.7**	**239.4**	**249.5**	**240.0**

*source: International Grains Council, 24Nov11 *forecast July/June crop years*

TABLE 2: HANDYSIZE 10-39,999 DWT BULK CARRIER FLEET (MILLION DEADWEIGHT TONNES)

	2006	2007	2008	2009
Newbuilding deliveries	1.5	2.3	3.0	4.9
Scrapping (sales)	0.9	0.3	1.7	5.6
Losses	0.1	0.1	0.0	0.2
Plus/minus adjustments		-0.5	-0.1	0.0
World fleet at end of year	**73.6**	**75.0**	**76.2**	**75.3**
% change from previous year-end	+0.5	+2.4	+1.6	-1.0

*source: Clarksons (historical data) & Bulk Shipping Analysis 2011 forecast *forecast*

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CONFERENCE SCHEDULE

1–2 February
McCloskey South African Coal Exports Conference 2012
Cape Town, South Africa
IHS McCloskey
T: +44 (0)1344 328300
F: +44 (0)1730 260044
E: marketing@mccloskeycoal.com
W: http://conf.mccloskeycoal.com

2–3 February
12th Coaltrans USA
Miami, USA
Coaltrans Conferences Ltd
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F: +44 (0)20 7779 8946
E: coaltrans@euromoneyplc.com
W: www.coaltrans.com

7 February
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Fax: +91-22-22870502
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W: http://www.chemtech-online.com/events/smp/index.html

28 February – 1 March
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F: +61 3 9824 6588
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W: www.bairdmaritime.com

28 February – 1 March
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Breakbulk Events
Leon Gu
T: +186.21.61577250
E: leon.gu@ubm.com
W: http://breakbulkevents.com/?section=breakbulk_asia2012

13–14 March
8th International Biopower Generation Congress and Exhibition
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E: james.brady@greenpowerconferences.com
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13–14 March
11th Coaltrans India
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Slowing economies affect

Prospects for a continuing solid recovery in global economic activity have faded over the past few months. After an initial rebound from a devastating downturn in world output and trade in 2008/09, there were high hopes of further steady progress. But the sovereign debt crisis intervened, and the outlook now is much less promising.

Lowered expectations for industrial output in a wide range of countries, amid restrained demand for the products, implies adverse effects on imports of many dry bulk commodities. Attention immediately focuses on the steel industry which, because of its vast size and raw materials purchases, has an enormous impact upon suppliers, shipowners and port operators. Numerous other bulk trade flows could be affected by a slowing world economy as well.

Muddling through

Some dire warnings have been expressed, especially for the advanced group of countries within the OECD area, comprising mainly Europe, USA, Japan and South Korea. In comments accompanying the OECD secretariat's latest half-yearly forecasts published at the end of November, the deteriorating trend of global economic activity was emphasized.

These forecasts, key elements of which are summarized in the table below, show gross domestic product (GDP) growth in the area as a whole slowing from an acceptable 3.1% in 2010, to an estimated 1.9% in 2011 and weakening further to only 1.6% in 2012. Despite expectations of improving momentum in the USA this year, and a post-disaster rebound in Japan, the group is likely to be weighed down by a very weak European Union.

Events in recent weeks have reinforced the message. The IMF in mid-December warned of 1930s-style threats: the world economy faces "economic retraction, rising protectionism, isolation". However, while this assessment is undeniably a bleak outlook, there is a high degree of uncertainty surrounding predictions.

The OECD's report emphasizes a more uncertain than usual global economic outlook, especially regarding the eurozone debt crisis and its possible impact. Consequently the organization's GDP forecasts are based on what it describes as a "muddling through" process, where there is a mild recession in Europe, after which a soft and gradual recovery ensues within the whole group.

Supportive emerging economies

One crucially important aspect of the economic outlook is the relatively firm trend among emerging economies, including China and India, forecasts for which are also shown in the table. Although these economies will not be entirely insulated from adverse events elsewhere, their growth prospects currently are still quite favourable.

Potential for a worse outcome is apparent, particularly if advanced countries experience a more severe setback than currently projected. But based on a cautiously positive view, China, India, and a number of other emerging economies may see only limited further slowing over the next twelve months. This expectation implies a generally supportive trend for imports of dry bulk commodities into these countries.

Nevertheless, there is anxiety about patterns of economic activity in China. Growth slowed in 2011 from the strong 10.4% GDP increase seen in the previous year, amid tightening monetary policy — higher interest rates and restricted credit for the private sector slowed investment in housing, and foreign trade weakened. During this year the results of easing monetary and fiscal policy could ensure that China achieves about 8.5% expansion.

Steel raw materials impact

Back in October last year, before the full severity of damaging events in Europe became clearer, the World Steel Association outlined a cautiously optimistic view of the steel industry's future progress. It was suggested that global demand for steel in 2012 probably would slow only moderately from an estimated 6.5% growth in 2011, to 5.4%.

bulk trade

GDP GROWTH FORECASTS (% CHANGE FROM PREVIOUS YEAR)

	2006	2007	2008	2009	2010	2011*	2012*
OECD area	3.0	2.7	0.2	–3.8	3.1	1.9	1.6
USA	2.7	1.9	–0.3	–3.5	3.0	1.7	2.0
Eurozone	3.2	3.0	0.4	–4.3	1.8	1.6	0.2
Japan	2.0	2.4	–1.2	–6.3	4.0	–0.3	2.0
China	12.7	14.2	9.6	9.2	10.4	9.3	8.5
India	9.5	10.0	6.2	6.8	9.9	7.7	7.2

source: IMF, OECD Economic Outlook (28 November 2011) **forecast*

In the European Union, a much sharper slowing from 7% growth last year, to 2.5% in 2012 was envisaged. By contrast in Asia (no separate forecast for Japan was given), only a modest deceleration from 6.2%, to 5.4% was predicted. Within this group, China's steel demand expansion seemed likely to slacken from 7.5%, to 6%. However, a few months later, these expectations are looking hard to achieve.

China's steel output has been declining, after reaching a monthly peak of 60.2mt (million tonnes) in May 2011, falling to just below 50mt in November. While not conclusive evidence of prolonged weakness it does, together with other signs, point to a trend of slowing domestic steel demand. But the impact on iron ore imports (comprising over 60% of global seaborne trade in this commodity) has been muted so far.

In Japan, a boost for steel demand and production in the aftermath of last spring's earthquake and tsunami, as reconstruction work progresses, has been slow to gain momentum. In the meantime, slackening demand in key foreign markets for direct exports of steel products has emerged. For the immediate future, the steel production outlook seems fairly flat.

Expectations of a continued upwards trend in Europe's steel output and raw materials imports during 2012 are becoming less convincing. Although recently there have been some indications of resilience in Germany's economic activity, the outlook for the remainder of the EU suggests pronounced weakness. Consequently, European domestic steel usage may struggle to remain flat this year, and the possibility of an actual decline in demand and production is becoming more plausible.

Richard Scott

Brazilian exports of soya and maize will

Soya growing in Brazil.

With 8% more soya beans and 12% more maize to be produced in Brazil this year compared to 2011, and with most of the extra available for export, up to 57mt (million tonnes) of the two products will be exported this year, 12%, or 5mt more than in 2011.

On the other hand, little or no more sugar will be exported in 2012 than the 26mt shipped last year, when adverse factors meant 2mt, or 8%, less sugar was shipped compared to 2010.

With a new 1.5mt pulp mill only to start up at the very end of this year, the first for two years, 2012 will see a repeat of the 8.8mt of pulp shipped in 2011. A 10% fall in the price of pulp may cause other projects to be delayed.

Because many farmers preferred to plant soya or maize than rice last year, there will not be a repeat of the million tonnes of rice exported in 2011.

As usual, Brazil will import far more wheat than it exports this year. In 2011, twice as much came in than the 2.5mt shipped.

About half a million tonnes of cotton will be exported this year and there is likely to be a repeat of the export of about 550,000 tonnes of tobacco, although much of the tobacco is now shipped in containers, rather than as breakbulk.

With few signs of a recovery by the construction and furniture industries in the United States and elsewhere, there is unlikely to be an upturn in demand for wood and processed timber this year. A repeat of the 2.6mt shipped in 2011 seems most likely, a far cry from the 6mt to 7mt exported in 2005 and 2006.

Record prices during most of 2011 explain why farmers planted more soya and maize at the end of last year and why the amount of land planted to maize as a winter crop, to go into the ground as soon as early soya is harvested, will be a record as well.

As well as planting the two grains on up to 5% more land, farmers have bought more fertilizer and lime, have had more money to spend on farm chemicals and machines, and are looking after their plantations better, so yields will be above average.

The only bad news is that an increasingly strong 'La Niña' phenomenon, which as well as prejudicing yields in much of Argentina, Paraguay and Uruguay, also meant that little rain fell in December in most of Rio Grande do Sul, as well as much of Parana, could cut yields. This will be particularly true if, as feared, the dry weather persists during January, when soya beans and corn cobs fill out.

Prices of the two key commodities started to fall in August last year, but have since recovered on the news of the dry conditions, as world stocks are still relatively low.

China will be the leading destination for Brazilian soya beans this year, taking more than 22mt.

China is also the leading market for Brazilian soya oil, of which less is now exported as five years ago, due to increasing quantities being used to make bio-diesel fuel.

In contrast to beans, up to half of the 14.5mt of soya meal to be exported this year will go to destinations in Europe, with the Netherlands, Germany and France in the lead. About 5mt of soya

rise while sugar falls

beans were sold to EU countries as well last year, but only two of them, Spain and the Netherlands, bought more than 1mt of beans. No other country bought more than 900,000 tonnes of beans.

The market for Brazilian maize, a comparatively recent export, is far more fragmented, although Iran remains the leading customer. Brazil's large poultry, pork, dairy and beef herds, together with industry mean 50mt of maize is now needed in Brazil itself each year. Domestic demand increases by about 3% a year, so there is relatively little left over for export.

Most of the 10mt of maize to be exported, is grown in the winter months in centre west. It is planted immediately after the early soya is harvested, taking advantage of the moisture which remains in the soil.

Brazil's sugar industry still has to recover after three very poor years.

The industry almost doubled in size between 2005 and 2008, when more than 100 large new mills were started up, and the cane crop doubled to more than 500mt.

The new mills, plus planting three million hectares to cane for the first time, cost about $50 billion. However, expenditure peaked in 2009, when the financial crisis caused prices of both sugar and ethanol to fall sharply.

Cash strapped mills were forced to sell ethanol below cost, which made the fuel very attractive to motorists, but worsened the financial position of the mills.

With few resources, mills neglected to renew their elderly plantations, causing yields to fall. Coupled with three years of adverse weather, the output of cane has stagnated.

The industry has been saved by the high world price of sugar, of which about a quarter of the total produced worldwide is Brazilian. About 50% of the 60mt traded around the world each year normally comes from Brazil as well. Because of difficulties last year and despite the mills giving priority to making sugar, rather than ethanol, Brazil shipped 2mt less than in 2010.

If Brazil is to maintain its share of the world market, at least 20mt more sugar will have to be produced by 2020. It remains to be seen whether this will actually happen.

To maintain its dominant position, the countries pulp industry also needs to add 10mt of capacity by 2020. Although half a dozen new mills are planned, it is not now certain all will be built in time.

Two of the leading companies, Fibria, formed of the merger of VCP and Aracruz, plans to duplicate its 1.5mt capacity mill at Tres Lagoas in Mato Grosso, while Suzano also plans three new mills.

But because the Brazilian Real fell by 12% against the US$ last year, and 90% of Fibrias large debt is denominated in US dollars the companies financial position is not good, so the new mill may not start up on time. The same thing applies to the Suzano company, which plans to build three new mills in the north east of Brazil, in Maranhao and Piaui states, where land is now much cheaper than where its existing mills are located.

To start up at the end of this year, the 1.5mt-capacity Eldorado mill is being built in Mato Grosso do Sul, by a subsidiary of the JBS meat company, the world's largest meat packer.

India allows 1mt of sugar exports

After many weeks of procrastination, the Indian government allowed sugar exports of 1mt (million tonnes) on 22 November last year to give relief to local factories contending with the prospect of bumper production of up to 26mt in the current season to end in September 2012. Production of this size cannot but put pressure on sugar prices. Industry official Om Prakash Dhanuka says the foot dragging on exports by the government was because of the pincer attack coming in its way from all quarters because of high rates of food inflation till recently. "Export sanction delays will not, however, find justification since sugar in recent periods has not contributed to food inflation at all. Moreover, at no point Indian Sugar Mills Association did not leave the government in doubt that India's sugar production in 2011/12 will leave considerable unmanageable surplus with the industry after fully meeting domestic requirements," says Dhanuka. India is the world's second largest producer of sugar but its use of the commodity is the highest among all countries.

The industry says that the sanction came too late and also for too little a quantity. The monsoon in India's cane growing centres having behaved well, a bountiful cane crop was expected as early August. Assuming Indian production will be 26mt, the total supply will be close to 32mt taking account of the season's opening stocks. ISMA projected local consumption of 22mt will leave a season-end surplus of 10mt without exports. It is in order to reduce the inventory burden of the industry that ISMA was long pleading with the government for export sanction of up to 4mt. Consultancy firm Kingsman SA, however, says that while late crushing start in Maharashtra, India's largest sugar producing state, could restrict national production to 25.5mt, consumption is likely to be higher at 22.5mt. Whatever may be output and local sugar use, delays in export sanction are translating into slow conclusion of business and much lower price realization than would have been the case had exports been flagged off a few months earlier. Raw sugar futures in New York were down 27% last year in a first annual decline since 2007. White sugar in London fell 19% in the same period to $602 a tonne.

According to ISMA director general Abinash Verma, falls in sugar prices were caused by reports of emerging surpluses during 2011/12 season. This is also the reason why Indian factories secured permits for export shipments of only 232,454 tonnes out of sanctioned exports of 1mt, says Verma, adding that at prevailing world prices "we are still making some money and importantly saving on carrying and interest costs." Much of December and first week of January are lean periods for business in the West and industry officials expect more bounce in export sales now onwards. With rise in business, world sugar prices are to move forward.

There is consensus that after two years of shortage, the world sugar production this season will be substantially more than demand. But estimates of surplus by different agencies vary. Surplus estimate of 4.5mt by International Sugar Organization will appear conservative compared with the Kingsman latest projection of 8.2mt, scaled down from its earlier 9.2mt. This is because production rise to 174.1mt from Kingsman's earlier estimate of 173.2mt will be more than offset by increased global demand, particularly from Asia. Between its third and fourth estimates, a global demand rise of 1.819mt has occurred on account of low sugar prices. And as much as 1.1mt of that incremental demand are on Asia account.

Dhanuka says unlike India where this season's challenge is to

unburden itself of surplus by way of exports, China is expected to take advantage of low prices to rebuild sugar stocks as part of its overall policy to control inflation. Kingsman report says on the back of a 16% rise in area under sugar beet and 6% for cane, China's sugar production will surge to 12.5mt. But this will still fall short of the country's consumption requirements of the sweetener. Therefore, Chinese imports will be to take care of demand supply gap and also for restocking purposes. In the beginning, there were fears that Thailand's marauding floods during the 2011 monsoon would wreck havoc on cane crop and therefore, sugar production would take a hit. But these proved unfounded and Thailand, the world's second largest sugar exporter after Brazil will have a production of 10.6mt. The country, however, is encountering some logistical problems in despatching sugar to overseas destinations.

Brazil being the world's largest producer and exporter of sugar is the principal market mover. The country's official farm forecasting agency Conab is projecting 2011/12 Brazilian cane crop at 571.5mt, down 8.4% from a year earlier and 3% less than the August projection. As a result, sugar production is likely to be pared by 3.4% to 36.88mt. Production setback for ethanol will be a stiffer 17% to 22.86bn litres. A common practice among sugar factories in this South American country is to juggle the use of cane for making sugar and ethanol. If high sugar prices for most of 2011 encouraged factories to lay claim to at least half the cane crop for making sugar, prevailing low prices for the commodity will likely see emphasis shifting to ethanol production. In the meantime, fall in sugarcane yield in Brazil resulting from neglect of renewal of cane fields has increased sugar production cost to about 20 cents a pound.

According to FranceAgrimer, a state supervised agency, sugar production this season in the European Union will climb 15% to a record 18.25mt mainly on the back bigger output in Germany, France and the UK. Italy and Austria will, however, see a fall in production. Europe is likely to import 3.1mt of sugar this season but it will export 2.05mt at the same time.

Kunal Bose

East Asian Economic and Trade Survey 2011

David Turner

Last year *DCi* examined the consequences of the World recession of 2008, and measures taken to try and prevent it ever happening again. The problem was that there was little agreement on the way to proceed. The G20 said it was the West's problem. The US and EU couldn't agree on a joint approach, and the US Banks mobilized their forces to try and prevent any adverse legislation through the House and Senate through the Republicans.

The US and EU problems are different. So we will treat them separately.

The US created the crisis by de-regulating the banking industry, initiated by Reagan, but most actively from the 1980s onwards. It allowed investment Banks to merge with savings banks and allowed savings to be invested. Loans to industries and SMEs (small and medium enterprises), particularly the latter, have increased difficulty in obtaining the essential loans to keep their enterprise operating.

Nicholas Kristof in the *NY Times* got it pithily right "The Banks have gotten away with privatizing profits and socializing risks, and that's just another form of bank robbery." The result was explained in last year's article — basically a huge housing bubble and massive unemployment. Even after bailing out the banks with peoples taxes, the banks insisted on paying multi-million dollar bonuses to their senior staff. In 2010 one paper pointed out that the bonuses paid were larger than the banks paid in tax.

The Republicans gained control of Congress at the mid-term elections, pushed by the born-again Reaganites, espousing no taxes for the rich, spending cuts to reduce the deficit (which was caused by President Bush, who took office from Clinton with a hefty surplus!). No additional spending on anything, whilst transport infrastructure is badly in need of repairs, and education standards and results are behind China and many developing countries.

It is astonishing that the Republicans are ignoring all the lessons learnt from the Depression of the 1930s, and are pushing reforms which will guarantee that it will take at least ten years of slow learning before the unemployed will maybe have a job! The West recovered fast after the 1930s and in three years was back to growth of the late 1920s The sad fact is that the Tea Party's only policy is to ensure the Democrats are beaten at the next election, and are ignoring those they are supposed to serve.

It hasn't helped that the Democrats are unhappy with Obama's inability to fight the Republicans, by apparently giving in to most of their demands, since the mid-term elections.

The European Union has a major sovereign debt crisis. The member countries are heavily indebted to the EU banks, particularly Greece, Portugal, Ireland, Spain and Italy. Three of them have had their credit ratings downgraded, and others warned.

The banks were bailed out after 2010 and need more bailing

out now. Greece is the critical problem, its debt is now 182% of GDP and no matter how much cash injection they receive they can never pay back their debt. The effect of a collapse with a 'dirty' refusal to pay and default from the EU, would be worldwide and catastrophic. Greece would leave the EU, and Portugal and Spain could follow suit. The EU is desperately trying to put together a plan for an 'organized' collapse i.e. the banks would take a hefty 'haircut' to their loans and lengthen their payback period to reduce their annual payments, and the 17 EU countries would provide a large collective sum as further long-term loans.

The problem with this is that all 17 countries have to agree and Germany would have to cough up the most money.

Only the UK has announced that it will ring-bark the investment banks from their savings banks, and is preparing legislation to this effect. The US and EU say they will deal with it with regulation, however this has never worked in the past, and the US bankers are smugly boasting they can make loopholes in any legislation; expect another depression in about another ten years or so!

The one interesting piece of news is the anti-Wall Street movement, which is rapidly spreading worldwide. The concern was that during the worst financial crisis since the 1930s, Wall Street and the wealthy were bailed out at tax payers expense, but the latter were left to cope for themselves. They are well aware that since the 1980s the disparity between rich and poor has grown at an incredible rate; the middle class has grown poor and the poor, destitute, whilst the *nouveau riche* must not be taxed any further. Both the Democrats and Republicans were responsible for this debacle and neither knows how to deal with it. If the movement grows and prepares a 'change' document which attracts leaders, it could challenge both parties at the elections in 2012.

Finally, well known Western economists are divided whether EU is heading for recession in 2012 or whether both the EU and US are headed for recession in 2012.

East Asia

East Asia had learned the lessons of the Asian economic crisis of the late 1990s, and in particular the misdirections from the IMF and US Treasury. They introduced legislation to prevent a rapid input and output of foreign money, and to a great extent avoided the de-regulation of the banking industry, pushed so hard by the US. They either ring-barked the two banking systems or constrained the activities of the investment banks from the savings banks.

Finally they did not buy into the complex derivatives and other financial devices that created the housing and business bubbles that caused the banking problems in the US and added to the banking woes of Europe.

After bailing out the banks in the US and Europe, the US banks returned to their investment practices leaving little funds to support businesses, as a result unemployment in the US has stayed around 9–10% ever since, indicating that SMEs and other businesses are not recovering, restarting or starting up. In the EU, the banks need an urgent infusion of cash because of their holding of sovereign debt, and a means to save the EURO bloc (as indicated above). At the time of writing, a solution to this problem was set to be put to the G20 at the end of December 2011, but no agreement has been arrived at as this is being written. However *DCi* expects that the EU will fudge its way through the problem in order to avoid the worldwide carnage that would follow if they don't.

The problems that face Asia is that local stock markets have tended to follow the West, particularly foreign buyers, and the US and EU have been large investors and importers. Thus East Asia will be more dependant on China and Japan for investment, and to search even further to diversify their trade to make up for the loss from the US and EU, and which will take many years to return to former trade flows.

The world still has an overflow of shipping, exacerbated by the downturn in trade, though commodity prices are up due to increased demand from China.

ASEAN has scheduled to introduce a common market in 2015, but not much detail is currently available as several members are seeking to retain privileges for their main or vulnerable exports, and it is likely to take several years before a 'Common' market is really in place.

Nevertheless East Asia will manage this crisis, which was not of its making or its responsibility, and will continue to show growth rates that are among the highest in the world, though less than before the crisis broke. However the ADB (Asian Development bank) has warned that if Asia wants to be as wealthy as Europe after 2015, it will have to tackle key challenges such as inequity and corruption.

North East Asia

REAL GDP GROWTH RATES

	2010	2011	2012
China	9.5	9.2	8.1
Hong Kong	6.6	5.0	3.9
South Korea	4.5	4.0	4.1
Taiwan	9.0	4.6	4.3
Japan	1.0	(–0.5)	1.0

China

China weathered the depression in the West by diversifying its trade to Japan, East Asia and other developing countries. It also enjoyed criticizing the US for its profligate financial dealings, at the same time it is very conscious that China and the US need each other. It has bought up foreign debts of the EU to assist its recovery and is actively trading with the EU where it can, for example Germany.

It has allowed the Yuan to appreciate (though less than the US would like) and wages have risen very quickly, so it has been forced to move to more valued-added goods; one result is that developing countries have started to regain their trade with China and the West for clothing and shoes etc. The second result has been the development of a middle class in the industrial areas and a millionaire and billionaire class that is now larger than that of the US.

China has become one of the leading groups of tourists travelling around the world. The very wealthy class are buying property in capital cities in the West but also in countries with large Chinese residents such as Singapore and Malaysia. And is looking for businesses to buy or expand. In 2010 they bought five vineyards in the Bordeaux region, and a Bordeaux-type wine grown in China won a first prize in Europe!

At the same time they need to balance their budget to encourage and the Chinese to buy more at home rather than excessive saving. Unfortunately the middle and upper classes prefer to move their spare cash out of the country, and the poor class cannot affect a difference in consumer spending.

In 2010 China's FDI (Foreign Direct Investment) reached US$1.05 trillion, up by 15 million, after dropping by US$2 billion in 2009 during the aftermath of the depression of 2008. Its ODI (Overseas Direct Investment) increased by 6.5% last year to US$59 million, and invested in 3,125 companies in 129 countries.

China faces two key problems: first, the gap in wages between those in the rural areas and the wealthy in the cities — however they seem to be handling it better than the US does! Second, the approaching change in government next year.

Much lobbying is going on between different factions, and 'favourites' are not yet known, so the direction that China will take after the change is by no means clear.

As shown above China's GDP will be lower in 2011 and 2012 than previous years. This suggests that the domestic economy is slowing down, but not exports, contrary to what China say it must do.

Hong Kong

The Chief Secretary Henry Tang resigned in September 2011, supposedly to seek a top position in China. It won't affect the business environment and the running of the administration because Beijing makes the decision who to appoint.

Export and transshipment has weakened due to its reliance on the US and the EU, and there is an ongoing property market correction as well as a slowing down in manufacturing production, which will affect the unemployment situation. However tourists and the retail sector provide strong support for the economy.

Hong Kong has maintained its currency peg to the US$ despite the fall in the value of the US$ since 2008, but although a peg with the Chinese currency would seem inevitable, it is not thought this likely in the near future.

South Korea

The decline of the SK won in 2008, due to its being caught with large debts when the financial crisis occurred, resulted in an increasing interest among tourists, and the government has been encouraging this quite successfully, it has also started to encourage medical tourism, which is strong in most of the ASEAN countries.

However the flip side is that its industrial product exports have slowed down because of the decrease of imports to the US and EU, as with other countries of this region.

The good news is that the US has finally signed the Korea-US trade agreement, which has the potential to increase bilateral trade by up to US$ 10m per year, and Korea has also ratified it whilst this is being written!

Taiwan

The country's relationship with China remains warm, but as the next election is under consideration, and China's position is clearly to see Ma Yingyou remain in power, whereas Taiwan appears to be looking for change, and the former vice president, Tsai Ing-wen now leader of the DPP (Democratic Progressive Party) is showing a much more relaxed position towards China. A change in power would at least see a cooling of the current relationship.

The country, like most of NE Asia, is seeing a slowdown in trade, because of the former strong trade ties with the US and EU.

Japan

The huge earthquake which headed the Richter scale, followed by the resultant tsunami which breached the under-managed defensives, caused incredible damage to the NE of the main island, involving the nuclear station Fukushima causing massive leaking of emissions spread over a very large area, and huge loss of life through drowning. Whereas the loss of life due to emissions is not known, but could prove large in years to come.

Scandal due to the lack of early action by the nuclear industry, followed by the scandals from the revelations of the cosy situation between the company and the nuclear regulators which allowed many unsafe practices to be carried out, has left the newish government embarrassed and the country to develop an anti-nuclear lobby. Nuclear power provides around half of Japan's electricity.

An unfortunate result was that the collapse of the US and EU currencies meant that many investors in those country's shifted their money to Japanese banks, causing an unwelcome rise in the Japanese Yen, which reduced the value of their exports to those states in Asia who were still their trading partners — an unwelcome double whammy.

The US faced with a large and stubborn unemployment situation, an ultra-right-wing Congress and an election due in December 2012 is desperate to get both unemployment down and trade up. President Barack Obama who introduced the idea of a Trans Pacific Partnership, and is now pushing its negotiation, it is a free trade agreement that already has nine members at the negotiating table, viz Australia, Brunei, Chile, Malaysia, New Zealand, Peru, Singapore, Vietnam and the US recently received a request from Japan to join the negotiations despite the strong opposition of the Japanese rice farmers, who have a monopoly in the country. Japan was forced to open its rice market a little a few years ago but all the overseas rice it has to buy is used as give-aways.

Finally, Japan has outsourced many factories to Thailand which incurred severe damage in the recent worst flooding in 50 years, further harming its trade benefits (see later Thailand report).

ASEAN

REAL GDP RATES

	2010	2011	2012
Indonesia	5.3	6.2	5.4
Malaysia	6.5	5.0	4.4
Philippines	6.2	4.7	4.5
Singapore	12.7	5.6	4,2
Thailand	7.5	1.5	2.0
Vietnam	6.6	5.8	6.7

Indonesia

The country's balance of payments surplus is the highest on record at US$ 11bn. Its strong trade figures and higher FDI (Foreign Direct Investment) — at US$5.2 bn some 60% higher that last year — is the highest within the ASEAN region. This is helped, of course, by its growing exports of bulk commodities, and although having to import some oil this year the new finds coming on stream will reduce this next year.

The above table shows that Indonesia will have the highest real GDP in 2011 of all ASEAN countries for the first time. It is also developing its manufacturing exports by offering incentives to invest outside of Java, which shows some success, such as Unilever agreeing to commit over half a million $s in Sumatra for a palm oil processing plant.

Its growing middle class has greatly increased its domestic purchasing, offsetting imports. hence its healthy balance of payments.

However the full impact of the 2008 recession and the inability of the West to recover from it will affect, hence the forecast reduced GDP for 2012.

Finally, Indonesia has a long-term plan to upgrade its infrastructure, including a new international airport forecast to open in 2113.

Malaysia

The government has announced it will abolish the hated Internal Security Act, in force since the British introduced it because of the internal fighting prior to independence. There is some doubt that it will, but as there is an election due next year, the government could face electoral difficulties if it changes its mind. It has also set up a committee to advise on electoral reform.

Malaysia has seen a reduction in its exports because of the slowdown of the world economy and therefore an increase in unemployment. The next budget therefore is expected to see concentration on infrastructure and real estate, as there has been a significant reduction in FDI in2011. Of more concern has been the reduced demand from other developing markets, including China, and the government is hoping to counter this direction as demand from the West decreases.

The Philippines

President Aquino, elected in 2010, has had an impressive first year in office, despite falling exports due to the recession, and the reduction in exports to Singapore and Hong Kong were disappointing but increase to China and Japan made up for it.

His promise to fight corruption had a boost by arresting his notorious predecessor President Arroyo in November 2011 on election fraud.

The falling growth rate in 2010 forced Aquino to introduce a stimulus package, but the country's main problem is its over-large dependence on electronic exports. In its favour it has recorded a budget surplus this year so far, and its banking system is strong due in part to increasing remittances, and its commodity exports are increasing.

Singapore

At the last General Elections the ruling party received the lowest number of seats since independence, though the opposition still had less than a handful but in the lead-up to the election there was increasing criticism of the government, as a result the prime minister has undertaken a review of it's actions.

The country's trade showed a decline as a result of the recession, with exports to the US dropping by almost 40%, and overall trade by around 5%. The main area of losses was all those other than electronics, e.g. pharmaceuticals, and growth within ASEAN and China barely increased. However Singapore's fundamentals are strong but it will have to wait for recovery over the rest of the world, which currently doesn't look bright.

Thailand

The new government of Thailand sees Yingluck Shinawatra become prime minister. She is the youngest sister of the former PM Thaksin Shinawatra, who fled overseas to avoid a two-year jail sentence for corruption. She has no previous

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Thailand had been warned of serious flooding from the monsoon rains this year, but the previous government had not made much attempt to prepare for it. The rains were indeed exceptional but made worse by the fact that the six reservoirs in the north were at maximum content and the massive rains meant that all reservoirs had to be partially emptied just when the southern area of Ayudhaya had become seriously flooded, as a result a huge wall of water went south towards Bangkok and the sea.

Thousands of families had to leave their homes and many areas remain flooded three months after the flooding began. Six industrial areas were flooded causing extensive damage, and up to a half of agricultural goods destroyed. The government says that most of the flooding should be gone by the end of December. The result is that exports are badly hit hence the steady reduction of forecast GDP to only 1.5% at present.

Thus, although Thailand was well prepared for the recession, it was not for this disaster and the cost will be hundreds of billions of Baht. It is expected that exports will not be back at the level of 2010, until the end of 2012. Tourism too has been hard hit but is expected to resume in the New Year.

The key problem for Thailand is to hope that the foreign factories and businesses do not leave the country, which means that adequate preventative measures are put in place before the next monsoon season arrives.

Vietnam

The country has had large trade deficits since independence due to a lack of an efficient manufacturing industry. Shortage of skilled labour means that FDI is the lowest in the region, and fell around 20% in 2011 so far and further cooling is expected next year.

Vietnam has offshore oil but has only recently built refineries so that the crude was sent to Singapore for refining. It has a strong agriculture and aquaculture industries.

The dong was devalued three times last year and again by 8% early in 2011 and the government has decided to end the dong's value linked to the dollar. The good news is that the trade deficit is getting smaller and inflation also lower so the result should show a recovery in 2012. It will certainly benefit from Thailand's woes in agricultural exports, as it is the second-largest exporter of rice. DC

Sources: UN, Economist, World Bank, IMF, IHT and the Bangkok Post.

Throughput of bulk cargoes 2010/2011 at the Port of Hamburg

Over the last year, the throughput of bulk cargoes at Germany's Port of Hamburg has accounted for around 30% of the total throughput at the port. In 2010, bulk cargo throughput reached 40.3mt (million tonnes) and was accordingly up by 9.5% over the previous year. The main growth under this heading was in the form of imports of grab cargoes. Growth in inland steel production, for example, caused a 60.7% increase in iron ore imports to 9.3mt. At 10.3mt, imports of liquid cargoes were 8% higher in 2010. Increases of 9% in crude oil imports and of 14.3% in mineral oil products were the main factors behind this growth. The figure for suction goods imports at 3.3mt failed by just 0.8% to reach the previous year's level. Imports of wheat reached 632,000 tonnes and were accordingly 33.9% higher.

Exports of bulk cargoes in 2010 totalled 10.3mt, or 9.3% below the previous year's above-average total. Exports of wheat and also of other suction cargoes remained well below the strong figure attained in 2009. On grab cargoes, exports totalling 3.2mt were handled, or 23.5%. At 2.2mt, this handling sector is dominated by fertilizer exports that were 28.6% higher. Exports of liquid cargoes, preponderantly of oil products, totalled 3.8mt and were 21.6% down on the previous year.

In the first three quarters of 2011 throughput of bulk cargoes was up by 1.9% and reached 30mt. The suction cargo category that at 4.5mt (down 4.4%) remained below the comparable total for the previous year, was notable for steep growth in imports of oleiferous fruits at 2.3mt (up by 21.1%). Among grab cargoes that totalled 14.8mt (up by 3.7%) it was primarily imports of coal and coke at 4.3mt (up by 8.5%) where growth was impressive. At 10.5mt, throughput of liquid cargoes such as oil products and crude oil, for example, also developed favourably, with an advance of 2.3%.

HANSAPORT WITH NEW SHUNTING ROBOT

The Port of Hamburg is one of the most important transshipment locations for dry bulk cargoes in the world. HANSAPORT, Germany's biggest seaport terminal for dry bulk cargo, handles around 15mt annually. Up to 110,000 tonnes of coal and ore can be discharged each day along the quays measuring over 1,000 metres in total. In 2010, the company Vollert Anlagenbau was commissioned by HANSAPORT to modernize the railway shunting systems which have been in operation since 1989, in an effort to reduce costs through the use of energy-efficient technologies and greater rationalization. To meet the efficiency target set, the engineers from Vollert developed the DER 240 shunting robot, an ideally proportioned shunting solution for intra-plant loading operations involving any type of commodity. New benchmarks are set by the much lower investment cost compared with traditional railway locomotives, the 50% reduction in operating costs thanks to fully automated, GPS-controlled loading processes, and the low environmental impact as a result of using diesel-electric drive technology.

ICS says CO_2 fund could help ports adapt to climate change

The International Chamber of Shipping (ICS), whose member national shipowners' associations represent more than 80% of the world merchant fleet, has participated at a special UNCTAD (United Nations Committee on Trade and Development) meeting in Geneva (29/30 September 2011) to explore how the world's sea ports should prepare for adaptation to the threat of dangerous climate change.

Speaking at the UNCTAD meeting, ICS Director of External Relations, Simon Bennett, advised governments that monies for the adaption of ports to the effects of rising sea levels — and the increased likelihood of storms, flooding and extreme weather events — could be provided by a proposed International Maritime Organization (IMO) environmental compensation fund, with contributions from the shipping industry linked to fuel compensation. An environmental compensation fund is the Market Based Mechanism preferred by the majority of the global shipping industry, rather than the alternative of emissions trading schemes which has also been proposed by some governments in discussions at the IMO.

"The advantage of a compensation fund linked to ships' fuel consumption is that some of the monies raised could be readily directed by IMO to environmental projects in developing countries, such as the adaptation of ports to climate change." said Simon Bennett. However, he suggested that developing nations should play close attention to discussions at IMO, and to the parallel discussions at UNFCCC with respect to possible contributions by the shipping industry to a UN 'Green Fund', "to ensure that developed nations did not end up keeping the lion's share of any money raised from shipping for themselves".

ICS believes that any money raised from shipping through Market Based Measures for CO_2 reduction should primarily be directed to projects which improve the environment in developing nations or which allow the shipping industry and developing nations to prepare for the effects of climate change, for example protecting ports. "Shipping fully accepts the need to play its part and — if governments so decide — participate in Market Based Measures" said Bennett. "But measures to reduce CO_2 emissions should not be used to treat the shipping industry as a 'cash cow', simply to boost the balance sheets of richer countries that are currently in economic difficulties."

$2.97 Million US Department of Transportation grant for Port of San Francisco

The US Secretary of Transportation Ray LaHood has announced that the Port of San Francisco was awarded $2.97 million for rail improvements aimed at improving segments of its freight rail track in order to enhance safety, livability, and economic development.

The port project will improve an approximately one mile-long spur connecting the Caltrain mainline track to the Port of San Francisco Rail Yard. The current condition of the spur track limits the frequency, weight and length of trains that can use the track, causing delays. The improvements will allow freight trains to operate at higher speeds and clear the mainline more quickly, significantly reducing delays to Caltrain commuter trains and future high-speed rail trains.

The US Department of Transportation's Federal Railroad Administration (FRA) received 51 applications from across the country for the Rail Line Relocation and Improvement (RLR) grants and the Port of San Francisco was one of only eight cities and ports to be awarded funding and had the top scoring project nationwide.

"The strong desire to improve infrastructure and foster economic development throughout America is evident in the overwhelming demand by our nation's cities and states," said Secretary Ray LaHood. "These strategic investments will help advance President Obama's vision to create jobs, build livable communities, and stimulate economic growth through local projects that deliver the greatest public benefits."

FRA's Rail Line Relocation Grant Program assists projects that improve community livability and promote economic development by addressing the effects of rail traffic on safety, roadway and pedestrian traffic, overall quality of life and local area commerce. Rail line relocation dollars announced last week will fund the Port of San Francisco project as well as projects in seven other states.

"The Quint Street Lead improvements will promote jobs and economic development in San Francisco while enhancing public safety and livability in our local community," stated Port Executive Director Monique Moyer. "The Port of San Francisco is pleased to participate in the FRA's grant programme that will facilitate this important rail project. We especially thank House Minority Leader Nancy Pelosi for her continuing support of the FRA's rail relocation and improvement programme which is providing the funds for this project."

The port has two rail-served cargo terminals that will benefit from these improvements. Pier 80 is San Francisco Bay's only breakbulk cargo terminal and Pier 94/96 currently is a dry bulk cargo terminal.

The Port of San Francisco, an enterprise agency of the City and County of San Francisco, oversees a broad range of commercial, maritime and public access facilities along the City's waterfront that are held in public trust for the people of California.

Port of Sept-Îles first to get all partners on board with Green Marine

In November last year, Green Marine announced that the terminals owned by the Iron Ore Company of Canada (IOC), Cliffs Natural Resources–Eastern Canada, Pointe-Noire division, and Esso have joined its environmental program, while Aluminerie Alouette is also becoming a member in the 'partner' category.

This makes the Sept-Îles Port Authority (SIPA) the first port in North America with all its partners, including terminals and users, participating in the Green Marine environmental programme. Green Marine is a voluntary environmental programme for the Canadian and American marine industry with over 140 members, including over 60 participants (shipowners, ports, terminals, and shipyards).

The close working relationships between the various port users were instrumental in getting all the key players on board for this sustainable development initiative. In embracing Green Marine, these organizations are following the lead of the Sept-Îles Port Authority, Logistec Stevedoring Inc., Porlier Express, Groupe Desgagnés, Ocean Group, and the City of Sept-Îles. Several shipowners active in Sept-Îles, including CSL Group, Cogema, McKeil Marine, and Fednav are also Green Marine members.

The Port of Sept-Îles has a long track record on sustainable development. It worked with the St. Lawrence Economic Development Council (SODES) to draft the

environmental policy that led to the creation of Green Marine. "The Port of Sept-Îles has always cared deeply for the environment, and considers the environmental implications at the outset of major developments projects," said Pierre D. Gagnon, President and CEO of the Sept-Îles Port Authority. "Convincing all port users to join Green Marine shows that the whole marine industry is on the same page and committed to working together to continue improving and to achieve environmental excellence," he added.

Green Marine's executive director David Bolduc notes that applying the environmental programme to every sphere of its operations shows the port is serious about sustainable development. "We congratulate our new members for making this commitment to the environment, and applaud the Port of Sept-Îles for taking the lead and rallying the troops," he says. "Bringing in new members strengthens Green Marine's environmental programme and allows us to forge ahead with our goal to reduce the marine industry's environmental footprint."

Nacala port workers need specialist training

The head of the city council in Nacala, Mozambique, says that the development of the port could be severely hampered by a severe shortage of skilled personnel. He claims that the brand-new coal terminal currently being built will require at least 400 skilled people to operate it and these currently do not exist in Nacala. He therefore calls for an immediate training programme to be implemented by terminal operator CVRD, if the port is to be able to successfully load vessels up to 260,000dwt.

Barry Cross

Quelimane port upgrade mooted

Authorities in Mozambique are considering upgrading the port of Quelimane to become the country's new coal exporting facility. Currently, the port, which is located in the Zambezi province, is one of Mozambique's smallest. Being a river port, it has relatively shallow draught, although studies suggest it could be dredged to allow up to 20mt (million tonnes) of coal annually to be dispatched from there. Should the upgrade go-ahead, it will require additional construction of a 500km railway line from Moatize, as well as a bridge over the Zambezi River.

BC

Smaller coal producers eye Maputo terminal

A South African and Swaziland consortium of smaller mining companies are looking at building a 6mt (million tonne) coal terminal at the port of Maputo in Mozambique. This will be a dedicated facility exclusively handling B-grade steam coal.

The idea has come about because smaller mining companies struggle to attain sufficient export capacity at existing ports in South Africa, at a time when demand, particularly from India, is on the increase.

Six months of studies are under way, although it will take at least three years before any new terminal in Maputo is up and running. Cost has been estimated at $35 million, of which half would be for port infrastructure and the other half for a rail link via Swaziland.

BC

UGC and Dalport to build Vostochny terminal

The United Grain Company (UGC) and Dalport have signed a letter of intent encompassing the development of a grain terminal at the Port of Vostochny on Russia's Pacific Coast. They will invest $160 million in the new facility, which will have an export capacity of 3mt (million tonnes) by 2015, rising to 5mt by 2017. In 2020, Russia is expected to export up to 45mt of grain.

"We see the potential of the Siberian and Far Eastern federal districts to increase production and export of Russian grain. But the existing infrastructure for handling the needs of grain in the Far East meets neither the requirements of Russian grain producers nor the demand of rapidly growing Asian markets," noted Sergey Levin, CEO of UGC.

BC

Four concessionaires for Tegram silos

The three highest bidders for the Tegram grain terminal at the Brazilian Port of Itaquí are CGG Trading, Glencore and the Crescimento consortium, the latter having been put together by Louis Dreyfus Commodities and the Amaggi group. These will join Novaagri Infraestructura as the four chosen concessionaires. Each will be awarded a 25-year concession, renewable for a further 25 years.

Altogether, the four will invest $142 million in the initial phase, which includes the construction of four warehouses able to hold 125,000 tonnes each.

Tegram is viewed as crucial for exports from Brazil's Central, Western, Northern and North-Eastern regions, which currently ship 80% of their export soya via either the ports of Santos or Paranaguá.

When the terminal is operating at full capacity, it should be able to handle 10mt (million tonnes) of grain. However, up to 2013, it will be limited to 5mt.

BC

Thunder Bay reports strong November

The Port of Thunder Bay hit a milestone in the month of November with over 1mt (million tonnes) of cargo shipped through the port during one month for the first time since May 2009. Tonnages were bolstered by strong grain shipments. The 891,000 tonnes of grain shipped out of Thunder Bay grain elevators during November was the most for one month since May 2002.

Year-to-date grain tonnage this year has already surpassed the total grain tonnage for the entire year of 2010, with more than one month still to go in the shipping season. Types of grain that have had the greatest boosts in shipments through Thunder Bay are wheat and canola. There has been a 15% increase in wheat shipments and a 125% increase in canola shipments in 2011 versus 2010. Canola shipments are expected to exceed 1.2mt during the 2011 season — a record for canola shipments in the Port of Thunder Bay.

Focus on Rotterdam

Rotterdam is one of the main ports and the largest logistic and industrial hubs of Europe. With an annual throughput of 430mt (million tonnes) of cargo in 2010, Rotterdam is by far the largest seaport of Europe. The port is the gateway to an European market of more than 350 million consumers.

Rotterdam owes its position to excellent accessibility via the sea, hinterland connections and the many companies and organizations, active in the port and industrial complex. The port stretches out over 40 kilometres and is about 10,500ha (excluding Maasvlakte 2).

Cargo throughput in the Port of Rotterdam increased by 0.8% in 2011 to 433mt; 3mt more than the previous record year, 2010.

Rotterdam serves a hinterland of more than 150 million consumers living within a radius of 500 kilometres of Rotterdam, and 500 million consumers all over Europe. This is a gigantic market, representing a combined buying power of $600 billion. The European market is accessible from Rotterdam via five competing modalities: road, rail, inland shipping, coastal shipping and pipeline. Goods which arrive in Rotterdam in a morning can be in, for example, Germany, Belgium, France or Great Britain the same afternoon. From Rotterdam, all major industrial and economic centers in Western Europe can be reached in less than 24 hours.

One of the main advantages of Rotterdam is its location on the estuary of the rivers Rhine and Maas. As a result, efficient and economical transport by inland vessel is possible deep into the heart of Europe. The Betuwe Route is the new, 160km-long goods line that links Rotterdam directly with Germany. Feeder and short-sea ships connect Rotterdam by sea with more than 200 European ports; often with several departures a day. The short-sea/feeder ship is forming an increasingly important alternative to goods transport via Europe's busy roads. Underground, Rotterdam has direct links with the major industrial centres elsewhere in Northwest Europe. Pipeline is an ideal mode of transport for bulk chemicals, crude oil and oil products. Despite all this, the truck remains indispensable, particularly when it comes to more short-distance transport and door-to-door delivery.

Maasvlakte 2

More and more goods are shipped through Rotterdam, and a growing number of companies want to set up business in the area. However, the existing port and industrial area is quickly running out of space. It is expected that around 2012–2014 there will no longer be any large sites left. Expansion is essential for the port to continue to meet the rising demand in future and to maintain its leading role. If the port fails to grow, there is a good chance that shipping companies will pass Rotterdam by in the future. That is why the construction of Maasvlakte 2 is necessary. Construction began in 2008 so that the first containers can be processed in 2013.

Maasvlakte 2 will be a direct extension of the existing Maasvlakte and will have access to all its connections with the European hinterland. Maasvlakte 2 will create a new top location in the heart of the European market, with 1,000 hectares of

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space for deepsea related container transshipment, distribution and chemical industry. These sectors have a great interest in the industrial sites on the deep waterways of Maasvlakte 2. Nowhere else in Europe will the largest ships in the world be able to moor 24 hours a day.

Naturally, the future of the port depends not only on its position on the market. The quality of life and concern for the environment are just as important as strengthening Rotterdam's position as a mainport. Expanding the port and improving quality of life go hand in hand. This dual objective has been anchored in the Rotterdam Mainport Development Project (PMR) from day one. PMR consists of three sub-projects, including Maasvlakte 2, improvement to the Existing Rotterdam Area (BRG) and the construction of a 750-hectare recreation area and sites of natural interest. Furthermore, the nature that is lost as a result of the construction of Maasvlakte 2 will be extensively compensated with the creation of a sea bed protection area reservation (formerly sea reserve) and the enlargement of the dune area.

Work is going well on the project, with quay walls emerging from recently reclaimed land, and the growth of sea defences, and good progress being made on infrastructure projects, including railway tracks. With around 200m of the 240 million cubic metres of sand required for Maasvlakte 2 delivered, the foundations for Rotterdam's new port extension are now in place.

The 11km perimeter of the outer seawall is the main defence against the weather, comprising a 7.5km soft seawall along the southern and western edges and a 3.5km hard seawall protecting the more exposed north-western edge to a height of 14m +NAP. The design of the hard seawall was influenced by the reduced available area, due to its proximity to the main fairway into Rotterdam.

Long-term vision

Port Compass outlines the ambitions and vision for the future of the port of Rotterdam: The Port Vision 2030.

Vision 2030

By 2030, Rotterdam plans to be Europe's most important port and industrial complex. It's a strong combination of the Global Hub and Europe's Industrial cluster, both leading in efficiency and sustainability. Rotterdam is closely connected with other North West European industrial and logistics areas.

Leading companies invest in modern facilities. Cooperation between companies, government and universities results in a high quality labour market, good quality of life and accessibility. Thus, Rotterdam is a major pillar for the prosperity in the Rijnmond area, The Netherlands and Europe.

In 2030, Rotterdam industries and energy sector will function as an integrated complex with Antwerp. Hence it is the largest, most modern and sustainable petrochemical and energy complex of Europe.

This complex competes on world scale through its cluster advantages, integrated supply chains and energy-efficiency. The transition to a sustainable energy supply and bio-based chemicals is in full swing.

THROUGHPUT AT THE PORT OF ROTTERDAM

	2011 Jan–Jun	2010 Jan–Jun	difference (%)
Incoming and outgoing			
Agribulk	4,633	3,677	26.0
Iron ore & scrap	19,367	20,807	–6.9
Coal	12,669	12,011	5.5
Other dry bulk	6,415	5,326	20.5
Subtotal dry bulk	**43,084**	**41,821**	**3.0**
Liquid bulk	**97,157**	**104,339**	**–6.9**
Containers	**61,797**	**55,032**	**12.3**
Ro-ro	8,778	8,314	5.6
Other general cargo	4,110	3,218	27.7
Total breakbulk	**12,888**	**11,533**	**11.8**
Total throughput	**214,927**	**212,785**	**1.0**

Crucial actions

Port Compass describes nine success factors, each with a concrete ambition, followed by a number of different challenges that need to be fulfilled to realize this ambition.

The success factors are:

- investment climate;
- land use;
- accessibility;
- shipping;
- environment, safety and quality of life;
- labour;
- city and region;
- laws and regulations; and
- innovation.

Based on the vision, the success factors and an analysis of trends, development and estimates for cargo throughput, the following actions will be necessary realize the vision:

- transition of the industrial sector;
- efficient logistic chains in a European network;
- improving accessibility;
- improving the quality of life; and
- innovation and decisiveness.

▸ Board-to-board circuit from ocean vessel into coaster/barge (▬), magnets 1 and 2, from vessel onto storage circuit (▬), magnets 1, 2, 3 and 4. Overbelt magnets 1 and 3 are placed at the transformer points of the conveyor belts.

5. EBS Laurenshaven Terminal, new site "West 4" fully operational by early 2012.

European Bulk Services Rotterdam

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

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EBS bulk terminal expands for coal

European Bulk Services (EBS) B.V. is a major multipurpose bulk terminal operator in the Port of Rotterdam in the Netherlands. EBS engages in the transshipment, loading, discharge and storage of all kinds of dry bulk products such as agrimass and biomass products, coal and minerals.

Terminals

European Bulk Services (EBS) B.V. conducts its business operations from two strategically located areas in the Rotterdam port area, namely the EBS Europoort terminal (at the Capesize dolphins), and the EBS St. Laurenshaven terminal, a Panamax terminal. The terminals have excellent connections to deep seaways, hinterland by inland waters, railways and trucks by highways. The terminals can be reached without having to pass a single lock. All types of ships can be handled at these terminals, from Capesize to coastal and river barge. The Europoort terminal is one-and-a-half-hours' sailing time to/from the pilot station and the St. Laurenshaven terminal is three hours' sailing time to/from the pilot station.

EBS Laurenshaven expands by approx. 5 ha.

Recently EBS finalized a long-term lease with the Port of Rotterdam concerning a site with an area of around 5ha, which adjoins the current location.

The open storage area will be used for the storage of dry bulk goods such as coal and ore. EBS expects the new site , called West 4, to become operational in February 2012. This new EBS site will increase capacity by approximately 300,000 tonnes.

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Magnetic separators of iron parts of coal

In order to meet the special requirements of the coal import market, EBS has invested in several (electro) magnet systems for cleaning contaminated coal with iron parts. The St. Laurenshaven terminal, with a depth of 13.85m, is perfectly equipped to handle and store, amongst others, coal from Russian load ports. These load ports have a similar maximum draught to the St. Laurenshaven. Receivers of Russian coals can be extra sure of the quality of their coal if their product is cleaned for metals via the EBS de-ironing installation! The electro magnets are installed in such a way that the coal can be cleaned either via storage or via board to board discharge operations.

Solutions, services and activities

EBS strives to provide tailor-made services in consultation with its clients and offers:

- transshipment of Capesize and Panamax carriers into coastal vessels and river barges by means of floating cranes and gantry grab cranes;
- open and covered storage facilities;
- blending facilities and weighing services;
- excellent transshipment facilities via road river and sea; and
- SKAL, USDA-NOP certificates and GMP+, BLU Code, ISPS and ISO certified administration procedures.

Round-the-clock service

The EBS terminals are available 24 hours/day, from Monday 07.30hrs till Saturday 15.30hrs and weekends and holidays upon request.

ZHD Stevedoring makes major investments in equipment and facilities

ZHD opened a new 150m-long quay wall (Mallegat Quay Dordrecht) in June 2011.

In order to further strengthen its position in the Rotterdam Rijnmond area and keep on serving its customers in a modern and professional way, ZHD Stevedoring has invested some €18 million over the course of the last 18 months.

The Rotterdam-based family-owned, private company with more than 40 years of stevedoring experience, has been able to continue the strong growth from 2010 into 2011.

Recent milestones include:

- a new mobile Gottwald crane (HMK 6407B, High Tower) — operational in Dordrecht since April 2011;
- upgrade to loading and discharging facilities for waste-materials at Moerdijk — May 2011;
- a new 150m-long quay wall (Mallegat Quay Dordrecht) — opened in June 2011;
- 20,000m² of newly developed storage area at Dordrecht — opened in December 2011; and
- a new 50-tonne self-propelled floating crane — foreseen to be operational as of May 2012.

Although forecasts for this year are uncertain, ZHD Stevedoring has decided to keep on investing in 2012. Early in 2012, ZHD Stevedoring will start constructing covered storage space in Dordrecht.

The demand for covered storage space from both existing as well as potential new customers has been high in 2011, says Leo Lokker, commercial director at ZHD Stevedoring. "By investing in covered storage facilities we expect and trust to serve our customers even better," he says. "The same goes for our new self-propelled 50-tonne floating crane which is now under construction at our terminal in Dordrecht. This new self-propelled 50- tonne floating crane further expands ZHD Stevedoring's crane capacity and will load and discharge in Rotterdam, Dordrecht and Moerdijk."

As of 1 July 2011 the municipality of Dordrecht and the Rotterdam Port Authorities have entered into an agreement to combine forces. This implicates that of this date the Port of Dordrecht has become an integral part of the Port of Rotterdam with all its benefits. Although already active in Rotterdam for many years, by means of its self-propelled floating cranes, ZHD Stevedoring recognizes the advantages being part

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Artist's impression of the new 50-tonne floating crane, due to enter service in May this year.

of the Port of Rotterdam. In close co-operation with the Rotterdam Port Authorities ZHD Stevedoring is looking into the possibility of reclaiming another 10ha. of land at its terminal in Dordrecht.

Apart from handling products like minerals, coal, petcokes and seasonal products as salt, ZHD Stevedoring has been focusing on handling and storage in niche markets such as steel-scrap, biomass (woodpellets) and waste-materials. Special services in the field of breakbulk and bulk in containers (such as minerals, scrap) are not unfamiliar to ZHD Stevedoring and completes the handling portfolio of the stevedore. With its steel terminal in Moerdijk, ZHD handles coils as well as other steel products.

Rotterdam-based ZHD Stevedoring is a family owned, private company with more than 40 years of stevedoring experience. ZHD is active in the total so-called Rotterdam-–Rijnmond area, with terminals in Dordrecht and Moerdijk, but also with its (self-propelled) floating cranes in Rotterdam. The company offers services in bulk-, neo bulk-, steel products-, coils- and container handling, including warehousing and storage (open, covered and floating). ZHD has both road mobile and floating equipment and is able to handle all kinds of products. All ZHD terminals are able to work round the clock (24/7) and are ISO and ISPS certified. Furthermore, ZHD also has water-related sites available for further (industrial) development

Salt transshipment in Rotterdam.

EMO – full service gateway for coal and iron ore

Future biomass hub for the Netherlands and Germany

Over the years EMO has acquired a strong position in the dry bulk market servicing power plants and the steel industry in North-Western Europe. Today, the EMO deepwater terminal, which can accommodate the world's largest dry bulk carriers with a draught of up to 23 metres, is well positioned to meet developing and changing trends in raw materials logistics.

The EMO terminal for coal and iron ore is located at the Maasvlakte in Rotterdam. Since the EMO terminal was commissioned in 1973, it has been expanded and diversified. Today, EMO's advanced facilities and technology offer increasingly greater flexibility in meeting new and changing demands in the handling of bulk raw materials. With loading and unloading facilities operating 24 hours a day, 7 days a week, EMO currently has an unloading capacity of 42mt (million tonnes) and an unrivalled throughput capacity of over 60mt a year. Apart from core business — unloading, storage and loading activities — EMO looks at every opportunity to provide added value for its existing and new customers.

One of these opportunities is the development of solid biomass transshipment and storage for (co)firing at power stations. With its expertise in transshipment logistics, technology and expansion possibilities EMO is ideally situated to handle large volumes of solid biomass.

INVESTMENT PROGRAMME

What?	When?
Fifth 85-tonne grab unloader	Mid 2012
Seventh stacker-reclaimer	Mid 2012
Loader for seagoing vessels	Mid 2012
New unloading berth	Mid 2012
Hartelstrip site	2014

Giant handling facilities

Giant bulk carriers require giant handling facilities. The EMO quay can accommodate up to four Capesize vessels at the same time. The vessels can be unloaded simultaneously by the wide-span grab unloaders. In addition the EMO floating crane is also used to unload directly into smaller vessels. To guarantee the flexibility and continuity of the terminal EMO will invest in a new, fifth unloader. This 85-tonne unloader, of European origin — and, together with two other EMO unloaders, the largest in the world — will be operational in 2012 and will create an increase in unloading capacity of around 8mt per year.

Currently coal and iron ore for overseas destinations are loaded at the Amazoneharbour quay into sea-going vessels. A new loader for seagoing vessels will be build at the

ALWAYS ON THE BALL

Football is teamwork, with all team players doing their utmost to pass the ball from one to the next in rapid tactical manoeuvres. The team plays the game to a winning strategy. Just as in football, EMO operates as a team working closely together - from crane driver to barge loader operator. Our planners make strategic just-in-time decisions to utilise the EMO terminal in Rotterdam optimally in serving your business. You can depend on EMO for fast, efficient coal and iron ore handling.

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EMO

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Mississippiharbour quay to replace the current loader. A new unloading berth served by floating cranes will be operational as from 2012.

Rail loading facilities

Large volumes of coal or iron ore are loaded into rail wagons under EMO's fully automated installations. The exact load of each wagon is determined in the weighing bunker. These installations are directly connected to the European rail network by the dedicated rail cargo line — the Betuwelijn. As from 2006 EMO invested in an upgrading of the coal train loading facility. With this investment EMO increases its train loading capacity up to 16 coal trains daily. The new loading facility became operational in July 2011.

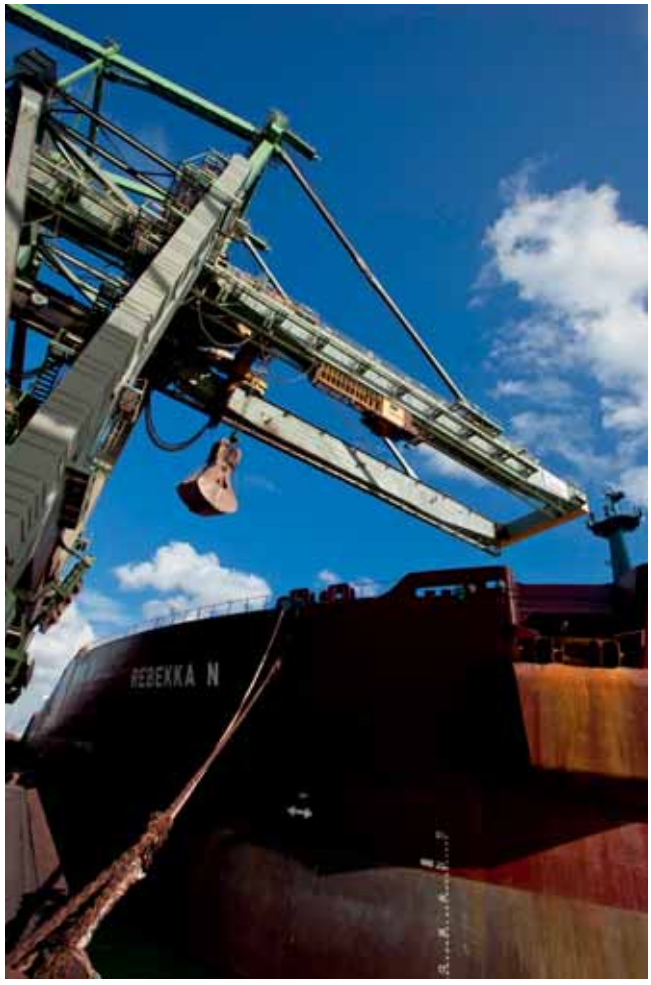
Extensive stock area

The terminal's extensive stock area up to 7mt for both coal and iron ore gives the flexibility to handle bulk cargoes for seagoing vessels, inland waterway barges and rail cars. Today, the various storage areas are served by six automated stacker-reclaimers. To handle increasing volumes of coal and iron ore a seventh stacker-reclaimer will be added around June 2012. It is the largest one of its kind in Europe and is capable of reclaiming materials at a rate of up to 4,500 tonnes per hour. Coal is mostly stored in paved stockyards to prevent contamination and when necessary, compacted to prevent spontaneous combustion.

To meet the foreseen growth and additional need for storage capacity, EMO will expand the site with a phased expansion of around 23ha on the Hartelstrip resulting in a storage capacity of 8mt. The Hartelstrip is located opposite the Mississippiharbour. As from 2014, EMO plans to bring into use an area of 11.5ha with railway connection. EMO has an option on the adjacent area of 12ha.

Power plants

On the EMO site, energy corporation Electrabel is building a coal fired power plant. As from 2013, this co-siting between EMO and Electrabel will be operational.



Simultaneously German energy corporation E.ON is also building another coal fired power plant on its site next to EMO. This new power plant will be operational in 2012 and, just like the existing Maasvlakte plant of E.ON, it will be fed directly from EMO through the underground conveyor belt. DCi

New grain terminal in Aqaba New Port

The relocation of the existing grain handling and storage facilities to the 'Aqaba New Port', located in the Port of Aqaba in the south of Jordan, forms part of a wider strategic development plan to transform the current main port area into a mixed-use waterfront area, including residential homes, recreational and business facilities, along with several hotels, a yacht marina and a cruise terminal.

Jan Dekkers, Eric Pereira and Klaas Brouwer of Royal Haskoning report on this exciting project.

The project consists of the construction of a new Grain Terminal in the south ports area and is undertaken by the Aqaba Development Corporation (ADC). The new facilities are expected to be completed and put into operation by the end of 2013 and are designed for an annual throughput of 2.5mt (million tonnes). The design allows for easy future expansions of both the storage capacity and the vessel unloading capacity.

Royal Haskoning was engaged by ADC as consultant for the preparation of the concept design and tender documents. The assignment further includes technical assistance during the tender and contract award procedure. Potentially, Royal Haskoning's role could be extended to include the position of Employer's Representative during the implementation of the Project.

Aqaba Development Corporation (ADC)

The Aqaba Development Corporation (ADC) is semi-public company, 50% owned by ASEZA (Aqaba Special Economic Zone Authority) and 50% by a number of ministries, represented by the Ministry of Transport. ADC was established in 2003 to implement developments within the ASEZ.

Royal Haskoning

Royal Haskoning is an independent, multi-disciplinary consultancy with its head office in The Netherlands. The company, founded in 1881, was the first private consulting engineering practice in The Netherlands. Royal Haskoning has been active overseas for over 100 years, successfully carrying out a wide variety of projects throughout the world.

Being active in all fields of technical consultancy and engineering, Royal Haskoning is particularly experienced in the development of maritime port and transport infrastructure, integrating sophisticated planning, design and implementation expertise including contractual, legal, risk and financial skills, not only in the design and preparation phase, but also during the implementation of projects as Employer's Representative and/or Engineer.

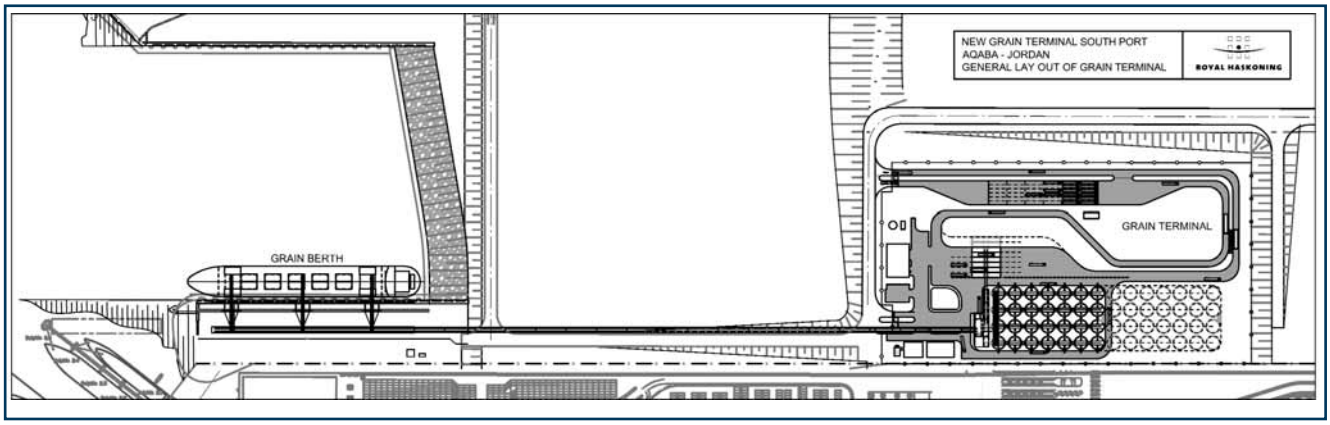
The firm's expertise covers all fields of infrastructure development, as well as off-shore, on-shore and inland. The multi-disciplinary nature of the organization enables a complete and comprehensive service to be offered to the client, covering all stages of a project from conception to completion.

Project approach

For this particular project, the approach up to tendering included the preparation of the design brief, master plan, tender documents and the evaluation of the tenders:

- Design brief

The purpose of the design brief is to identify all design



choices, to list the alternatives and to make recommendations. The design brief serves as a discussion document and stage pass, to fix all terms of reference of the project with maximum buy-in of all parties involved.

❏ Master plan

The master plan contains the final basis of design and definition drawings based on the decisions taken during discussion on the design brief. The master plan serves as the basis for the tender documents. The master plan was presented and discussed with all parties involved to ensure full support.

❏ Tender documents

The tender documents are prepared based on an EPC/ turnkey contract (FIDIC Silver Book), yet prescribing all essentials as identified in the design brief and concluded in the master plan.

❏ Tendering phase

The tender documents have been submitted to pre-qualified tenderers. During the tendering phase, the various queries have been answered in the form of addenda.

❏ Evaluation of the tenders

After receipt, the tenders were evaluated by the staff of ADC and Royal Haskoning based on pre-determined technical and financial evaluation criteria.

Scope of project

The new Grain Terminal will comprise a new grain berth equipped with unloaders which transfer the grains onto two overhead belt conveyors running to the head house in front of the reinforced concrete silos at the land terminal, also comprising a covered truck loading and bagging station, truck weigh bridges, office, canteen, workshop, fire fighting facilities, etc.

The following main design drivers were identified:

- ❖ reduction of initial investment costs where possible;
- ❖ phased development with respect to storage capacity and

Dry bulk handling, processing & storage

Royal Haskoning is an independent world-wide operating consultancy firm with a staff of 3,900 professionals. With its world-wide network of offices, Royal Haskoning offers its multidisciplinary and integrated services locally, based on experience acquired globally.

Royal Haskoning harbours the knowledge and experience that is indispensable in the development of modern ports and (un) loading, transport and storage systems. Our experts are dedicated to finding solutions aimed at improving and optimising their clients' business activities in the field of dry bulk handling, processing and storage.

Our services cover all stages of project development such as:

- pre-investment studies and consultancy;
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- preparation of tender documents and contracting;
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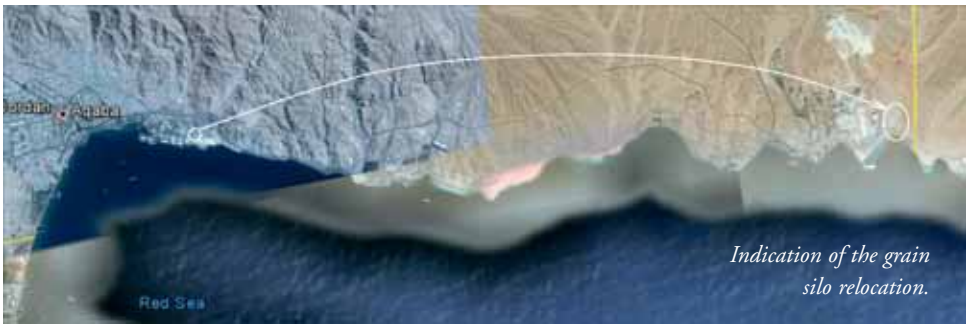
ROYAL HASKONING

Old grain silos at Aqaba main port.

unloading and loading facilities; and

- minimum dust emission and spillage according to the ALARA principle.



Indication of the grain silo relocation.

Ship unloaders

For unloading vessels up to Panamax size, two 800tph (tonnes per hour) unloading lines will be installed. The initial design includes two new 800tph mechanical ship unloaders. However, at its current grain terminal, ADC operates a 500tph mechanical and a 300tph pneumatic unloader. In a drive to reduce the initial investment costs, it was decided to investigate the feasibility of re-installing these unloaders on the new grain berth, after complete refurbishment and adaptation of the outtake conveying system, in combination with one new 800tph unloader. In order to avoid extensive adaptations to the portal structures, the rail gauge at the new grain berth is kept the same as on the existing grain terminal.

Grain silo

A 100,000-tonne reinforced concrete grain silo with head house will be installed. In the head house, after weighing by batch type weighers, the grains are elevated by bucket elevators to the silo deck, where a system of enclosed chain conveyors distributes the grains to the silo bins. The grain silo consists of four rows with each seven individually founded concrete silo bins with a raft foundation. However, contractors are allowed to offer alternatives which are technically or economically more attractive. Outtake from the silo to the truck loading station is by a system of belt conveyors, bucket elevators and chain conveyors.

Truck loading and bagging

All grains will be loaded into trucks. Inside the land terminal area, the parking area is limited to 60 trucks, since the entrance to the port area is regulated from the large truck parking area inside the ASEZ boundary. In principle, the trucks will be loaded at the fully enclosed truck loading and bagging station which consists of two combined bagging/bulk truck loading lines and four bulk truck loading lines. To enable loading of trucks in case of emergency, the two outer rows of the grain silo are equipped with direct truck loading spouts.

Reduction of dust emission and spillage

Reducing dust emission and spillage in combination with robustness and ease of operations has been one of the focal points of the design and the functional requirements. This is reflected in the selection of the fully enclosed continuous ship unloaders which will be equipped with enclosed outtake chain conveyors and dust-controlled truck loading bellows for direct loading in case of emergency. It is also reflected in the selection of enclosed or fully covered conveyors and the enclosed truck loading station. Dust control is by means of insertable dust filters at each transfer point and on the enclosed conveyors. Royal Haskoning prefers this individual filter system over a system with centralized dust filters with hopper and airlock for this prevents extensive suction and dust return piping and airlocks that tend to get clogged, since collected dust is returned directly in the product stream. Due care is taken in the wording of the functional requirements to guarantee that the filter cloth area of all filters will be sufficiently large to ensure that the velocity through the filter cloth remains below the required limits to avoid clogging of the filters and to reduce dust emission.

JOINT EFFORT

The preparation of the design brief, master plan, tender documents and the evaluation of the tenders for the Aqaba new Grain Terminal was a joint effort between ADC and Royal Haskoning and will result in a modern grain terminal, tailored to the experiences of ADC with major improvements regarding dust emission and spillage control.

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DCT designs dust suppression ring for conveyor discharge points

The DB-R creates a virtual curtain around the material flow for outstanding particle containment.

By surrounding the discharge flow on all sides, the DustBoss Ring provides simple, focused dust management that's well suited to continuous duty, such as radial stackers.

An innovative new dust suppression device has been introduced specifically for use at conveyor discharge points, designed to create a virtual curtain around the material flow for outstanding particle containment. The DustBoss® DB-R™ Ring from Dust Control Technology (DCT) is engineered for industrial strength and longevity, built with a high-quality stainless steel ring outfitted with a network of atomizing nozzles that deliver millions of 50-200 micron droplets per minute. By surrounding the discharge flow on all sides, the DustBoss Ring provides simple, focused dust management that's well suited to continuous duty, such as radial stackers.

"This design was first developed for a coal application," explained DCT CEO Edwin Peterson. "The momentum created while discharging dry coal was propelling large amounts of dust into the air, and the customer was looking for a way to specifically address the material as it came off the conveyor. The solution was simple but effective, and we're finding that it's well suited to conveyor discharge of sand, aggregates, biomass or other traditionally dusty materials," he said.

The DustBoss DB-R is available in five standard sizes, from 17" (43.2 cm) to 100" (254 cm) in diameter. All five can be customized with DCT's Variable Particle Sizing™ technology, allowing customers to specify different droplet size ranges to match specific materials.

"The greatest chance of a collision between a dust particle and a droplet is present when the droplet and dust are roughly the same size, avoiding the slipstream effect," Peterson reminded. "If we can increase the chances of collision with a given particle size, we improve the effectiveness of the suppression."

Designed without any moving parts, the intrinsically safe DB-R is intended for elevated mounting. It requires no electrical power or compressed air. The water supply hose is connected directly to male pipe threads on the ring: 3/4" NPT for the 17" model, and 1" NPT for the three intermediate sizes: 22.5" (57.2 cm), 25.5" (64.8 cm) and 42" (106.7 cm). For large applications, the company also offers the 100" diameter model, which is supplied by a 1.5" NPT hose.

Available options for the DB-R include a booster pump to elevate low water pressures, a variety of nozzle sizes and configurations, and a water filter. Customers can also order the units with a two-way valve and/or hose included.

The number and size of the spray nozzles vary by model. The smallest model features 30 brass nozzles that produce 3.25 GPM (12.3 LPM) of water flow. The 22.5" unit is designed with 18 medium-flow nozzles, with a water usage of 11.34 GPM (42.9 LPM). The 22.5" and 42" models feature 30 high-flow nozzles that deliver 18.9 GPM (71.5 LPM), and the 100" size employs 84 nozzles for a whopping 52.92 GPM (200.3 LPM) of water delivery.

Dust Control Technology is a pioneer in dust and odour control solutions for coal handling, mining, recycling/scrap, construction, demolition, and rock/aggregate processing. The company's DustBoss® product line helps reduce labour costs vs. manual sprays, freeing up manpower to concentrate on core business. The automated units also use less water than fire hoses and sprinklers, while avoiding over-saturation, with some customers realizing payback in less than six months and netting an annual cost savings of more than $50,000.

RDS launches Loadmaster iX range of on-board weighing systems

RDS Technology, the UK based on-board weighing specialist, has announced the launch of the new Loadmaster iX range of on-board weighing instruments for wheeled loaders.

Loadmaster iX benefits from additional standard features including temperature compensation enhancing system performance particularly on machines with a wide variation in operating temperature and angle compensation providing an additional level of precision beneficial on most sites and not only those with obvious slopes.

In addition, the Loadmaster iX range offers effective management of weighing data. The Loadmaster 8000iX has an integral SD card port for the fast and efficient transfer of data between loader and weighbridge or office PC and enables pre-registered customer reference data to be uploaded directly to the instrument.

Also available is the trade-approvable Loadmaster 9000i. When fitted to a wheeled loading shovel, this on-board weighing scale effectively transforms the loader into a mobile weighbridge which conforms to MID Class Y(b) levels of accuracy.

The company has recently gained approval via the UK National Measurements Office to self-verify its instruments. Subject to formal training by RDS, this approval extends to all EU RDS distributors. This will dramatically speed up verification times and reduce end user costs.

For further bespoke data management options, the Loadmaster 9000i DMM features an extended data-handling module. This has been specially designed with the integral SD card port central to the system. Up to six separate reference fields for each truck loading cycle can be stored in a comprehensive database for detailed record keeping. The details of each field can be uploaded to the instrument from the SD card or programmed onto the card directly through the instrument. The card exports the weighing data into an Excel compatible file, ready for use with company invoice and record systems. Such product traceability makes it ideal for material handling applications in demolition operations, recycling plants and other potentially harmful or toxic areas.

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Highlight of the month

A further advantage of the compact system is the energy savings: Other shuttles available on the market weigh between 12 and 15 tons, and because of this are heavy and not very flexible. With a tare weight of only a half a ton, the shuttle system of the compact warehouse equipment is energy saving and can react quicker than the technology previously known. The drive power of the compact warehouse system lies at about 2.5 Kilowatt in comparison to the 70 Kilowatt of a satellite system.

SMB optimizes warehouse technology with Truck-shuttle system on every level

The **SMB Logistics GmbH** has been building compact warehouse technology for the past 15 years, and has now constructed a system, which enables the electronically controlled placement and release of pallets in vertical and horizontal directions on multiple levels. In the high rack, up to 200 pallets can be moved per computer every hour – with a minimum staff level.
A forklift places the pallets on to the lowest level of the handling technology where it is mechanically centralised. After this has been completed the pallets are then scanned, placed on the next level by the vertical transporter and allocated the optimal rack position. Because there is a truck for every storage level that brings the pallets to the storage positions, the loading and offloading of pallets can take place simultaneously. This fact results in enormous cost and time savings for the user. An intelligent controller developed by SMB is responsible for the most effective positioning and automatic relocation.

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E-Crane 'open house' well attended

President Mark W. Osborne addresses the 150 people who attended the banquet.

E-Crane International USA Inc. held an 'open house' in late October last year, at its headquarters in Galion, Ohio. More than 200 people attended the event, which included a tour of the facility, a banquet attended by 150 people, and opportunities to see and experience a 700 Series E-Crane in action. A product demonstration of scrap handling was conducted every half hour, and attendees could board the E-Crane to see it working from the operator's perspective.

"We held this 'open house' to show our very sincere appreciation to our staff, friends, their families and others who do such a great job of helping us engineer, promote, sell, install and service the full line of E-Crane products," president Mark W. Osborne said, "They've all been crucial in helping us grow tremendously during our 12-year history. We've sold and installed many E-Cranes throughout North and South American and such far-flung places as the Congo River in Africa," Osborne added. "In addition, our parts and service people are ready to accommodate our customers at a moment's notice 24/7 at any E-Crane site. This means that many of our engineering and service people are often away from home, sometimes for extended periods. We truly appreciate and value the support they get from their families in these travel times."

The E-Crane product line includes five series of machines based on capacity requirements: 700, 1000, 1500, 2000 and 3000 models for scrap handling and off-loading or trans-loading bulk materials from barges and ships up to Panamax class. Modular construction enables custom solutions with off-the-shelf components.

Product demonstrations were conducted every 30 minutes with a 700 Series E-Crane.

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Dunlop announces major new investments

At a time of global economic uncertainty, Netherlands-based Dunlop Conveyor Belting is bucking the trend by making the biggest single investment in its history. The new investments, totaling some €6.4 million, are designed to increase current capacity as well as adding a brand new product to its already comprehensive range of rubber multi-ply belting.

The first phase, costing some €2.5 million, is the addition of a new, 12-metre-long 'double-daylight' press, which will produce rolls of up to four metres in diameter (20 tonnes) at a width of up to 1,400mm. Director of production, Michiel Eijpe, says that the press will be at least twice as efficient as current presses. "We urgently need to improve our capacity to keep up with customer demand, particularly our ability to make more 800 to 1,400mm-wide belts," explains Eijpe. "Increasing capacity also means that we can further reduce lead times for our customers, which will give us yet another edge over our competitors".

The second part of the programme is an investment of €3.9 million to build a new, 100-metre-long production hall on the existing site. Here Dunlop plans to install a steelcord production line that will be linked to its newest press, which itself was only installed as recently as 2009. The new production line will be used to produce steelcord belting for the first time ever in Holland. Although actual production is not expected to begin before September next year, sales and marketing director Andries Smilda already has eyes on winning new market share. "This will create a whole new dimension to our sales efforts. A great many of our customers use steelcord as well as rubber multi-ply belting so we have a ready-made target market to attack".

Up until now, supplies of steelcord belting for Dunlop's existing customers have largely been produced by Fenner USA. "Although the quality is excellent " explains Smilda, "The limitation on sales is mostly due to the shipping costs from North America, which puts us at an immediate price disadvantage. With our own steelcord production located in Europe we will be able to be much more aggressive and responsive".

Network expansion

At the same time, Dunlop continues to expand its network of Dunlop Service centres, which provide a 24/7/365 belt fitting service. Having already successfully established centres in Holland, Spain, Poland, Morocco and two (Bergamo and Sicily) in Italy, Dunlop has recently opened another service centre in Tenerife in the Canary Islands.

Although Tenerife may at first sound like an unusual location for a conveyor belt business, the local market is surprisingly big. Dunlop Service Canary (through its acquisition of a long-standing vulcanizing company) has instantly established itself as the major player throughout Tenerife itself, Lanzarote, La Gomera and Fuerteventura. There is also a strong connection between the islands and countries on the west coast of Africa.

With such ambitious plans, the future continues to look very positive for Dunlop Conveyor Belting.

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Triple Point Technology acquires QMASTOR

Triple Point Technology, a major global provider of software to manage commodities and enterprise risk, announced in mid-November last year, that it has acquired QMASTOR Limited, a noted provider of mining software solutions to manage the tonnage, quality, and value of coal and mineral supply chains from 'pit' to the point of export, import, or consumption.

QMASTOR's mining supply chain solutions are used to manage over one billion tonnes of coal and mineral movements per year. The company, headquartered in Newcastle, Australia, supports its global client base through regional offices located in Africa, South America, and North America. QMASTOR's clients are some of the most prominent natural resource companies in the world and include BHP Billiton, Rio Tinto, Vale, Anglo American, Xstrata, and Peabody Energy.

Coal is a large, important, and fast-growing element of the energy supply mix. Driven largely by rapid population and income growth in developing nations such as China and India, world-wide coal consumption rose by 7.6% in 2010. In the last decade alone, China's coal usage more than doubled, and last year, it became a net importer of coal despite its huge reserves. India also has large and growing energy requirements and relies on coal for 55% of its needs. The rapid growth in global coal consumption is expected to continue for the foreseeable future.

"Our product strategy is to provide the deepest functionality, from upstream to downstream, in each commodity class. Given the importance of coal to future global economic growth, the addition of QMASTOR to the Triple Point portfolio is extremely compelling," said Peter F. Armstrong, president and CEO of Triple Point Technology. "QMASTOR solutions are a perfect addition to the Triple Point portfolio in that they supply all the functionality to optimize an end-to-end coal and mineral supply chain, while at the same time being completely complementary to the rest of the Triple Point product set."

The companies' complementary customer bases, target markets, and product sets create substantial opportunities for continued and accelerated growth in combined market share, revenue, and profit. The outstanding financial performance of QMASTOR — in terms of strong revenue growth, healthy profit margins, and a solid balance sheet — underscores the suitability and attractiveness of the transaction for both Triple Point and QMASTOR employees and customers.

QMASTOR managing director, Trent Bagnall, has been named Triple Point's managing director of coal and mineral supply chain solutions. "This is exactly the right time in the life cycle of QMASTOR to become a part of Triple Point," said Bagnall. "Integrating with a larger, successful organization gives us the resources and reach to accomplish our ultimate goals. This is an important time in the mining software market, and our joining-of-forces will underpin and accelerate our growth."

About QMASTOR

QMASTOR Limited is a prominent provider of mining software solutions to manage the tonnage, quality, and value of coal and mineral supply chains from 'pit' to the point of export, import, or consumption. QMASTOR's advanced solutions manage and optimize all aspects of mining supply chains including mine planning and scheduling, material tracking, logistical movements, 3D stockpile modeling, grade control, blend management for coal, and other minerals such as nickel and iron ore. QMASTOR also offers solutions for managing port operations and metallurgical accounting. The metallurgical accounting solution supports multiple metals including gold, silver, titanium and platinum.

About Triple Point Technology

Triple Point Technology® is a major global provider of software to manage commodities and enterprise risk. The company provides innovative solutions to competitively address the complex commodities value chain: mining, buying, selling, trading, and procurement; enterprise risk management; scheduling and logistics; storage; processing; and settlement and accounting. Triple Point's Commodity Management platform enables over 300 customers in 35+ countries to profitably manage exposure to energy and raw materials across industries, including energy, metals, minerals, agriculture, transportation, shipping, consumer products (CP), discrete manufacturers, and big box retailers. Triple Point was named a 'Leader' in Gartner's ETRM Magic Quadrant for its completeness of vision and ability to execute in 2009, 2010, and 2011. Founded in 1993, the company employs over 700 staff in 17 offices and support centres around the globe.

Cargotec opens new Marine Service office in Lithuania

Cargotec has opened a new marine service company: MacGregor BLRT Baltic UAB in Klaipeda, Lithuania. The company is a joint venture owned by Cargotec (51%) and Western Shipyard (49%), located in Klaipeda.

"This joint venture with the major shipyard owner in Baltic — Western Shipyard — is a natural continuation for Cargotec's Marine Service development in the Baltic countries where Cargotec has a good market share with MacGregor products and services," says Kimmo Huhtala, branch and sales manager at Cargotec's Marine Service.

"In Baltic, cargo access equipment repairs and annual maintenance are mainly carried out during dry docking repairs at the yards rather than having the repairs done in ports between the voyages due to ships' tight time schedules. With this new joint venture we can serve our dry docking customers now more efficiently both in Estonia and Lithuania," Huhtala continues.

Additionally Cargotec's customers benefit from expanded services in terms of long-term co-operation and partnership agreements with Baltic's major ship-repair yards. Cargotec's local offices take care of practically all cargo access equipment repairs on both ship repair yards; Western Shipyard in Klaipeda and Tallinn Shipyard.

Cargotec's Baltic joint venture companies operate mostly in the Baltic Countries Estonia, Lithuania and Latvia, but their services are also available for the whole Baltic Sea region.

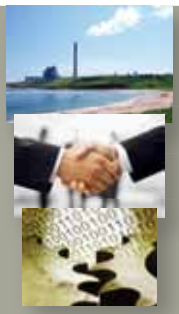
Mobile Sennebogen 880 M at Shoreham Port

The Sennebogen 880 Mobile currently used at Shoreham Port in England is the world's largest and unique mobile material handling machine. The 180-tonne machine is impressive in its size with a 26m range and a maximum payload of 30 tonnes. The investment made by Shoreham Port underlines a consistent focus on customer needs and future requirements in developing new business.

The new Sennebogen 880 Mobile was delivered with various attachments including a quick coupling system which enables fast removal and fitting. The range of attachments includes; 6.8m^3 clamshell grab, 20t hook, 30t hook and 10m^3 biomass grab. In addition to that the machine can also attach a semi-automatic timber spreader and 15-tonne capacity spreader beam. In combination with the excellent mobility of the 880 machine at Shoreham Port it is an extremely flexible solution to effectively load and unload ships with noticeably shorter turnaround times. The spacious and comfortable cabin provides the port driver the best possible working conditions. The optimum visibility, the sensitive control and the ergonomic arrangement of all controls ensure fast cycle times with high security.

Besides the new Sennebogen 880 Mobile Shoreham Port also utilize two 870 Special Mobile machines for port applications. The 880 M closes the gap to that of the large rope-operated mobile harbour cranes.

"Critical to the acquisition of all the machines was the fact that Sennebogen and Shoreham Port tailored the specification to suit the customers specific needs. With proven low maintenance costs and extremely positive support from the local sales and service partner E. H. Hassell & Sons now for over six years are also of enormous importance for us," said Alan Motterham, director of operations at Shoreham Port.



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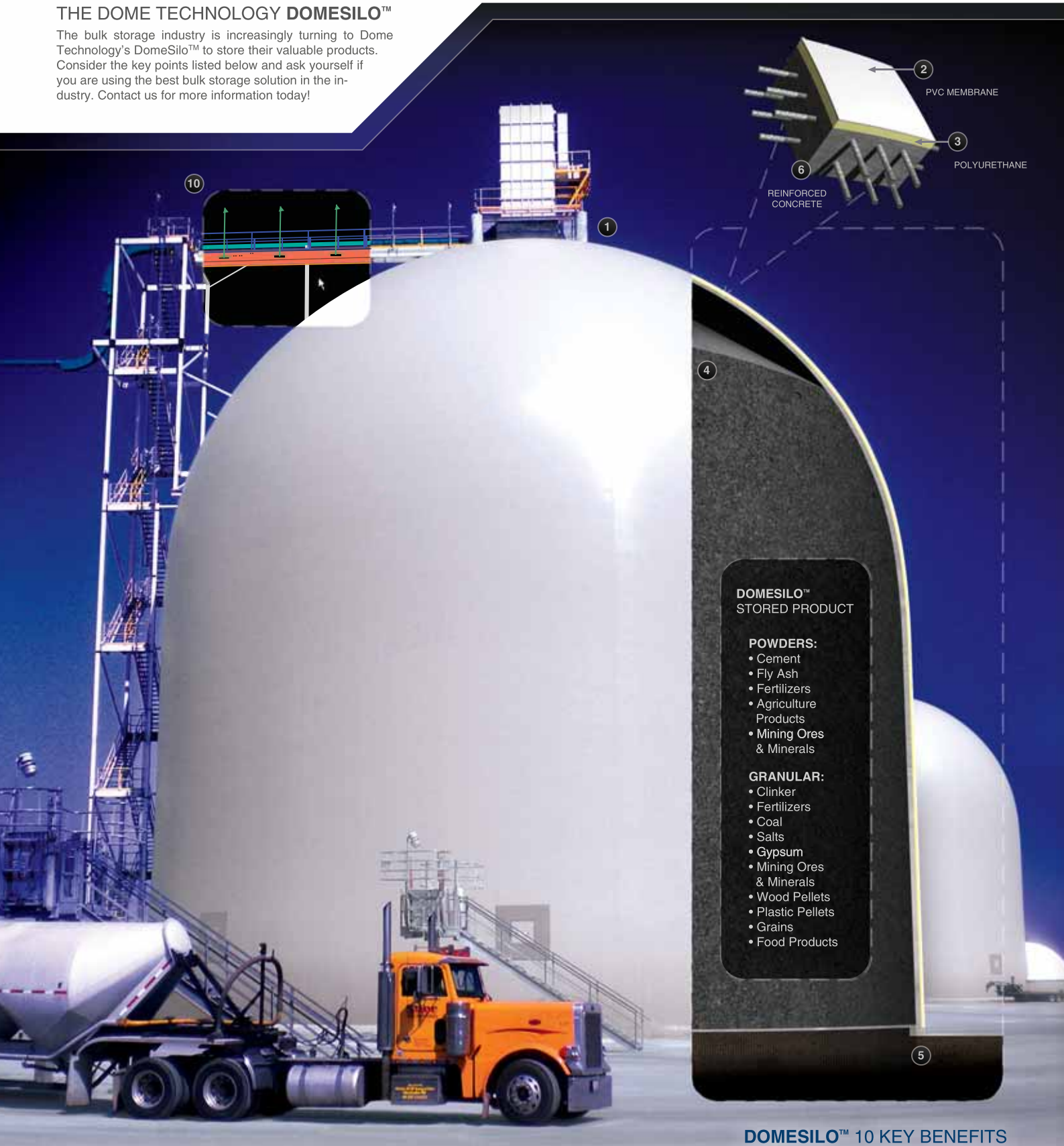

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Demag Cranes brings its bulk materials handling activities together in a Competence Centre

In mid-November last year, Demag Cranes has announced the launch of its International Dry Bulk Competence Centre with the aim of further expanding the company's activities in this sector. The centre is located in Banbury, United Kingdom, and will offer customers a complete bulk-handling product family ranging from mobile harbour cranes, portal harbour cranes and floating cranes to hoppers, conveyors, grabs and drive components.

Moreover, the centre will also supply customers with state-of-the-art software tailored to bulk-handling applications, expert consultancy services and service packages provided by qualified professionals. The International Dry Bulk Competence Centre is headed by Mark Reardon and will serve bulk terminals intending to expand or upgrade their facilities or material flows. Demag Cranes will offer them an innovative and reliable one-stop-shop approach. "Many terminals are currently sourcing equipment from a disparate range of suppliers with a view to configuring their own system using these different elements," explains Reardon. "Under the name of its leading brand, Gottwald Port Technology, and together with its software specialist subsidiary, DBIS, and a proven network of partners, Demag Cranes will be ideally placed to provide optimum solutions from a single source."

The Competence Centre indicates a major commitment by Demag Cranes in developing its long-term bulk-handling strategy with a view to positioning Gottwald as a leading brand in this rapidly expanding market: "Dry bulk is the largest seaborne commodity, driven by increasing demand for energy and food resulting from continuing growth in global population," says Giuseppe Di Lisa, senior vice president of Port & Intermodal Cranes. "Our Dry Bulk Competence Centre will help terminals to master the challenges triggered by this growth quickly and sustainably."

Gottwald — innovation leadership in bulk handling applications

Through its Gottwald subsidiary, Demag Cranes is a key supplier of products and services in the bulk handling market and stands for innovation leadership. With handling capacities of up to 1,850tph (tonnes per hour), depending on terminal and operating conditions, Gottwald four-rope grab cranes are the most powerful in the industry.

Around the globe, some 300 of them are in use moving coal, iron ore, gravel and agribulk rapidly and cost-effectively. An important factor affecting many clients' decisions in favour of Gottwald products is its electrical drive concept. It enables the crane to be operated from external power sources, which makes operation not only more economical but also more environmentally compatible. Apart from cranes, Gottwald's innovation leadership extends to other products, such as the new verifiable weighing system for mobile and portal harbour cranes.

Bulk-handling applications – a strategic pillar of the company's business strategy

Handling equipment for bulk materials is one of the corporate strategic pillars with regard to the company's aim of consolidating and expanding its position in the market. In 2010, bulk-handling applications represented a significant portion of the company's business, and the company intends to further extend these activities. The success achieved is based on the excellence of the company's own products and on joint operations with trusted partners, offering the same standard of innovation and quality as Demag Cranes itself. Due to such partnerships, Demag Cranes can, for instance, offer state-of-the-art hoppers and conveyors.

In addition, the acquisition of DBIS, a UK-based dedicated bulk terminal software provider, in spring 2011 has been a milestone on the way to becoming a provider of turnkey terminal installations. The new Competence Centre will draw together this comprehensive range of products and services in a single location, which will further underline the company's long-term commitment to bulk handling applications.

Bulk materials — dynamic growth in an expanding world

The Dry Bulk Competence Centre is Demag Cranes' sustainable answer to rising demand both from clients and partners — bulk applications are predicted to see major growth in the coming years. According to estimates, trade in seaborne thermal coal will increase from 680 million tonnes in 2010 to 1.1 billion tonnes in 2025. Key markets for coal will be China and India. A further example for anticipated growth is the iron ore trade, which is likely to increase by around 46% between 2010 and 2020. The market for dry bulk handling in general is expected to grow by 7% by 2015, due, on the one hand, to the booming Asian markets and, on the other, to the increasing world population, that will significantly increase the demand for grain.

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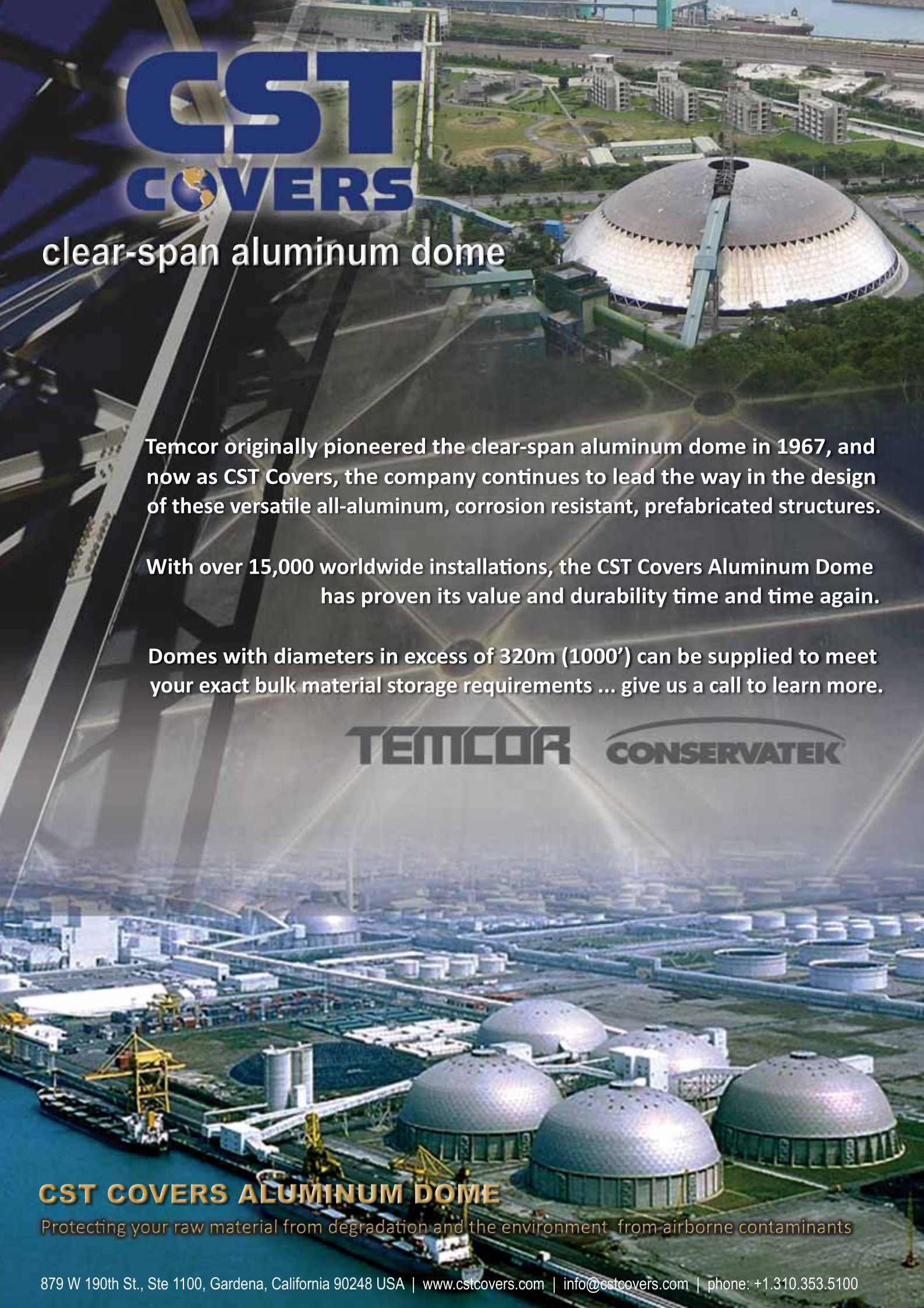
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Universal Liebherr crane sets new standards

In June last year OOO Liebherr-Russland and OOO Lukoil–Kaliningradmorneft signed a contract for a new combined mobile harbour and offshore crane to be delivered by the end of 2012.

The new crane is designed for two completely different types of application: on the one hand, the TCC 14000-400 D Litronic® can be used in harbours as a powerful crane for lifting heavy loads up to a maximum of 400 tonnes. On the other hand, it is possible to drive the crane onto a floating installation (barge) where it is fixed and used as an offshore crane under offshore conditions.

The crane is particularly notable for its design as it was developed using existing technologies from the offshore crane and mobile harbour crane product groups. For the undercarriage of the TCC 14000-400 D Litronic® the drive technology of a Liebherr mobile harbour crane was combined with a newly designed steel fabrication: it consists of a central X-shaped structure to which four outriggers are mounted. For travelling operation the base structure is fitted with 48 wheel sets as known from the conventional Liebherr mobile harbour crane. During crane operation the crane is propped up on support units situated at the end of the outriggers. The dimensions of the support base are 22m x 22m. Using a large number of wheel sets and accordingly large supporting pads the crane achieves equally low ground pressure values as a standard mobile harbour crane, not only while travelling but also during crane operation.

The TCC 14000-400 D Litronic® was developed under close consultation between Lukoil–Kaliningradmorneft and Liebherr–Werk Nenzing GmbH. The crane's wide variety of application possibilities mainly result from the close cooperation of two R&D departments — the mobile harbour crane and offshore crane departments.

In autumn 2011 the specialists of Liebherr-Werk Nenzing GmbH finished project documentation for the new crane. Production is now commencing.

TCC 14000-400 D LITRONIC® STATISTICS

Maximum lifting capacity	400 tonnes
Maximum outreach	70m
Maximum lifting height	68m
Dead weight	1,100 tonnes
Available	autumn 2012

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Conductix-Wampfler targets port sector after landing two major contracts

Mobile energy firm Conductix-Wampfler UK has landed two major deals in the ports sector.

The firm, which manufacturers at its Salford site, is a major producer of energy and data transmission systems for mobile machinery.

It is part of the global Conductix-Wampfler Group and is owned by the €800 million turnover Delachaux Group.

Conductix-Wampfler's UK managing director Alan Jones said the first order with DP World Southampton will see the firm replacing cable carrier systems on three ship-to-shore cranes.

Work will include pre-building festoons at the Salford site before shipping them to the south coast terminal for installation, which will also be undertaken by Conductix-Wampfler.

A further deal on the east coast will deliver a replacement heavy duty festoon system, one of the largest handled in the UK, for one of two coking grab cranes at the Humber Refinery.

Repairs will also be carried out to the festoon system on a grab crane at the North East location.

Jones said: "These latest contracts reinforce the firm's ambition to secure more work in the port, marine and offshore renewable sectors. Firms use us for our product and engineering expertise."

He added: "The work we are carrying out at DP World Southampton and the Humber Refinery will help to showcase the quality of our products. Our aim is to now forge greater links with other ports around the UK and build a reputation as a leading mobile energy specialist in this sector.

"In the future we expect to see great demand for work on RTG (rubber tyred gantry) cranes. Many of these cranes still rely on dirty diesel powered systems which are costly and not environmentally friendly. Conversion to our electric powered systems will dramatically reduce any port's carbon emissions.

"We believe Conductix-Wampfler is ideally placed to help firms tackle the challenge of becoming more environmentally sustainable while remaining energy efficient and cutting costs."

Conductix-Wampfler recently announced a 20% turnover surge, in the last 12 months, rising to £5.2m. It manufactures a range of products in Salford including conductor bars and festoon systems.

Jones said strong global export sales had driven growth with major deals signed in the rail, automation and utility sectors.

"Conductix-Wampfler continues to go from strength to strength," he said. "Recent contracts have seen our products used in China, India, Africa and Europe. We have a solid core of business which keeps the firm very stable. There are also a number of very exciting deals in the pipeline which could lead to decade-long contracts."

He added: "We benefit from having such a committed team of more than 30 people at our Salford base who are dedicated to delivering mobile energy solutions to businesses around the globe."

Conductix-Wampfler Operations is a major global supplier of mobile energy supply and data transmission systems. With about 1,000 employees around the globe, the division generated sales of more than £177 million in fiscal year 2010.

Conductix-Wampfler's core competence lies in the development, production, consulting and installation of solutions that provide tailor-made answers for all questions to do with energy supply and data transmission for moving consumers.

The customers include crane-construction companies, manufacturers of people mover systems, suppliers of conveyor technology, the automobile industry, machinery manufacturers and many more.

The company has expertise in providing engineering solutions for festoon systems, conductor rails, energy guiding chains, spring cable reels, motorized cable reels, slip ring assemblies and contactless power transmission systems.

AUMUND Fördertechnik makes new appointment

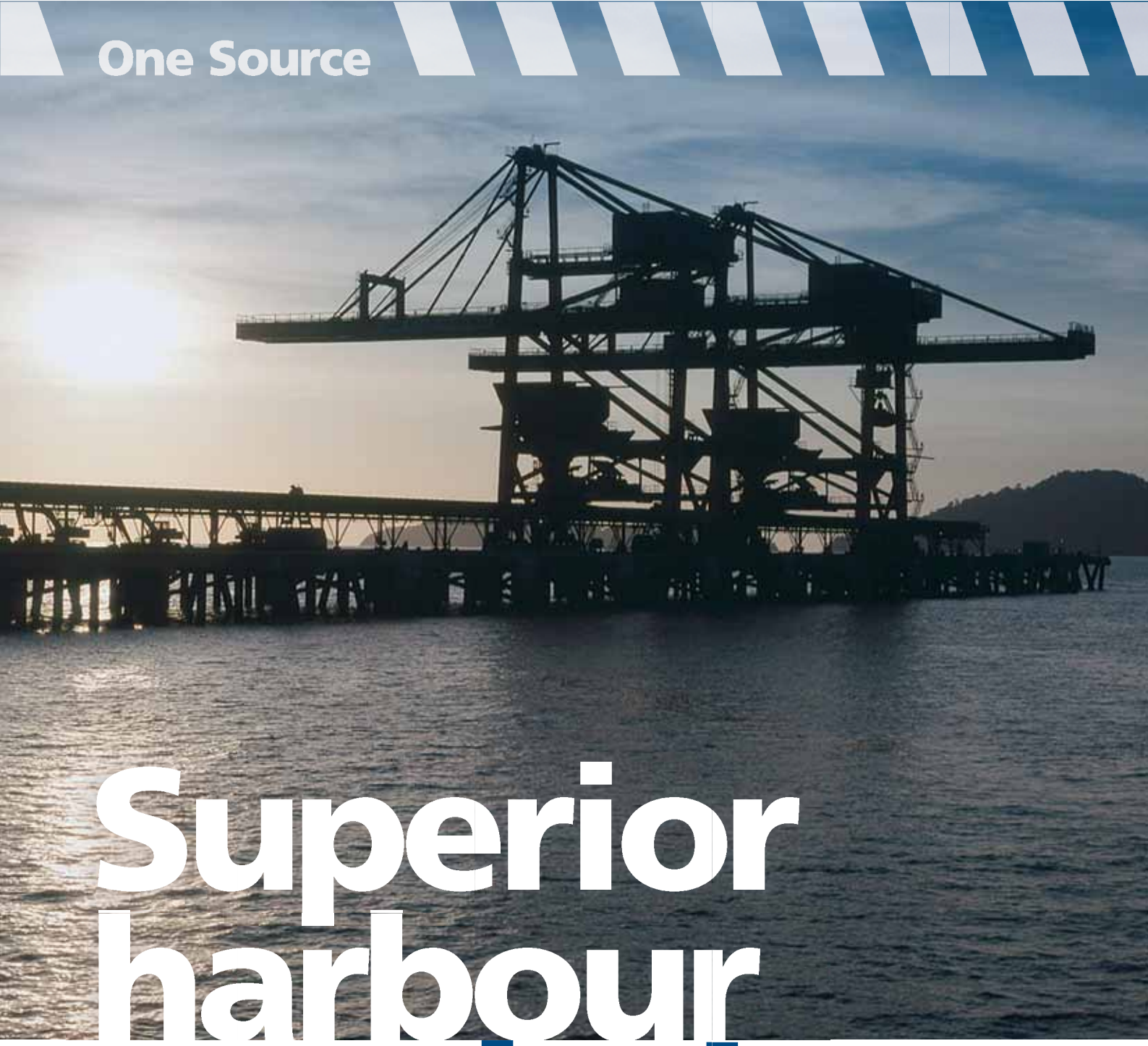
With effect from 1 September last year, Jörg Hoffmann (42) has been appointed as member of the management at AUMUND Fördertechnik GmbH. Hoffmann was previously a member of the management at SCHADE Lagertechnik in Herne which belongs to the AUMUND Group. In conjunction with Franz-Walter Aumund and Dr. Volker Brandenburg he will assume responsibility for the operational side of the business.

Born in Germany's Westphalia region, his professional career commenced in January 1998 in the role of sales manager at SMS AG in Hilchenbach. After further positions of responsibility in the USA and as a management board member both in China and Canada, he returned to Germany. In December 2008 he assumed a new management role at AUMUND affiliate SCHADE Lagertechnik in Herne.

SCHADE Lagertechnik, a company steeped in tradition, is among the leading manufacturers worldwide of equipment for bulk material stockyards and blending beds. Hoffmann made a decisive contribution to the company, being able to expand its position as leading supplier of equipment for stockyards and blending beds.

In his new position at AUMUND Fördertechnik GmbH he above all sees his task in the expansion of the internationality of the globally operating medium-sized company. His attention above all will focus on intensive cooperation with subsidiary companies in sales, purchasing and service as well as on the opening of new markets.

Besides managing partner Franz-W. Aumund, Dr. Volker Brandenburg has been a management member at AUMUND Fördertechnik GmbH since 2008. The business administration graduate is responsible for the domains of finances, production and administration.



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NBE system cuts operator interaction and increases capacity

National Bulk Equipment (NBE) has given *Dry Cargo International* details of a new fully automated, self-contained bulk material handling system which reduces operator interaction and increases process capacity to 12,000 pounds per hour.

This fully automated, self-contained, bulk material handling system completely manages material from the introduction stage, through discharge and conditioning, to downstream supply of finished material into manufacturing operations. Human interaction is limited to container loading and removal. The NBE lift-and-seal carriage receives each 1,450-pound container and precisely aligns and seals it to the custom, stainless steel discharge hood using an automatic centreing system. The 2,000-pound capacity lift carriage raises and rotates the container 180°, ensuring complete material discharge. The 100ft³-capacity, stainless steel receiving hopper with integrated agitator pre-conditions the material. A 9-inch diameter auger feeds pre-conditioned material to a high-capacity, dual-shaft size reduction crumbler for final conditioning of the material prior to pneumatic conveying to downstream process operations. High capacity, chain drive, live roller conveyors and 90-degree rotation turntables provide container indexing and accumulation. Electrogalvanized, zinc-coated, carbon steel conveyor rollers provide superior corrosion resistance and extended duty cycles in the harsh environment.

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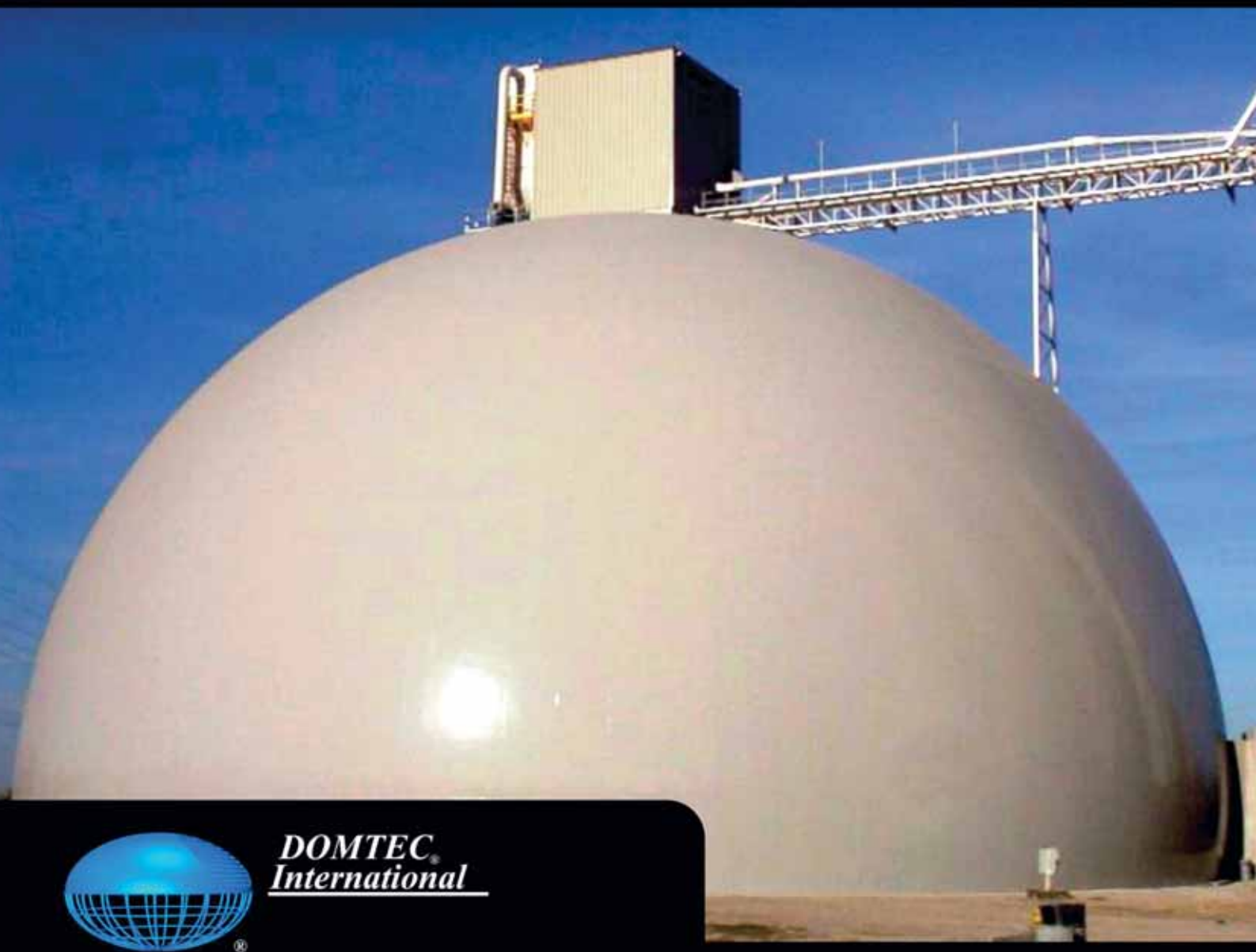

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Stewart Group invests in new technology at UK hub

International inspection and analysis specialist Stewart Group has made significant investment in its UK headquarters.

The company, which was acquired by global minerals expert ALS Group earlier this year, has extended its facility in Merseyside, UK, and invested in new state-of-the-art technology.

Stewart Group has invested almost £200,000 in the PANalytical Axios max-wavelength dispersive Spectrometer, which will supplement its laboratory instrumentation to provide reliable, accurate and fast analysis of metals and minerals. It will ensure the quality of reporting is as advanced as the markets demand.

The package includes an upgrade in Omninium and software that improves accurate semi-quantitative analysis.

The technology boost will enable Stewart Group to offer clients with pressing deadlines accurate analysis and rapid turnaround times.

Chris Walker, group general manager of Stewart Group Inspection and Analysis, said: "We are one of the foremost umpire and party analysis laboratories in the world. This investment in technology reaffirms our dedication to expansion and development. Our network of progressive laboratories will continue to develop and invest in advanced technology. "We will also be offering advanced training to our staff, to ensure they remain experts in the field of inspection and analysis."

Stewart Group has inspection and analysis laboratories in the UK, Rotterdam, Belgium, Germany and South Africa.

Moviter invests in the Angolan market

The official Hitachi Construction Machinery (Europe) NV (HCME) dealer for Portugal and southern Spain, Moviter, is expanding its operations into Africa. The Portuguese company is increasing sales within its European territories by focusing on after-sales for its existing customers and exporting its business activities into pastures new, such as Angola and other countries on the continent with historical and linguistic links to Portugal.

Moviter was established in 1989 as part of the Movicortes group and its mutually beneficial relationship with Hitachi was initiated four years later. It is based in Leiria, central Portugal, from where it successfully meets the requirements of its large national, supported by a strong network of branches (in Portugal and Madrid) and sub-dealers (in southern Spain).

There has been a huge investment in the Portuguese infrastructure over the past 20 years. This helped to create a relatively large construction market — for the size of the country — which wasn't sustainable in the long term. The leading contractors have therefore been forced to expand their activities elsewhere, with Moviter following in support of their fleets of Hitachi construction machinery.

It currently has customers with machines in more than 14 African countries, all requiring the Hitachi Support Chain after-sales programme.

Fortunately, Moviter already has a foothold in Africa, having been appointed as the Hitachi dealer for the Angolan market. This provides it with a strategic base, in which it has made a significant investment and from where it hopes to build a more significant commercial presence on the continent.

Angola was an obvious choice for Moviter, as Movicortes manager and board member, Arnaldo Sapinho explains, "Angola is a Portuguese-speaking country and it was a colony until 1975. This means that the language and similar culture are two of the main advantages that Moviter — and other Portuguese companies — have in trading with this huge African country.

"However, the 27-year civil war only ended seven years ago and this had a devastating effect on Angola's infrastructure. At that time, there was an intensive rebuilding programme that helped the construction market to recover. As well as public investment, there was an increasing trend towards privately funded housing and commercial construction projects."

In 2009, Angola suffered its own financial crisis when the price of oil bottomed out. With 95% of the country's revenue coming from this natural resource, it obviously had a further negative effect on the construction industry. The signs for recovery in 2011 are encouraging, as projects recommence and Moviter's existing and potential customers use subcontractors to complete the work on their behalf.

"As the Angolan construction industry starts up again, the companies who stayed in the country through these turbulent times have a distinct advantage," continues Arnaldo. "The big issue is trust, so we need to continue to build relations and then develop the network. We believe that the power of Moviter's organization and the consistency of the Hitachi brand will help the industry to believe, not just in the reliability of the machine, but also the level of service behind it."

Siwertell unloader specified to keep cement handling clean

Adelaide Brighton Cement's new enclosed Siwertell system from Cargotec will ensure minimal environmental impact when loading cement and clinker at its plant in South Australia.

Cargotec has won an order to supply Adelaide Brighton Cement with a Siwertell SSL 700 screw-type shiploader. A leading supplier of cement, lime and pre-packaged dry blended products into the South Australian market, and an exporter of cement to Victoria and clinker to Queensland, Adelaide Brighton Cement, specifically requested the Siwertell unit for its environmental credentials. The order is booked to the third quarter 2011 order intake.

"Our enclosed Siwertell system ensures minimal environmental impact for the owner," says Bertil Andersson, sales manager, Bulk Terminals. "And it has the advantage of being able to handle both cement and clinker. Also, we are able to minimize the company's disruption and modernization costs by integrating our loading arm system into the customer's existing loader structure, as well as integrating our control and power systems with the existing ones. The old arm system will be removed."

The new Siwertell unit will be located at Adelaide Brighton Cement Birkenhead Plant in the Port of Adelaide, South Australia. It will have a rated capacity of 900tph (tonnes per hour) for cement and 600tph for clinker.

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Martin Engineering opens new office in Lima, Peru

Martin Engineering, a major player in bulk materials handling technology has announced a new sales and service location, as it opens its offices in Lima, Peru. The new facility will provide products and technical support to the central and northern regions of the country, with plans to continue developing the emerging market in Bolivia. Martin Engineering Peru began operations in April of 2010 with the opening of its main office in Arequipa. With the addition of the new location, the company plans to divide the region into five territories to facilitate sales and track activities.

Martin Engineering has begun serving customers with a number of conveyor products and flow aids, such as belt cleaners, transfer point equipment, air cannons and dust containment products. "We are initially focusing our efforts on the cement and mining industries, including copper, gold, zinc, lead and silver operations," commented sales manager Jorge Manrique. "Once we are well established, we plan to expand our concentration to other industries, such as coal handling and rock/aggregate processing."

Plans are already in place to showcase Martin Engineering products in regional trade shows during the coming months, including Expomina 2011 in Lima and Extemin 2011 in Arequipa. Long-term plans include engineering and manufacturing facilities to deliver the firm's complete range of bulk material handling solutions to the growing Peruvian market, including railcar unloading products, engineered vibration and fugitive material control.

The company plans to utilize its expanded FOUNDATIONS™ Training Program to help introduce Martin Engineering technologies and educate the industry, focused on the design and development of more productive bulk material handling systems. The programme features three levels of training: Introduction to Conveyors and Conveyor Safety; Operation and Maintenance of Belt Conveyors; and Advanced Topics and Conveyor Engineering.

The FOUNDATIONS series has been teaching bulk materials handling personnel how to operate and maintain clean, safe belt conveyors for nearly twenty years.

Manrique said the Peruvian market represents a significant opportunity for the company, as increased industrialization and improved infrastructure continue to drive the country's development. "There is a definite need to introduce the latest bulk material handling technology to industries throughout the nation," he continued. "Peru is quickly gaining ground on neighbouring countries in a wide range of industries and applications, and the available natural resources are rich in minerals, fossil fuels and biomass products."

Peru is a representative democratic republic divided into 25 regions. Its geography varies from the arid plains of the Pacific coast to the peaks of the Andes Mountains and the tropical forests of the Amazon Basin. It is a developing country with a high Human Development Index score, which is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide. Peru is the third-largest country in South America, encompassing approximately 496,225 square miles (1.28 million square kilometres), making it about three times the size of California.

Founded in 1944, Martin Engineering is active in making bulk materials handling cleaner, safer and more productive. The company is headquartered in Neponset, IL, with global reach from operations in Brazil, China, France, Germany, Indonesia, Mexico, South Africa, Turkey, and the UK.

Hennlich Engineering seeks to extend its reach

Dust-suppression specialist Hennlich Engineering is currently striving to increase the reach of its products.

The company is an investor-engineering and production plant specializing in dust suppression. Its key production programme focuses particularly on loading spouts, which are used for the dust-free loading of bulk solids to cisterns, trucks, rail wagons, ships, and stockpiling facilities.

Other products manufactured by Hennlich Engineering include filter units that are used for belt conveyors transfer points; dedusting, silo dedusting application are also possible.

Hennlich Engineering's water guns (spray cannons) are very effective in combating dust on open piles of bulk solids or on demolition works.

Unless properly controlled, demolition work can cause devastating levels of dust. Hennlich Engineering offers dust suppression for demolition sites, as well as for use in ports and terminals.

As part of its portfolio of dust-suppression solutions, Hennlich Engineering also offers high-pressure fogging systems, dust suppressants for conveying systems such as belt, screw or pipe conveyors, elevators, steel silos, valves for bulk solids, storage domes, and so forth.

Apart from manufacturing its products, the company also ensures 'turnkey' deliveries according to customer requirements, including design, assembly and service.

The company's customer portfolio includes companies such as: cement plants, lime operations, coal power stations, heating plants, coal-cleaning plants, ceramics plants, quarries, mines, chemical factories, agricultural suppliers, manufacturers of fertilizers, granulation products, pellets and of dry mortar mixtures, building companies, manufacturers of rubble, sand and gravel, food processing plants, etc.

Hennlich Engineering is certified to ISO 9001:2008 and ISO 14 001:2004.

Terminal security company opens

smart-Tecs is a new terminal automation and security systems supplier formed to focus on growth opportunities for its current best-on-the market terminal gate and yard automation applications (smartGATE, smartOCR) and middleware integration platform, KPI reporting, hardware equipment installations, and 24/7 technical and maintenance support for clients at marine terminals, airports and railroad facilities worldwide.

smart-Tecs' current suite of well-established products includes smartGATE (terminal gate operating system), Lane Video Solution, Portal and Crane OCR Solution, smartWEB (Web-based appointment system, real-time tracking and steamship cargo management) and smartACCESS (terminal/site security and access control).

smart-Tecs will concentrate on developing new as well as evolving and growing existing advanced automated software products and security system for transportation industry. Opening its office on 30 November last year, smart-Tecs is headquartered in the San Francisco Bay Area and led by Dr. Eldar Sheykh-Zade, who has more than 25 years of experience in design, developing and managing enterprise software solutions.

World's largest range of hydraulic rotators

Indexator AB offers the world's largest range of hydraulic rotators. Indexator produces IR rotators which are suitable for scrap and general material handling. Using the highest quality manufacturing materials means that the IR rotator is an incredibly reliable and durable product. The IR rotators are available in different models, ranging from small to large sizes.

"When we choose materials, we have precise testing. The components must show excellent properties and definite durability over time. Our rotators help achieve high productivity and good profitability regardless of the machine, crane or grapple," says Indexator's Vice MD Gunnar Bålfors.

Rotator for material handling

The IR rotators are designed to be used in combination with large cranes and excavators. The rotators are primarily used within material/scrap handling, recycling and timber handling, areas which place extremely high requirements on function and operational safety.

"Our experience of tough material handling has really enabled us to understand the requirements of a professional rotator user. There are no shortcuts. We know that we have to work with the highest possible quality in all areas of product manufacture, from design and production to sales and service," says Bålfors.

Indexator's customers have a direct influence on product development and therefore work in close co-operation with the


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company. One of the many customers Indexator works with is Dennis Bergström at Dennis Logistics System AB.

"I started with an IR2 when it launched in 1995, which opened up a whole new world for rotators. The rotators are durable, solid, reliable and simply outstanding in their industry," says Bergström.

Options based on customer needs

The rotators consist of three main modules: the motor, main shaft and housing, which together create a compact body. The IR rotators are robustly designed and can tolerate heavy loads in any direction. One of the biggest advantages is that the resulting machine is a compact and protected design.

Security for customers

Indexator has an efficient spare parts system and an extensive network of service providers, giving customers the security they need. An example of this is the Indexator Service School (ISS), a training school for service technicians working in the repair and maintenance of Indexator rotators. The training is global, and eventually leads to accreditation.

"Our ISS training is tailor-made for the rotator models available on each geographical market, but also tailored to the participants' previous training. We annually train a large number of accredited service technicians to work with our rotators and we can see that the interest in training is steadily increasing," says Daniel Lindström, technical support manager.

Various IR models for material handling

The IR rotators are suitable for everything from basic tasks to the most demanding work applications, and are compact, low profile and robust. The IR rotators come in different sizes and models, with a variety of fitting and connection options to suit different tools and machines.

IR 10 and IR 10-5

The IR 10 is a strong rotator that can cope with heavy work despite its light weight — up to a 25-tonne hanging load. The IR 10-5 has a direct connection for five grapple cylinders, so no manifold block is needed for the grapple.

The IR 10.

IR 20 and IR 20-5

These rotators are adapted to withstand extreme dynamic forces. They can cope with a 45-tonne hanging load. The IR 20-5 also has a direct connection for five grapple cylinders.

The IR 20-5.

The IR 20.

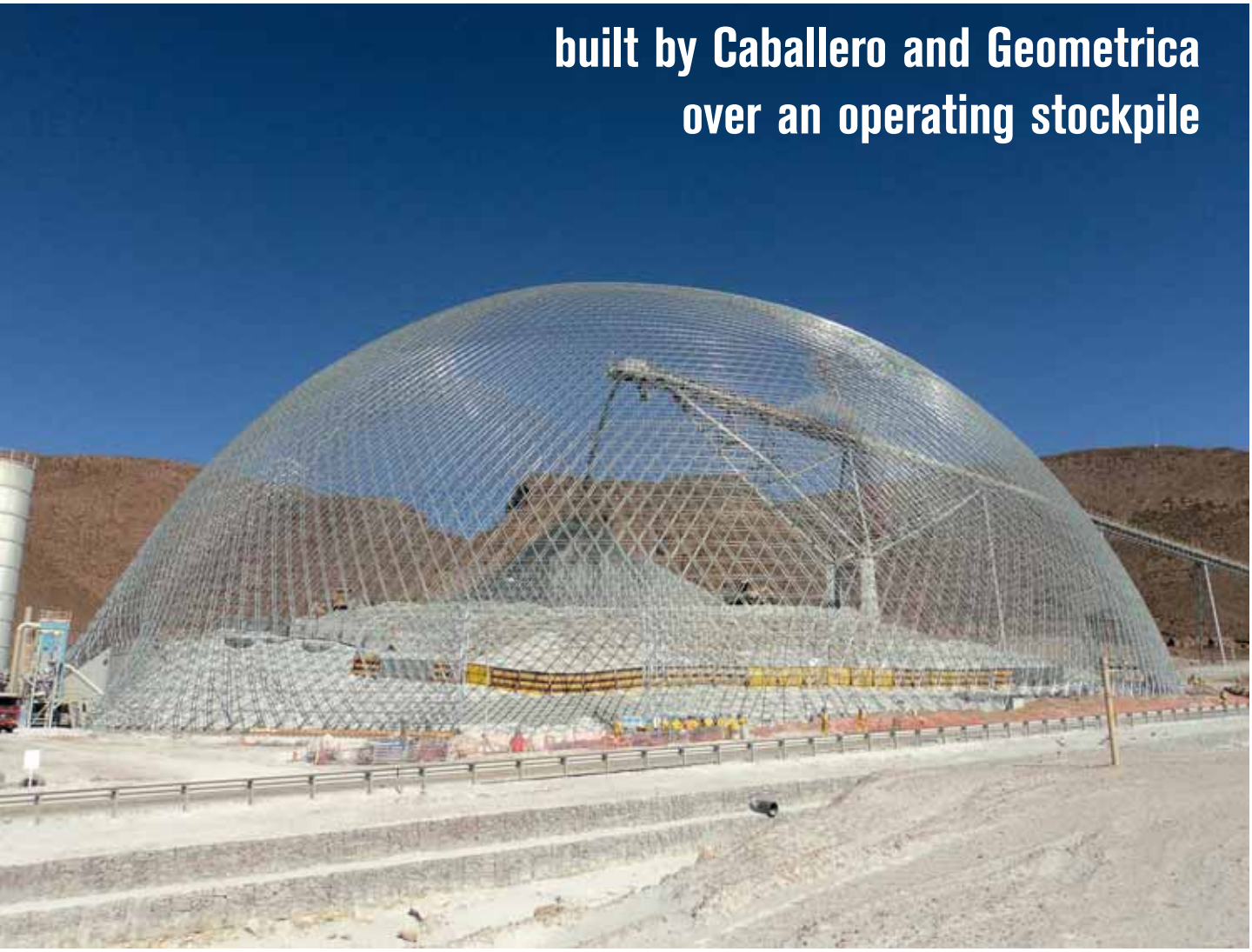
IR 25

This model is flexible and robust like the other models, but has integrated cylinder fixings with five direct connections for grapple cylinders. It can handle a 45-tonne hanging load.

The IR 25.

South America's largest dome

built by Caballero and Geometrica over an operating stockpile



Geometrica Inc. and Carlos Caballero SRL have created a rugged solution high in the Bolivian Altiplano.

Located over 4,000 metres above sea level in the Altiplano of the Andes Mountains, the San Cristobal Mine is the largest mine in Bolivia. The open-pit silver, lead and zinc mine's production process requires the transportation of 150,000 tonnes of rock, and the processing of 40,000 tonnes of mineral daily.

In early 2010, Bolivian contractor Carlos Caballero SRL responded to a bid request for a stockpile containment solution. Minera San Cristobal — in accordance with its principles regarding worker protection and protection of the environment and neighbouring communities — sought to prevent the release of dust from its stockpile into the environment, and protect the material awaiting transport to the mine's ore processing facility.

Caballero teamed with global storage company Geometrica, Inc. to propose a customized containment solution for the mine. Following review of the proposal and visits to other Geometrica bulk storage domes in South America by San Cristobal engineers, the project was awarded to the Caballero-Geometrica team. Caballero served as the main contractor and installer of the dome, while Geometrica, as a subcontractor, engineered,

PROJECT STATISTICS

Covered area	15,493m²
Surface area	25,340m²
Base diameter	143m
Height from base to apex of dome	59m
Weight of structural dome elements	523,400kg
Structural material	galvanized steel and aluminium
Number of tubes	88,329 pieces
Number of connectors	25,295 pieces
Cladding	galvanized painted steel and translucent panels

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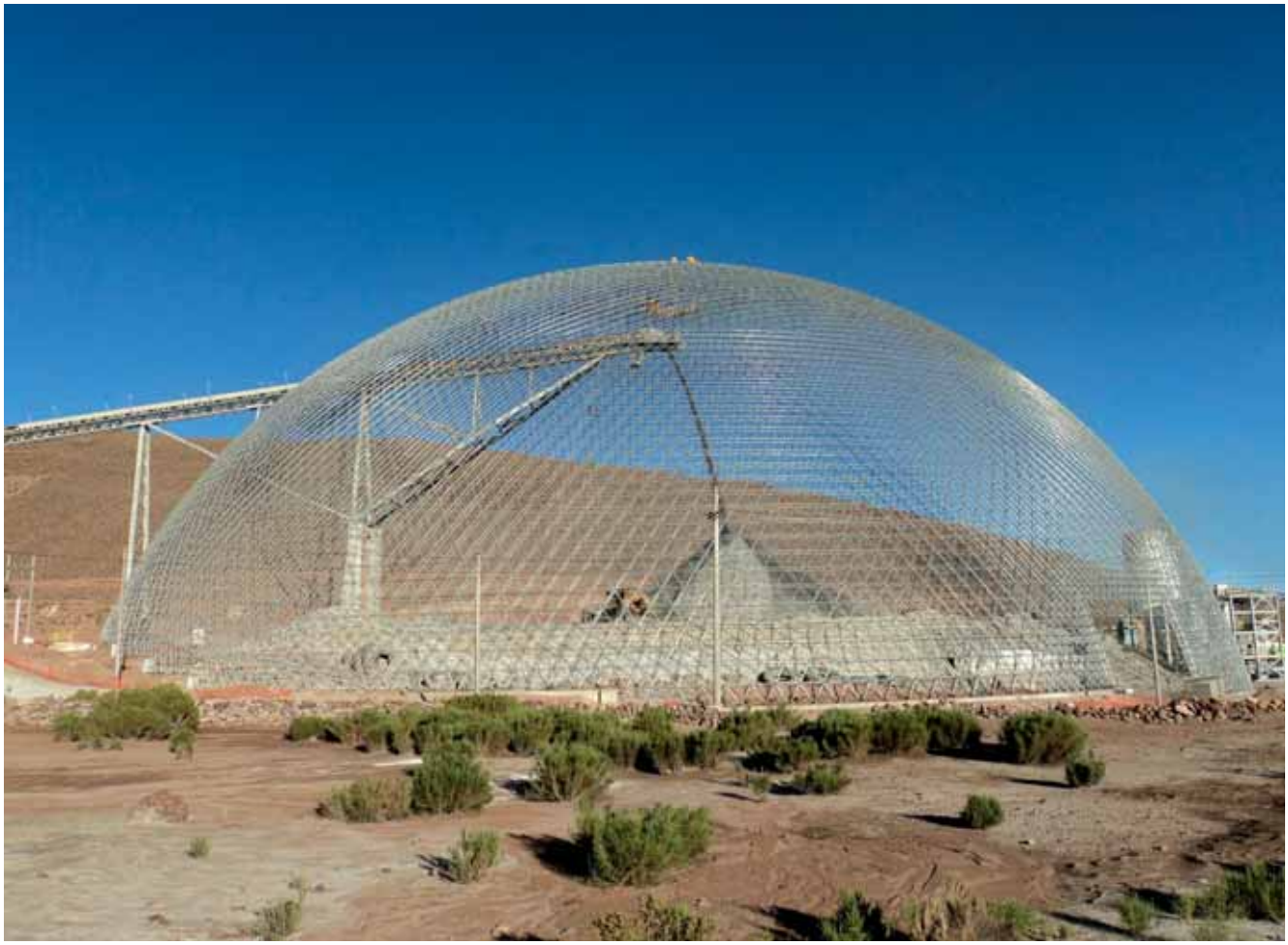
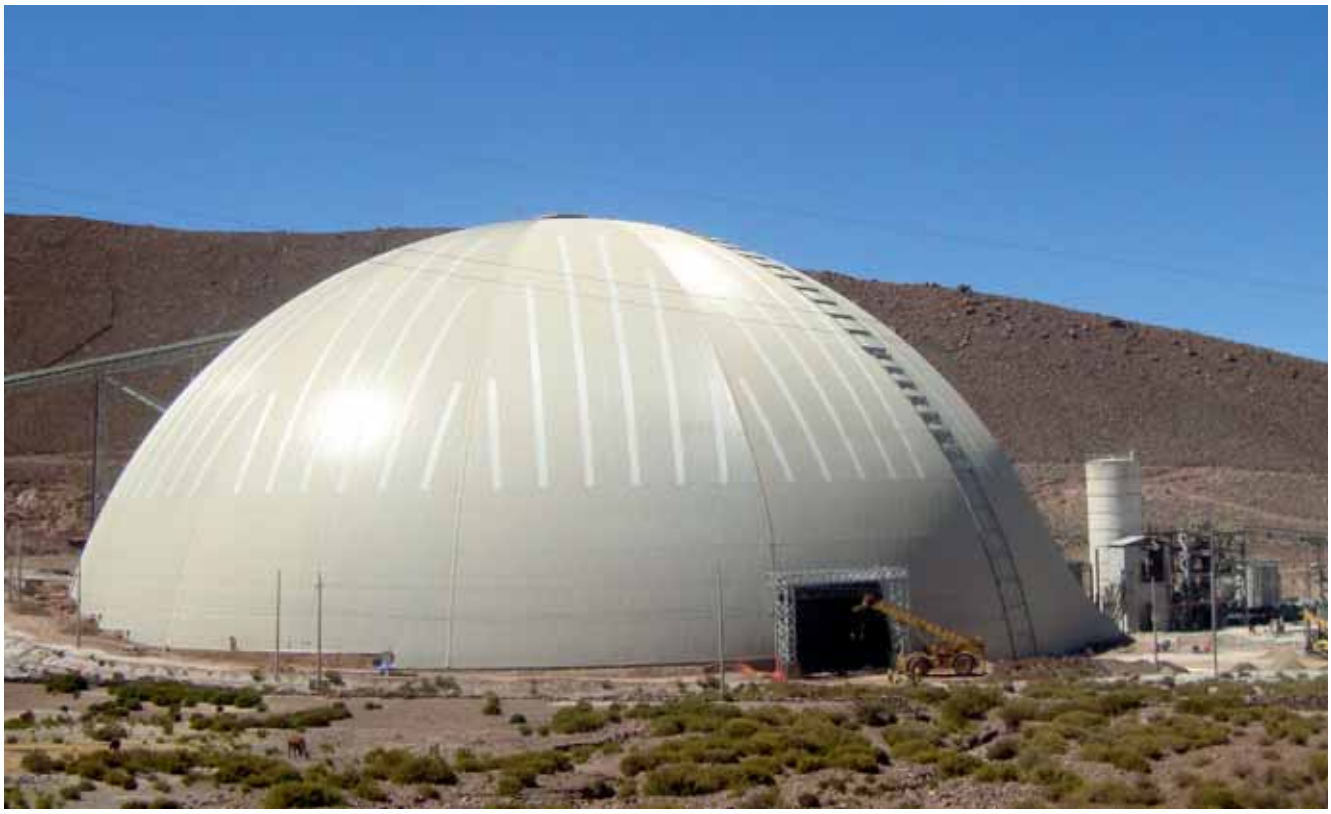


manufactured and supplied the dome. Key factors in the decision to employ a Geometrica dome solution for the site included the team's extensive experience, the capability to build around an operating stockpile, and the capability to follow an irregular shape for the supports.

The finished stockpile containment structure is a Geometrica dome 140m in diameter and 59m in height anchored by concrete foundation — the largest dome of its kind in South America. The foundation, which accommodates a 9m change in elevation over 140m, is fitted to the terrain. The dome is designed to withstand wind speeds of up to 150kph and an ice load of 110kg per square metre.



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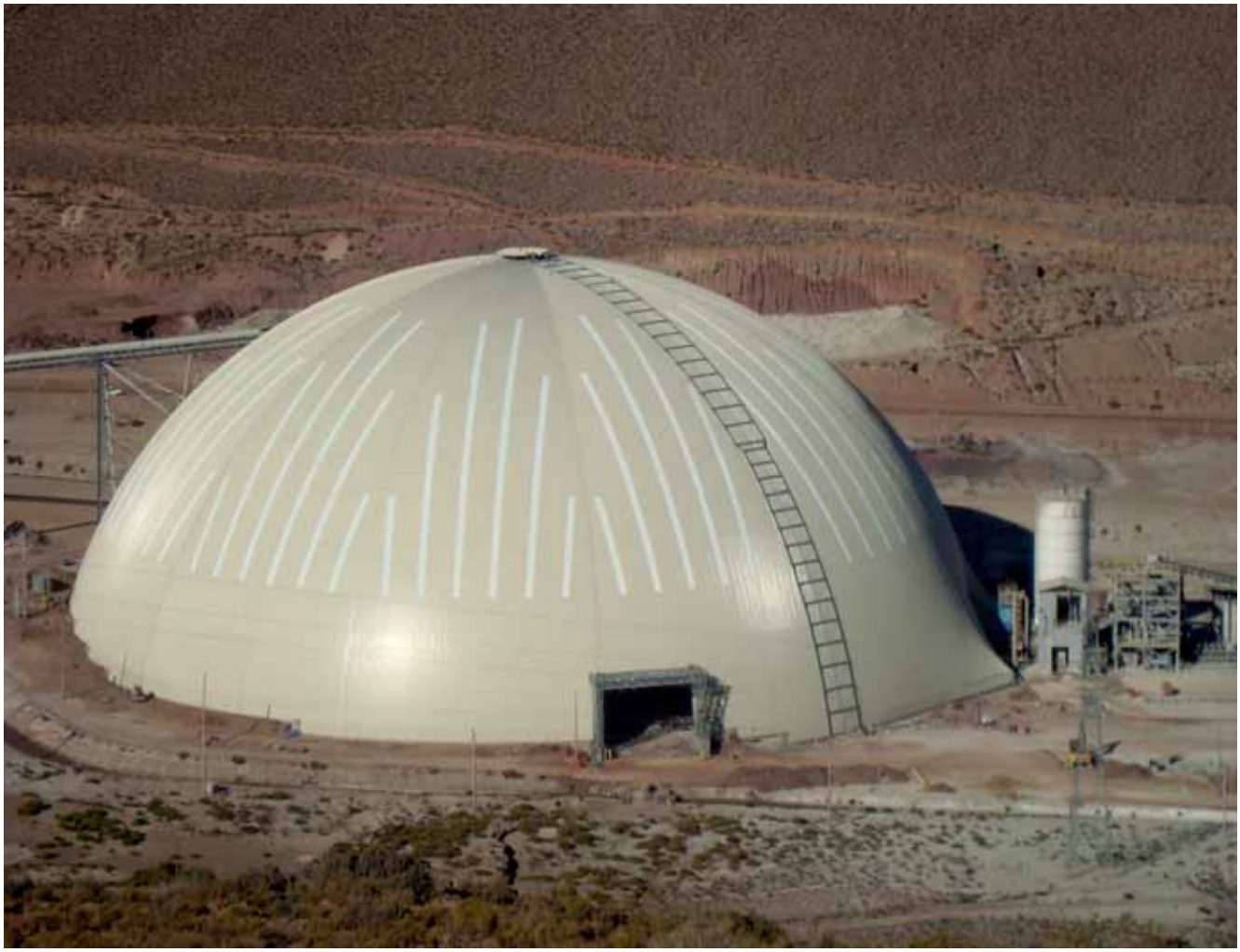

The Geometrica dome at San Cristobal Mine is made up of more than 88,000 galvanized steel tubes organized and inserted into aluminium hubs to form the structure. Local crews recruited by Caballero built the dome as deliveries by Geometrica arrived on site. Shipments consisted of containerized crates of parts, each holding 2t of structure, and organized by construction phase. The Geometrica system requires no welding, as the prefabricated tubes slide easily into the aluminium hubs and hold fast. The precise yet simple assembly process allowed the mine to continue to operate in the midst of dome construction and made it easier to assemble the building in an environment subject to high winds.

A ventilation lantern is located at the top of the dome and additional armature on the side of the dome can support dust removal equipment. The interior includes a system for lowering the material-conveyor pulley for maintenance, and a catwalk circling the dome interior. Three 13m x 10m doors allow simultaneous access by up to two off-road vehicles to the interior of the dome. The finished building is clad in galvanized and painted metal sheets and translucent skylights provide natural light. Material is transported from the dome to the mine's ore processing plant via an existing underground tunnel.

In addition to creating the largest bulk storage dome in South America at the San Cristobal Mine, Geometrica has designed more than 15 bulk storage domes for mining projects located in the Andes, where construction challenges include rugged terrain, remote jobsites and insanely high snow loads. Examples of recent projects include the Barrick Zaldivar Mine, the Mantos Blancos copper mine, both located in neighbouring Chile, as well as Minera Aguas Tenidas in Spain. Hundreds of Geometrica structures have been built for clients and end users around the world including BHP Billiton, Anglo-American, Barrick, Codelco, First Quantum, Fluor, Sumitomo, and other mining companies in locations ranging from the Sahara desert to the jungles of Borneo.

In addition to the solutions for irregular shapes, Geometrica offers containment solutions for automated, ring-shaped stockpiles and for spans of up to 300m. A precise design process, the ability to package and ship a complete structure by construction phase, and mechanical structural joints that do not require welding result in a durable structure that is easily built in a wide range of environments. DCi

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Digging deep

unloading with ease using continuous ship unloaders

Two 2,200tph Siwertell ST940-DOB unloaders in operation at Talin Power Plant, in Taiwan, exceeded expectations in a recent performance test.

Louise Dodds-Ely

Siwertell's superior coal handling capabilities ready to serve future demands

Cargotec is meeting the rising demands for coal handling with its unique Siwertell systems; these can handle the abrasive commodity at continuously high rates, and this year Cargotec will introduce 3,000tph (tonnes per hour) unloaders, *explains Anders Paulsson, sales manager for Cargotec Bulk Handling.*

The present planning and construction of a large number of new coal-fired power plants worldwide means a substantially increased future demand for coal. "This is a great challenge and means there is an enormous potential for new coal unloaders to be put into operation," says Paulsson. "Cargotec, with its unique Siwertell ship unloader programme is well prepared to meet this expected increase in demand and has developed efficient and environment-friendly, high capacity ship unloaders for coal."

Cargotec Bulk Handling operates under the well-known Siwertell brand name, which is recognized as one of the world's major dry bulk handling companies. The Siwertell product range for coal consists of screw-type and screw/belt-type ship unloaders and belt-type ship loaders. Based on the latest technology and design, Cargotec can now offer Siwertell continuous coal unloaders, with capacities up to 2,400tph, and coal loaders, with capacities of up to 4,500tph; both are capable of unloading/loading vessels up to 200,000dwt.

For coal, Cargotec Bulk Handling offers well-proven, high-capacity, efficient and environment-friendly Siwertell systems. In addition, it can deliver conveying systems and stacking/reclaiming and storage systems to provide complete bulk terminals for import, export, or transshipment.

"Quality after-sales service, combined with long-term support, is as essential as a quality product from the first contact through the entire lifetime of an installation, which is why

Cargotec Bulk Handling also focuses on this aspect of its business and provides the services and products needed to ensure long-term cost-effective and efficient operations," he notes.

Four 2,400tph Siwertell ST940-DOB unloaders in operation at Yonghung Power Plant, Korea.

R&D breakthrough

"Coal is an abrasive commodity and the high wear and rather short life-time of screw flights, was initially a big concern, but through intensive R&D Cargotec can now offer screw flights with a guaranteed life time of 10,000 hours, equal to unloading of 15mt (mt) million tonnes at an average rate of 1,500tph.

"In addition to the improvement of reduced maintenance costs, ship unloaders with a rated capacity up to 3,000tph will be offered by next year. These will meet the requirements for the bigger power stations and consequently their increasing demands for coal.

Clean coal-handling

Stricter rules and regulation for pollution levels have been implemented worldwide. "This means that dust free operation has become an increasingly important factor for all bulk operators today. Since the very beginning we have given the environmental aspect of ship unloading/loading a very high priority. Consequently, Siwertell ship unloaders and loaders are designed with totally enclosed conveyors and are well fit to meet the most stringent environmental rules and regulations. Subsequently Siwertell ship unloaders have permits to operate in places like for example California (USA), Germany and Singapore."

An impressive record

"In only the last ten years, more than 30 coal unloaders have been sold, of which, 24 are designed for capacities of 2,000tph or above. This is an impressive record and most likely makes the Siwertell coal unloader the world market leader," highlights Paulsson.

In 1982 the first two Siwertell continuous coal ship unloaders were delivered to Hsinta Power Station in Taiwan. Since then, more than 60 coal unloaders have been delivered and more than 600mt of coal have been unloaded by Siwertell ship unloaders worldwide. "By these references, it's clear that Cargotec Bulk Handling is one of the most experienced suppliers in coal handling."

In mid-2011, Cargotec conducted a performance test for the Taiwan Power Company at its Talin Power Plant, in Kaohsiung, Taiwan. The test was for two Siwertell type-ST940-DOB coal unloaders, each with a rated capacity of 2,200tph. According to the contract, the average through-ship capacity was guaranteed to be a minimum of 70% of the rated capacity.

Therefore, the two units with a combined rated capacity of 4,400tph, should, on average, be able to unload at a minimum through-ship rate of 3,080tph to fulfil this contractual obligation.

"The actual test result was well above expectations," notes Paulsson. "The average through-the-ship capacity achieved for the two Siwertell ship unloaders was 3,339tph, equal to 76% of the rated capacity. One Siwertell unit had an average capacity of 1,592tph and the other unit an average of 1,747tph, meaning that the latter unit had an unloading efficiency of no less than 79%. This is a record performance for a Siwertell coal unloader and probably the highest through-ship capacity figure ever achieved for any type or brand of coal ship unloader."

Cost savings in jetty construction

Due to its unique light-weight design the total weight of a Siwertell unloader is much less than the weight of a corresponding bucket chain type unloader. Weight comparisons for unloaders with a rated capacity of about 2,000tph and designed for unloading vessels up to 200,000dwt, have shown a weight saving of more than 50%. "This means that huge potential cost savings can be achieved in the jetty's civil construction work, and some clients have claimed that this has resulted in cost savings of about $5 million in the jetty construction."

Decades of experience boost VIGAN's presence in the CSU market

Going back in its history, major manufacturer VIGAN started manufacturing portable grain pumps which, today, are commonly known as its T100 or T120 'Mobiles'.

As the years went on, customer demand led VIGAN engineers to design a higher-capacity model, the 'Type 200' (see picture on p81). This unit can unload at a rate of up to 250tph (tonnes per hour) in suck-only mode, and handle commodities by gravity using an integrated belt conveyor.

The range of working modes has led to a high level of success. Over the past 40 years, there have been over 1,200 references throughout more than 80 countries. On quay or on vessel, with the appropriate accessories, these portable machines can handle cargo from vessels to trucks, from silos to trains, transfer from big vessels to barges…

Years have gone by since that model was developed, and VIGAN has significantly developed its range of equipment. Based on experience that it has gained in vacuum technology, VIGAN designed and manufactured its first gantry-mounted high-capacity pneumatic continuous ship unloader (CSU) in the late 1970s, which:

- is stationary or self-propelled on rails or tyres;
- discharges into trucks, rail cars or to quay conveyors (see illustration on p81);
- has an electrical or diesel engine, adapted boom length and many optional devices (such as operator's control cabin, radio remote control, special fire and explosion protection panels,

Siwertell

More than 300 Siwertell systems sold worldwide handle high-capacity operations with ease

Cargotec's land-based Siwertell ship loaders and unloaders can handle coal, cement, fertiliser, sulphur, grain or just about any other dry bulk cargo at about 2,500 tonnes per hour. Since 1974 over 300 systems have been delivered for operations throughout the world, demonstrating that our unique enclosed screw conveyor technology makes sure that dry bulk cargo handling is environmentally-friendly and efficient.

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The VIGAN T200, which can unload at a rate of up to 250tph.

winch for bulldozer, etc.);

VIGAN's engineering department has been continuously improving its own expertise with state-of-the-art design of major components such as:

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❖ VIGAN's CYCLONE: separates the mixture air-product by centrifugal action so that only air is sucked into the turbine. The products are then extracted by the airlock. Some air is sucked at the bottom of the cyclone to ease the downstream of the products into the airlock.

❖ VIGAN's AIRLOCK is one of the main parts of the machine.

VIGAN pneumatic rail-mounted CSU discharging grain into a quay conveyor at a rate of 400tph.

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VIGAN has sold one NIV 600 to the Electrabel co-firing power plant in Nijmegen in The Netherlands for unloading wood pellets from barges.

Its main goal is to evacuate the product while keeping the vacuum in the filter. Since any leak of pressure in the system would result in losses of efficiency, its design and characteristics are crucial. Thanks to its adequate dimensions, it can handle high quantities of products with a relatively low rotational speed.

❖ VIGAN's telescopic piping system, moving horizontally under the boom, and vertically from the boom into the ship holds. VIGAN has always focused on innovating about the wear-resistance of its piping, particularly on the Ni-Hard (nickel-chrome alloy) elbow which does not require any maintenance until 5mt (million tonnes) have been handled.

Originally, all VIGAN equipment was designed to convey dry agribulk cargo such as: all types of cereals, beans, seeds, and most of the raw materials for animal feeding. They also proved to be suitable for handling fragile products (malt, cocoa beans, etc.), certain chemicals (dense soda ash, alumina, urea, etc.), as well as many pelletized products (such as wood pellets for instance, which is a rising market). VIGAN has already gained significant experience in the handling of wood pellets, having sold one NIV 600 to the Electrabel co-firing power plant in Nijmegen in The Netherlands (see illustration above) and two NIV600 to the RWE co-firing plant in Tilbury/United Kingdom to replace two

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Purpose-built bulk handling and dredging cranes.

existing ship unloaders of bucket type for coal (see illustration below).

VIGAN's 'SIMPORTER' mechanical CSU has been designed to offer a very high capacity, with a discharging rate of up to 1,500tph (metric). It is particularly suitable for large bulk carriers up to post-Panamax. The twin-belt SIMPORTER technology offers major benefits: efficiency, cost-effectiveness (minimum energy consumption, reduced operational and maintenance costs) and environment-friendly qualities (minimum noise, dust control, etc.).

With its integrated Engineering Company, VIGAN is able to react rapidly to any customer's specific request. It always stays one step ahead in terms of improving its current technologies, or developing new ones.

VIGAN's offices and factory are located at the heart of Europe, 30km south of Brussels and one hour's drive from the Port of Antwerp, allowing fast logistical connections to any region of the world. All the company's activities take place on the same 10,000m² site, which enables easy and very quick exchange of information among all departments including sales, engineering, manufacturing, quality control and after-sales technical assistance.

Equipment that has recently been commissioned by the company includes:

- one NIV 400tph[1] in South Korea;
- the two above-mentioned NIV 600s for RWE in Tilbury;
- one rail-mounted NIV 400tph for Taiwan.

Recently awarded contracts, which are at various stages of development, include:

- one ship unloader and one loader for the south of France;
- six machines delivered to Egypt over December 2011 and January 2012;
- one further unloader for Bangladesh, strengthening VIGAN's presence in the country;
- one grain loader for a customer in the Balkans.

In November 2011, the maritime bulk industry recognized VIGAN's contribution to the market when the company won the prestigious 2011 IBJ Award for the 'Best ship loading/unloading system'. This acknowledgement of VIGAN's professionalism is very motivating in such a competitive world, proving that continuous efforts and experience are the pillars on which each company must continue building its growth.

1. Based on wheat (density 0.75)

VIGAN has supplied two NIV600 to the RWE co-firing plant in Tilbury/United Kingdom to replace two existing ship unloaders of bucket type for coal.

Indian order for enclosed unloader includes Siwertell Sulphur Safety System

Cargotec has received an order for a Siwertell ship unloader type ST790-D from the Indian Farmers Fertiliser Cooperative Ltd (IFFCO), Paradeep Unit. The enclosed screw-type unloader will be used to discharge rock phosphate and sulphur at a rated capacity of 1,800tph (tonnes per hour).

"IFFCO wanted a totally enclosed system for both environmental and safety reasons," said Anders Paulsson, sales manager, bulk handling. "The company specified a screw-type unloader for high efficiency and chose a Siwertell system from Cargotec because we have by far the most knowledge and experience of this technology — the first Siwertell system designated for sulphur was delivered in 1980. Of the four main types of continuous unloaders — screw, pneumatic, chain and bucket chain — only the Siwertell screw-type has been demonstrated to solve the three main problems caused by unloading sulphur: a high explosion risk, extreme corrosion, and stringent regulations for environmental protection."

Cargotec's Siwertell Sulphur Safety System ('4S') was developed to minimize the risk of explosions and detect fires. The 4S is designed to prevent sulphur dust explosions in the conveying line and to evacuate explosion pressure in case a dust explosion does occur, without causing damage to equipment and endangering the safety of operators, personnel and other facilities. To prevent explosions and fires, the Siwertell unit is equipped with nozzles that spray water at the inlet feeder and in the conveyor transfer points. An automatic lubrication system lubricates and cools down end bearings and intermediate bearings.

"Even with preventative technology in place, there are rare occasions on which an explosion occurs or a fire starts, so Cargotec has designed a system that reacts immediately upon detection and extinguishes any fire," Paulsson said. "Fire detectors along the conveying line automatically stop the conveyors and start spraying water from the fire extinguishing system. To manage an explosion, the conveyor's steel casings are reinforced with extra-thick steel, and explosion-venting valves fitted along the conveyors and dust collectors relieve pressure."

A specially-designed conveying line with stainless steel components ensures that a Siwertell unit is protected from corrosion and it is also practically maintenance-free.

This is the third reference for Siwertell fertilizer unloaders in India: in 2003 a 400tph Siwertell 490-F was delivered to Coromandel Fertilizers for unloading fertilizers and sulphur from 40,000dwt ships, and this was followed in 2005 by an order from Paradeep Phosphates for a 1,600tph Siwertell 640-D handling sulphur, phosphate and fertilizers.

Components for IFFCO's system will be manufactured in Sweden and China for erection on site in Paradeep Port, Orissa, India. With a delivery time of 12 months, the unloader is expected to be in operation by early 2013.

Cargotec wins a large contract for Siwertell ship unloaders from Morocco

Cargotec has recently won a significant order for two Siwertell ship unloaders to handle coal at Jorf Lasfar, on Morocco's Atlantic coast. The contract comes from the Jorf Lasfar Energy Company (JLEC) and includes repositioning two existing unloaders as well as installing the two new Siwertell units when they are delivered in 2013.

The unloaders will suit a new jetty belt conveyor system with an increased travelling length at the Jorf Lasfar coal-fired power plant, which is undergoing major expansion. Each Siwertell type ST 940-DOB unit will have a coal-unloading capacity of 2,400tph (tonnes per hour).

"Cargotec's Siwertell system is technically superior to the other systems offered: it is more efficient and environmental friendly," says Bertil Andersson, sales manager, Bulk Terminals. "Cargotec is the only provider of this kind of system with its performance proven by many references. In addition to technological advantages, Siwertell systems have a unique lightweight design offering weight-savings of more than 50 per cent in comparison with a corresponding bucket and chain type unloader." Cargotec has also just announced that its Siwertell Sulphur Safety System (see above), known as the 4S has won the *International Bulk Journal's* Safety in Bulk Handling award. The system is designed to minimize the risk of explosions and detect fires when handling sulphur.

The values of the Indian and the Moroccan contracts total approximately €40 million.

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TAIM WESER conveying system for acid plant

TAIM WESER has designed and supplied a dual phosphate conveying circuit for the TIFERT (Tunisian Indian Fertilizers) phosphoric acid production plant located in Skhira, in Southern Tunisia.

The phosphoric acid plant built by TIFERT (Tunisian Indian Fertilizers) in La Skhira, 300km south of the Tunisian capital, has been completed at last. After the delays encountered by the project due to the political instability in the area during the spring of 2011, the new plant is expected to start operating in the first few months of this year.

TIFERT entrusted the TAIM WESER Group with the design and assembly of the continuous conveying circuit which will carry phosphate mineral to the plant for subsequent treatment and transformation into fertilizer. This circuit is made up of 12 belts and has a total length of 1,317m and a belt width of 1,200mm. The belts travel at a speed of 1.5 m/s and have a conveying capacity of 800tph (tonnes per hour). The new plant will be capable of producing 360,000 tonnes of phosphoric acid per year and is part of TIFERT's overall plan for supplying fertilizers to the Indian market for the next 30 years.

For this turnkey project, TAIM WESER leads a joint venture together with the firm Socomenin, a top-level Tunisian company which specializes in industrial engineering and construction and has been in charge of manufacturing the local structures, assembly and commissioning, always under TAIM WESER's supervision. On the other hand, TAIM WESER has been responsible for designing and supplying the commercial elements and key components as well as for supervising all the processes. Assembly has already been completed, and testing is to take place in the near future; the no-load tests in the first place, and then the appropriate load tests.

TIFERT is the first company to be made up of two Tunisian state enterprises and two Indian companies. This plant will permit to transform the mineral and to directly export the fertilizer instead of the raw material. This will generate a significant added value, boosting the Tunisian industry's

competitiveness and encouraging the inflow of capital and the creation of jobs.

The phosphate conveying process step by step

The process starts in the goods-wagon unloading station, measuring 300m in length, which is equipped with a hopper capable of unloading up to two 20-wagon trains. A total of 117 pneumatically actuated gates have been installed at the bottom of the hopper, whose opening/closing and opening degree can be controlled from a computer programme installed on a PLC. The extraction capacity of the conveyor belt underneath the seals can be thereby controlled. The said control programme has been integrally developed at TAIM WESER.

Next, the phosphate is dropped onto the extractor belt, which is installed in a 10m-deep concrete tunnel, and is then transferred to another conveyor that takes it to the surface. From there, the material goes through a vibrating screen in order to remove possible foreign material that might have accidentally entered the product, and is subsequently carried by two circuits: the first one leads to the plant, and the second goes to an intermediate buffer yard where it is stored. This yard has a capacity of 60,000 tonnes and is made up by a 100m belt that circles through drums. The material at the yard is collected by means of power loaders that feed two hoppers which discharge onto a circuit belt.

Finally, before entering the production process proper, there is another 500m^3 concrete silo which is fed through the top by a moving belt, which is reversible so as to increase the silo's loading capacity. Beneath it, two rotating extractors are installed, the purpose of which is to preserve the integrity and properties of the material. Lastly, these extractors dump onto two belts that take the phosphate inside the plant in order for it to be transformed.

The circuit with all its components

On designing the phosphate conveying system for the La Skhira plant, TAIM WESER took into account both the material to be conveyed (wet phosphate, phosphogypsum and neutralizing salt) and the moisture thereof — around 15% — and the desert climate of the area. Based on this, the company has supplied the components needed to build the circuit, which includes: the unloading station with 117 gates, including an opening, closing and flow-control pneumatic and electronic control system as well as its (2, 110kW) compressors, tanks, piping, valves and the PLC. In addition, two rotary extractors, 12 conveyor belts of different lengths — two of which convey two process by-products (neutralizing salt and phosphogypsum), seven transfer towers, one screen, one radial stacker to make up the buffer yard, two loading hoppers, one moving silo-loading belt, one magnetic separator, and ten block and tackles.

As mentioned above, the assembly of the circuit was affected by the events that took place in Tunisia at the beginning of 2011, which paralysed the country's activity for over a month. This standstill especially affected industrial activity and, in particular, the progress of the onsite assembly works, so much so that normal work rate did not resume until four month later. All in all, the plant is expected to come into operation halfway through 2012. DCi

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Jay Venter

Grabbing the future with Kröger Greifertechnik

When large amounts of materials need to be moved, large machines are needed. This is where KRÖGER Greifertechnik GmbH & Co. KG comes into play. The company, situated in Sonsbeck, Germany, specializes in the development and production of grabs.

KRÖGER Greifertechnik, a part of Elbe Industrietechnik, was founded in 1962 as Kröger KG. In the 1970s it first started working on grab technology. Beyond developing and producing its own grabs, KRÖGER Greifertechnik also modernizes and repairs grabs from other manufacturers. Spare parts for its grabs are available for up to 30 years.

KRÖGER Greifertechnik develops three different grab systems: cable grabs, motor-powered grabs and hydraulic grabs. The material capacity of these products varies from 0.6m^3 to 35m^3

"We offer maintenance-free models, which in turn means significant time advantages because short transit to times are hugely important today," explains Christoph Smets, managing director. That is good news where the grabs are in use. About 60% of production ends up in port handling, and 25% is waste incineration. The remaining 15% finds application in gravel handling.

Latest models

KRÖGER Greifertechnik's latest innovations are its KMH and KZH models. Both models are hydraulic grabs, but they differ

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greatly in design and application. The KMH is a multiple-jaw system with four, five or six sections. It is used in ports and harbours for handling various forms of scrap, such as wood chips or shredded materials. The KZH is a two-jaw design. While it also finds use in ports and harbours, the KZH is applied to bulk loads to transfer them from ship to ship or ship to silo, for instance. Both grabs have a design that is weight optimized, yielding maximum utilization of the machine load capacity.

Aiming even higher

Globalization is boosting the need for equipment in ports, and despite efforts to recycle, waste disposal is an issue throughout the industrial nations. According to Smets the current situation provides good opportunities due to the trend towards hydraulics. He adds, "A central sector is waste disposal, an eminently important topic for Europe and Asia. Altogether 16 of these grabs will be delivered to China this year yet to three waste incineration plants."

The 50-strong team at KRÖGER Greifertechnik brought in €8 million last year, but that is not enough for the company. "We want to increase this turnover significantly by expanding our export," says Smets. And there are plans for that.

Exports expansions on the horizon

Currently the company exports about half of its production. It supports its customers with a sales force primarily in Central Europe: Germany, France, Switzerland, Austria, the Czech Republic, Poland, Denmark and the Benelux countries. Potential customers lie further afield, however. KRÖGER Greifertechnik sees itself in Turkey, Hungary, China and India in the future, and the way to get there is through its partners. The grab specialists make contact with new partners at trade fairs. They can be found at the Bauma in Munich, as well as at regional fairs and shows with trading partners. KRÖGER Greifertechnik's target groups include port operations as well as waste incineration plants and their OEMs, such as crane manufacturers and gravel quarry operators.

Partnership benefits

Smets says it pays for other companies to partner up with KRÖGER Greifertechnik. "We see ourselves as partners and problem-solvers," says Norbert Bollen, technical director and authorized representative. "Time pressure plays a large role in that. We want to increase our flexibility with respect to customer-specific specification. It is flexibility that has led the company to its success so far, and it is also the best route for further success.

"In the future we would like to be able to produce grabs without having orders," adds Bollen. "We also want to be able to produce for stock." It is a goal worth grabbing for.

As a member of the corporate group of Elbe Industrietechnik, Kröger can offer far more value added services beyond the supply of grabs. Together with its sister companies, FMS and Oswald Metzen, it is possible to provide multiple products and services in the field of material handling, plant engineering and industrial service.

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The first existing robot filling line was bought by Vinnolit in Gendorf Germany, a market leader in PVC.

NORDENIA Worldwide

NORDENIA INTERNATIONAL AG is a worldwide operating manufacturer of flexible packaging, technical films, and product components. The management headquarters of NORDENIA INTERNATIONAL AG are located in Greven in the state of North Rhine-Westphalia in Germany.

Two specialist working together

Nordenia Deutschland Emsdetten GmbH, a member of NORDENIA INTERNATIONAL AG, a specialist in the production of all kinds of FIBCs (flexible intermediate bulk containers) and Reis Robotics in D-Obernburg, specialist in robot technology, have developed the world's first fully automatic 4-loop FIBC handling system, with both companies sharing the patent.

All steps of big bag filling are included:

- first, an integrated camera system focuses on the FIBC (big bag) and finds the centre of the bag;
- the robot takes the FIBC to the filling station, connects the filling pipe, then connects all four lifting loops to the suspension and fills the bag up to a certain weight;
- then after the closure is automatically done, the FIBC is set down on a wooden pallet and transported out of the filling line. Stacking of two FIBCs on each other is possible; and
- in the meantime, the next FIBC is searched for by the robot and the procedure starts again.

Company structure

About 3,000 employees work for NORDENIA in Germany, Spain, Hungary, Russia, Poland, and outside Europe in the USA, China, Malaysia, and Australia.

The NORDENIA INTERNATIONAL AG management is headquartered in Greven, North Rhine-Westphalia, Germany. The group-wide strategic process and product developments of NORDENIA INTERNATIONAL AG are situated in NORDENIA TECHNOLOGIES GmbH.

Company development

Peter Mager founded the company Nordenia Kunststoffe Peter Mager KG in 1966. He had the idea of producing plastic bags instead of wire and plastic packaging for the peat industry.

The company, which started off with eight employees, has developed into one of the leading films companies in Europe, with about 3,000 employees today.

Robot connects the big bag to the filling station.

Filling spout is closed by drilling first and then with plastic clip.

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A quick and strong grip, dynamic maneuvering and exact positioning: these are what make handling cargo in ports profitable. And the materials handling specialists at Terex® Fuchs make it happen with convenient handling, impressive performance data, legendary reliability and high lifting capacities throughout the entire working range as well as ergonomic, safe work at an eye level of up to 9 meters – as is the case for the MHL 380XL. Your individual needs are our blueprint. At Terex® Fuchs, your machine is equipped on request with the special features you require. www.terex-fuchs.com

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- Special equipment: We equip each machine according to your specific requirements

READY FOR THE FUTURE

The new MHL350 complies with TIER4i/IIIB

TEREX® | FUCHS

WORKS FOR YOU.

New MHL350 mobile loading machine from Terex® Fuchs

The innovative MHL 380 combines the perspective blue evolution technology with a concentrated increase in performance and new futures.

The new MHL350 loading machine from Terex® Fuchs demonstrates environmental friendliness in two respects. Firstly, its restless run on the scrap yard contributes to recycling loop efficiency, raw materials reuse, and conservation of resources. Secondly, the innovative BLUE*EVOLUTION* technology of the MHL350 sets new sustained benchmarks for environmental conservation and climate protection. The MHL350 is one of the first mobile loading machines worldwide that fulfils the TIER4i/IIIB requirements and is already outstanding in achieving the minimum emission values which will be required by 2014.

Despite drastically reduced emission values, the user does not need to make any compromises in machine performance. In fact, thanks to the sophisticated BLUE*EVOLUTION* innovations, the developers have managed to reduce the consumption and to increase the power output to full 160kW at the same time. This success results from a perfect combination of the newest filter technology, a highly-efficient turbo-loader and an extremely powerful cooling unit, which always keeps the engine at the ideal temperature. The lowest emission, the minimal consumption, a strong performance and the excellent reliability typical for Terex® Fuchs are features which characterize the new MHL350 as a future-oriented investment object in all respects.

MHL 350 blue evolution

MHL350 PERFORMANCE DATA AND EQUIPMENT FEATURES:

- **New sustainability:** Terex® Fuchs BLUE*EVOLUTION* technology reduces carbon-dioxide-, nitric-oxide- and carbon dust emission to an ecologically compatible minimum
- **Capital investment set for the future:** MHL350 is already starting to take responsibility towards the 2014 Emission Standard
- **Ideal for scrap yards:** With a 16m working radius and an operating weight from 32 to 37.5 tonne, the machine is optimally suitable for scrap yards applications
- **Reducing emission and costs:** Significantly decreased consumption to both preserve the environment and to helping reduce the operational costs
- **Noiseless power increase:** A smoothly running and powerful 160kW engine together with powerful hydraulics has plenty in reserve for a quick handling of high loads
- **Proven reliability:** The extremely robust steel structure and first-class machining quality of all components ensures a high loadability and long life-cycle
- **Comfortable and safe:** Due to the height adjustable cabin with large windows providing a perfect overview, ergonomic and comfortable cockpit, as well as both sensitive and precise controlling devices and a clear plain-text display, the MHL350 machine provides a safe and comfortable workplace ensuring optimal productivity.

History

As early as in the 1960s, the Fuchs excavator 301 was one of the biggest-selling and most popular excavators on the market, and in 1975 the company received a patent for the newly developed hydraulic-lift and slewing cab. No wonder, then, that even today the company culture reflects a high degree of innovation.

Bigger is better – the Sennebogen 870 at Goeyvaerts in the Port of Antwerp

The Port of Antwerp is the largest port in Belgium and the second-largest port in Europe, based on the freight quantity in tonnes. A wide variety of different goods are handled here, such as fertilizers, grain, kaolin, coal and ores, coffee, iron and steel products.

Goeyvaerts R. has been active as a service provider at the Port of Antwerp for over six years, specializing in efficient high-performance handling of the delivered goods and relies on Sennebogen for this task. The company now has a fleet of 12 Sennebogen machines in different sizes and designs, which are rented, with or without a driver, to companies at the port for efficient material handling. The new Sennebogen 870 M Special, for example, is used mainly to load fertilizers via a hopper or onto a HGV with a 5m³ clamshell grab. This machine can process up to 700t of material an hour. Another new addition to the machine park is the Sennebogen 860 Mobile with 21m banana boom, the new Skylift III cab and 1.5m pylon. Sales and service partner is VCM Cramat.

"We chose the Sennebogen 870 because it allows us to unload even large ships quickly. This means that we can cover an even larger range for our customers. The extremely robust mobile undercarriage makes the device extremely flexible," says Kevin Goeyvaerts of Goeyvaerts R.

Sennebogen 880 on the high seas

In matters relating to hydraulic engineering, La Dragaggi s.r.l. is the first port of call and one of the most important companies in Venice. With modern machines and several ships, La Dragaggi covers a broad range of uses, including all kinds of dredging work, sand and stone extraction and filling for beaches or artificial islands and much more.

The company is active throughout Italy and beyond. To reduce the time it takes to carry out the various tasks, La Dragaggi s.r.l. recently decided to replace an old crawler excavator with a new Sennebogen 880. This machine was mounted as a permanent fixture on the ship *Gino Cucco*. The 880 became extremely popular in the team within a short period of time. The gigantic machine offers outstanding performance, is easy to operate and highly efficient. With a 29m special equipment with straight jib provides the necessary grab depths with impressive loads. The machine is needed every day for demanding hydraulic engineering tasks and is specially designed and built to meet these challenges. The sales and service partner Cesaro Mac Import won an important customer with La Dragaggi and the company now has a highly effective solution in place in the form of the Sennebogen 880 as a ship-mounted machine.

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saves **up to 50 %** operating costs

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saves **up to 33 %** energy

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High performance in port handling

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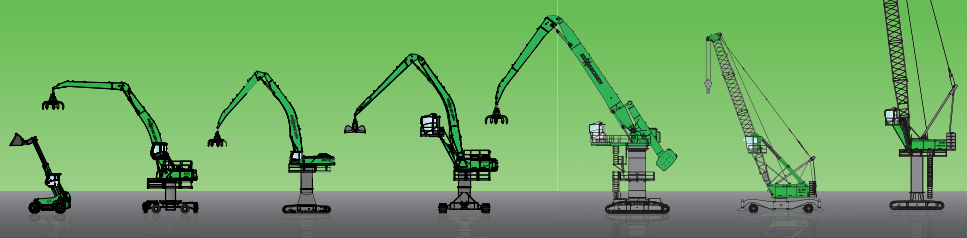
- **Energy-saving:** all machines with electrohydraulic drive solutions as option
- **Modular design:** manifold and flexible solutions
- **Wide product range:** designed for extreme requirements in port material handling
- **High Quality:** robust controllable technology, made in Germany



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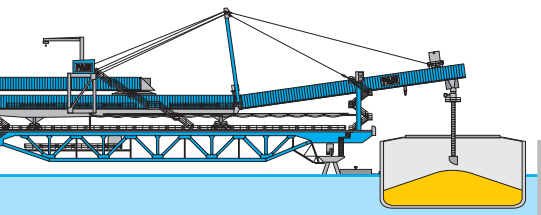

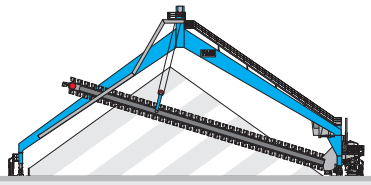

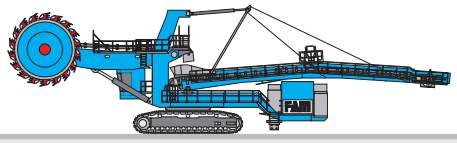

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Recent deliveries by FAM

FAM circular stockyard for sulphur.

Circular stockyard and shiploader

FAM supplied and commissioned a circular stockyard and a quadrant radial-type shiploader to Abu Dhabi (see picture above).

The 132m-diameter circular stockyard with a storage capacity of 140,000 tonnes is intended for sulphur handling.

The scope of delivery comprises not only design and engineering, manufacture and commissioning, but also comprehensive training of the operating and maintenance personnel on site.

Minera Esperanza, Chile

As part of the initial development of the Esperanza mine operated by Antofagasta Minerals, FAM supplied a long distance conveyor with a centre distance of 3,500m and a conveying capacity of 7,000tph (tonnes per hour) as well as the entire in-plant conveyor system consisting of another 27 belt conveyors in the capacity range of 500–7,000tph. See picture below.

The system is designed for copper ore and copper concentrate transport. It fully satisfies the high safety and environmental requirements typical of opencast mining.

For copper concentrate handling in Michila, the mine's port, FAM delivered a shiploader with a capacity of 1,000tph and a belt conveyor system.

FAM conveyor system at Minera Esperanza, Chile.

Vale Onca Puma, Brazil

FAM bridge-type bucket wheel reclaimer for nickel ore in Onca Puma, Brazil.

The Vale mining group has concluded service contracts with FAM covering the continuous maintenance of the conveying systems deployed at the stockyard in Onca Puma, Brazil. A slewable stacker and two bridge-type bucket wheel reclaimers for nickel ore are at the heart of the complex stockyard equipment.

The functionally critical assemblies of the FAM stockyard equipment, specifically the bucket wheel reclaimers, were manufactured in FAM's parent plant in Magdeburg and shipped from Germany to Brazil.

Achenbach Metalltechnik reveals new conveyer hood that opens on both sides

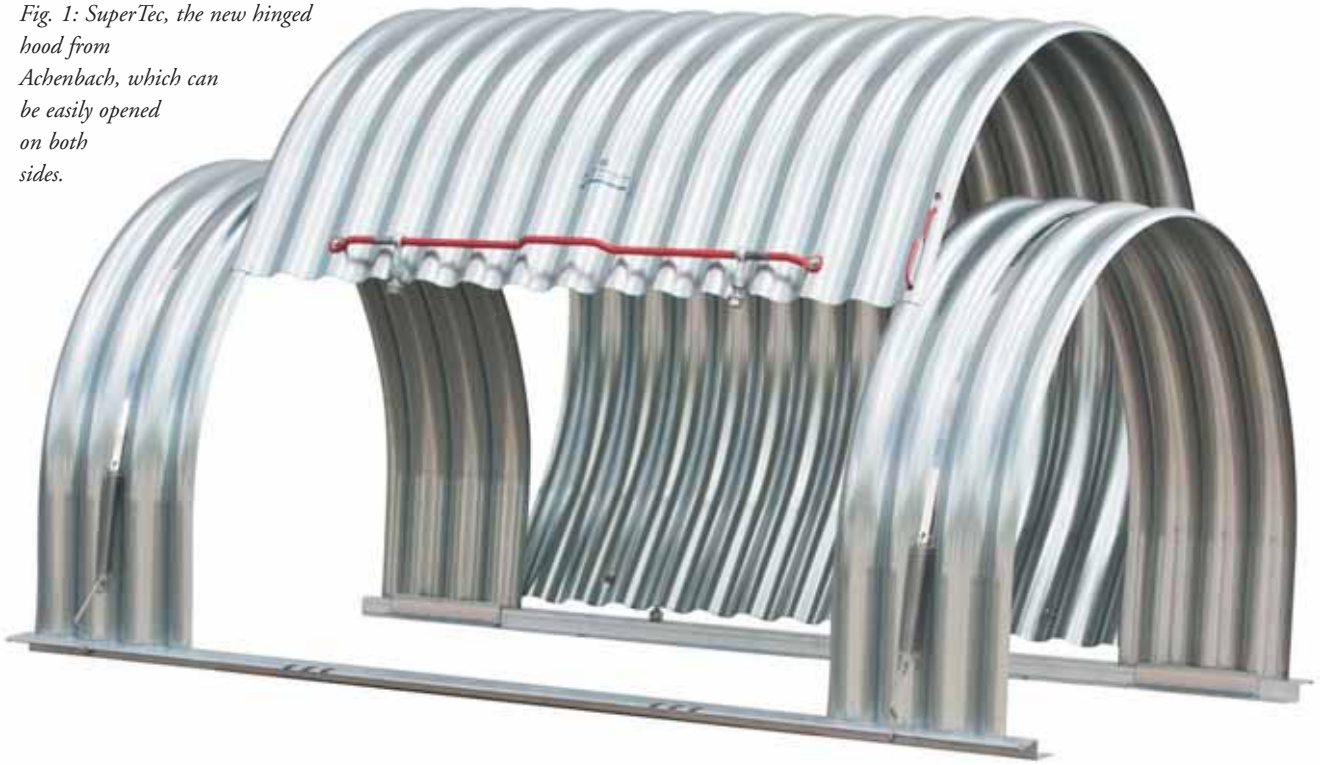

Fig. 1: SuperTec, the new hinged hood from Achenbach, which can be easily opened on both sides.

Achenbach Metalltechnik, with a great variety of hoods worldwide, has developed a new multifunctional conveyer hood that perfectly meets the requirements of the customers, with the ability to open on both sides simply and always reliably – the new Supertec hood (Fig. 1).

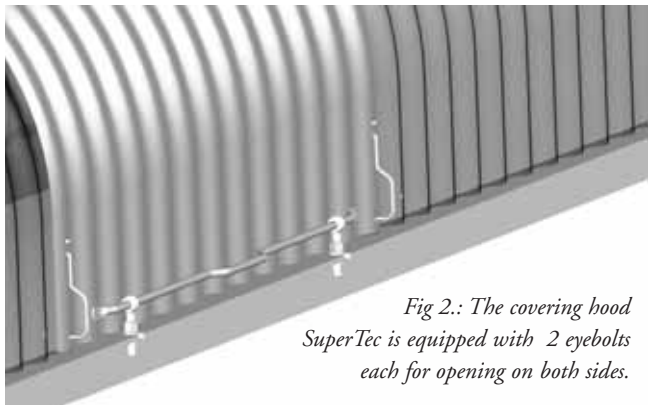

Fig 2.: The covering hood SuperTec is equipped with 2 eyebolts each for opening on both sides.

In part, opening systems offered in the market require immense assembly efforts because the sliding hinges to be arranged on the hoods have to be assigned exactly to the individual and short steel angles that support the hood, and have to be mounted separately. Up to 12 screws per hood have to be arranged during the preassembly of these systems. The new SuperTec hood eliminates these disadvantages, since generally only four screws are needed, even when the hoods can open on both sides (Fig. 2). Like almost all hood attachments from Achenbach, those of the SuperTec are also of stainless steel.

With the SuperTec the German company succeeded in combining easy assembly and high utility value. Thus, relatively low costs for the (subsequent) enclosure of belt conveyors may essentially contribute to improve the profitability of the plant due to an all-year operation independent of the weather.

The aspect of environmental protection (no material is discharged into the environment), of accidental prevention (no intervention in the running belt), and of emission reduction (in the case of plants near places of residence) have been taken into account. Many of the longest belt conveyers in the world have been enclosed with hoods from Achenbach.

TKF Materials Handling – connecting new and existing fertilizer production plants and export installations in Qatar via comprehensive belt conveyor systems

One of 4 connecting pipe conveyors between Qafco fertilizer plants and port.

In July 2008, Saipem, of Italy, awarded TKF (ThyssenKrupp Fördertechnik) the contract to supply the complete materials handling complex needed in connection with the extension of the world's largest fertilizer plant Qafco (Qatar Fertilizer Co.) in Qatar. The plant extension is carried out under the project name Qafco V.

TKF's scope of works includes a portal scraper for the export of urea, a shiploader for bulk material and several connecting belt conveyor systems. The new fertilizer plant and the existing sections of the port of shipment are connected with each other by means of two pipe conveyors arranged parallel to one another with a total length of almost 3km.

After a further 16 months in December 2009, Saipem placed a further order for the follow-up contract for the new plant Qafco VI with TKF. Similar to the first scope of supply, the new contract includes a portal scraper for the export material, 13 connecting belt conveyor systems and two more pipe conveyors running in parallel to the plants of Qafco V. This equipment will ensure the connection of the new fertilizer complex to the older plants Qafco III and IV which were also equipped with TKF machines and belt conveyors some years ago.

The plant Qafco V, which has been constructed during the past one and a half years, is expected to have started operating by the end of 2011. The erection of the Qafco VI plant was started at the beginning of 2011, while its commissioning is planned to take place in the middle of 2012

The photographs of the site show impressively how the two plants are growing together with integration of the old installations.

Qatar is a small but rich emirate. TKF BU Materials Handling has repeatedly succeeded in supplying large-sized handling plants for the industry based in this region. In the immediate vicinity to Qafco, there is in operation — among others — an impressive plant with a pipe conveyor from TKF for the import of alumina. Planning for a future extension of the fertilizer complex is in progress, and the prospects look good for TKF BU Materials Handling to be successful in winning further contracts.

Outgoing conveyor system and pipe conveyor in Qafco V and VI with storage hall (in far distance the TKF pipe conveyor running up to silo buildings of Qatar Aluminium Smelter).

Keep a good thing running with Kiepe

Kiepe Pull Rope Emergency Stop Switches.

In the bulk goods industry, the brand Kiepe is well known for mature premium-quality products for monitoring and controlling conveyor systems, that are all made in Germany. Since the late 1960s, roughly 50,000km of conveyor systems all over the world have been equipped with Kiepe products. Based on decades of experience and consistent product development, the company supplies products of superior quality and reliability.

In the year 1906, Theodor Kiepe founded the company in Düsseldorf as a special workshop for arc lamps.

Over the course of time, the product range was consistently broadened to comprise switches, contact material and complete controllers for roller mills, switches, resistors, relays and other devices for urban transportation services.

After the Second World War, the company focused on rebuilding catenary wires, producing equipment for hauling engines, cranes and industrial installations, as well as traction equipment for trolley buses and trams.

Between 1950 and 1970, the course was set to concentrate on products for the transport and traffic industries; the world-wide distribution of Kiepe products was expanded.

Parallel to concentrating on products for public transport companies, Kiepe worked the sector of industrial equipment for conveyor engineering which became a trademark for premium quality and reliability under harsh operating conditions.

In 2003, Kiepe was taken over by Vossloh AG. This allowed the company to expand its product range to railway components. The portfolio of services now also comprises the retrofit of older vehicles to state-of-the-art technology, assembly and commissioning, and the distribution of electrical components and hybrid technology.

At takeover, 'Kiepe-Elektrik' was renamed 'Vossloh Kiepe GmbH'.

However, the old name does still exist. Today, Kiepe-Elektrik is an established trademark for monitoring devices for conveyor engineering – premium quality and reliability all made in Germany.

The competence and experience is based on more than 100 years of company history and the commitment of its staff at the company headquarters and production site in Düsseldorf, and at the company's international affiliates.

Kiepe Misalignment Switches.

Kiepe robust Limit Switches

Scope of products

- **Kiepe Pull Rope Emergency Stop Switches** are emergency stop devices with latching function in variants of aluminium, cast iron or glass-fibre plastic enclosures. They are operated by pulling or tearing the pull rope. Reset is carried out manually at the device. For safe pull rope installation, components for pull rope systems are available.
- **Kiepe Misalignment Switches** were installed to detect misalignment of conveyor belts. Depending on the type of switch, two switching points can be provided for warning (pre-alarm) and switch-off; furthermore, latching of the roller lever after enabling is possible. As a special variant, Kiepe provides contact-free Misalignment Switches for bucket elevators.
- Kiepe robust **Limit Switches** are force-fit, electromechanic switches with positive breaking contacts in solid, robust design. They are available in various enclosure variants and with different actuating levers.
- The range of **Kiepe Speed Monitoring Devices** comprises units for electronic speed monitoring and speed monitors for direct coupling, as well as accessories in robust design.

Schütz Plastic Drums with pure HD-PE inner layer for sensitive filling goods

MULTILAYER EXTRUSION CREATES POTENTIAL NEW APPLICATIONS

Selters. When Schütz GmbH & Co. KGaA of Selters developed its Security-Layer Technology, it not only created potential new applications for IBCs (intermediate bulk containers), but also made it possible to process layers of different materials simultaneously. The innovation has proved a major step forward in the manufacture of plastic drums with specific property profiles.

The 220-litre F1 PE tight-head drum and the 120 and 150-litre S-DS1 open-head drums also benefit from this technology. By providing the option of an extruded layer of pure, colourless polyethylene (HDPE) on the inside of its drums, Schütz offers its customers these two successful drum types with an additional property. The purity of the inner layer guarantees excellent compatibility between packaging material and filling goods.

The F1 drum offers a number of advantages, such as high cold-temperature impact strength and chemical resistance, as well as resistance to stress cracking and stacking pressure. With its two patented closures for maximum residual drainage, the F1 is also ideal for a number of sensitive filling goods — particularly liquid and viscous substances. This also applies to the S-DS1 open-head drum with its clamp-ring lock and PU foam lid gasket, which guarantee the 100% impermeability of the seal between drum lid and body. This drum is also suitable for the transport and storage of powders and granulates, as well as other solids.

Schütz plastic drums with an inner layer of high-purity HDPE guarantee excellent compatibility between packaging material and filling goods.

Beumer establishes group company in Australia

STRENGTHENED POSITION IN AUSTRALIA

The BEUMER Group, based in Beckum, Germany, has established an independent company in Australia. The foundation of BEUMER Group Australia PTY Ltd. enables the group of companies to enhance its presence and support for local customers.

Until now, The BEUMER Group, a provider for conveying and loading technology, palletizing and packaging technology, as well as sortation and distribution technology, had a representative office in Australia. With the foundation of the new company, the BEUMER Group responds to the rising demand on the Australian market. A further cause was the merger with Crisplant a/s — specialist for baggage sortation systems for airports and sortation technology for service providers in the courier, express and package sector. The Danish Crisplant a/s has been part of the BEUMER Group since the middle of 2009.

Together with Crisplant a/s and Enexco Teknologies India Limited, the BEUMER Group employs about 3,000 people and achieves an annual turnover of about €450 million. With its subsidiaries and sales agencies, the BEUMER Group is present in many industries the world over.

Bedeschi enjoys recent successes

Italian company Bedeschi has successfully completed another contract, with the supply of a mobile crushing group to Shurovsky Cement OJSC (Holcim Group) in Kolomna (Moscow region) plant.

Shurovsky Cement is one of the first cement plants built in Russia (1870). In 1912, the plant became the first in Russia to receive two new Unaks rotary kilns.

A plan to modernize the Shurovsky cement plant was approved by Holcim EXCO in March 2007. A new high-tech dry cement production line will replace the old installation, and is considered to be the most modern, ecologically friendly and energy-efficient way to produce cement. Shurovsky Cement is the only plant in Russia to produce white cement.

Bedeschi had to take the following factors into consideration for the project:

Metereological data

- ambient temperature – maximum +40°C
- minimum –35°C; and
- annual average +5°C.

Rainfall

- yearly average: 1,113mm/year; and
- maximum per day: 219mm.

STATISTICS

Material	frozen agglomerations of: — corrective (pyrite, bauxite, sand, bottom ash, fly ash) — additives (gypsum, slag) — limestone — clinker — clay
Bulk density	1.4t/m^3
Moisture	up to 30%
Capacity	450tph
Inlet size	90% < 300 mm; 100% < 800 mm
Outlet size	95% < 100 mm; 100% < 150 mm
Max. possible pressure on the ground	1.25kgcm^2

Civil design

- snow reference load 126kg/m^2 SNiP 2.01.07-85*.

Wind

- normal wind load 23kg/m^2 SNiP 2.01.07-85*; and

❖ prevailing wind direction mainly S (E, SE, S, SW, W).

The crushing group is made up of:
❖ tracks for support and travelling;
❖ steel structure frame applied on the tracks and supporting the machines and the devices;
❖ CNA 11/2200 apron feeder complete with hopper;
❖ RL 650/2200 double roller crusher;
❖ belt conveyor to discharge on downstream conveyors; and
❖ belt conveyor, inclined, mobile on idle wheels for connection with downstream belt conveyors.

System supplied

CNA 11/2200 + RL crushing system apron feeder

CNA 11/2200 apron feeder

Useful width of metal apron at the discharge:	2,200mm
Interaxis of heads:	11m
Inclination:	20°
Approximate hopper capacity:	15m^3
Hopper height at dwg:	4m max
Lateral guide:	2
Central sliding guides of apron:	3
Installed electric power of apron:	22kW (with inverter) for turn down ratio 1:10

RL 650/2000 toothed roller crusher type

Dimensions of inlet mouth:	1,600x2,000mm
Internal diam. of rollers:	650mm
External diam. of rollers:	800mm
Opening between rollers:	50mm
Installed electric power:	132 x 2kW

Three belt conveyors

The belt conveyor structure is equipped with tyred wheels that are suitable for non-paved terrain; the wheels have hydraulic pistons for their lifting in order to reduce the height from ground during the working phase and to increase stability.

The frame is suitable for counterweights (not included in the supply) to prevent the equipment overturning.

The belt conveyor can be inclined from +10° to +20° using hydraulic pistons, to fit the height of downstream belt conveyors.

All hydraulic pistons are fed by the crushing group's hydraulic unit, rapidly connected for temporary feeding.

The mobile belt conveyor can be towed by an external truck/tractor (not included in the supply).

Latvian conundrum solved with Bedeschi's tailor-made solutions

In June 2011 Sia Cemex, awarded Bedeschi a contract to supply a GDF 800 mixer-filter with frontal grids for the Broceni plant in Latvia.

Cemex is Latvia's only cement producer, and the country's leading producer of ready-mix concrete.

In summer 2007, Cemex started to build Europe's most modern cement plant in Broceni. The total investment in this plant exceeds €275 million. At that point, Bedeschi was already involved, and was contracted to supply the complete limestone and clay receiving, crushing and storage facilities, as well as all plant apron feeders for gypsum, clay, limestone etc.

In summer of 2010 the construction of the new cement plant was completed and it was commissioned. The new cement plant can produce 1.6mt (million tonnes) of cement per year, which is exported to the Baltic States, Finland, Belarus and Russia.

The clay in the Broceni region is the most difficult and sticky in the Baltic area, due to its high moisture content and high plasticity. Therefore, after many laboratory and industrial tests with the clay, carried out in co-operation with Cemex engineers, Bedeschi was recently asked to supply its GDF 800 mixer-filter with frontal grids. This is used to handle, mix and regularly feed the clay in front of the plant drier.

Filter features

Final auger diameter: 800mm
Grid surface: 9,800cm^2
Main motor installed power: 160kW, 1,450rpm
Hydraulic power pack installed power: 4kW
❖ machine in strong steel structure.
❖ gears made of steel NiCrMo alloy, milled from full material. Pinions hardened of 18 NiCrMo5 steel;
❖ driving pulley complete with pneumatic clutch;
❖ mixing paddles and augers made of steel, easily replaceable: auger final elements with anti-wear chromium plating;
❖ grids with large surface, free from mechanic parts, with holes or slots;
❖ excellent mixing homogenizing because of clay paddling against the grids;
❖ change of grids in a rapid and simple way using a piston hydraulic system complete with hydraulic power pack;
❖ machine complete with pipes predisposed for wetting system:
  ❑ pipes and necessary connections on the hopper
  ❑ manual valve for water dispenser
  ❑ electric valve ON /OFF for interlock with the clutch
❖ machine complete with automatic lubrication unit for main gearbox.

In December 2011 the mixer was commissioned with great success and to the complete satisfaction of Cemex. This contract is a further indication of Bedeschi's expertise in handling difficult materials with its tailor-made solutions.

Fire-protective coatings from Hempel

With the extensive expansion of its R&D facilities in Spain, Hempel's new state-of-the-art centre focuses on bringing high performing fire-protective coatings solutions to the global market. Intumescent coatings — passive fire protection that lengthens the time a steel structure will remain intact during a fire — provide longer evacuation times and allow emergency personnel more time to respond. That means that these advanced coatings solutions not only help protect investments, but can potentially save lives.

Naturally, as global awareness of intumescents has grown, demand has increased. Worldwide, customers are requesting high-quality coating systems for fire protection together with Hempel's package of anti-corrosive coatings. With the expansion of the state-of-the-art R&D centre in Spain, Hempel now has the opportunity to better serve these customers with a more complete protective system.

The market for passive fire protection through intumescent coatings is expected to increase over the coming years. By expanding its product portfolio to include this important safety solution, Hempel also furthers its strategic goal for growth in the Protective coatings segment.

Says Hempel Group vice president of marketing and business development Klaus Møller, "This expansion is an important step in Hempel's growth strategy, One Hempel — One Ambition, to become one of the world's top ten leading coating's suppliers by 2015."

"Along with a state-of-the-art facility, we have also established a team with years of experience in intumescent product development," says Hempel business development manager Lars Risum. "The key focus of the new team is to develop a range of highly competitive intumescent coatings and protective systems to give our customers more integrated solutions."

Hempel has worked with fire protection coatings for many years. Now, with the new centre in Spain fully operational, Hempel looks to boost its R&D activities and offer customers some of the best performing and competitive coatings solutions in the industry. The new fire protection laboratory includes an advanced testing area with furnaces, pilot manufacturing and application in an impressive 1,000m^2 area.

"With the new R&D facility and dedicated team, we have overcome many of the challenges in developing an intumescent product range," Risum says. "We now look forward to bringing these important products to market and providing even greater value to our customers and stakeholders."

Armed guards to protect UK ships from piracy

Ships sailing under a British flag will be able to carry armed guards to protect them from pirates, according to UK prime minister David Cameron. He says he wants to combat the risks to shipping off the coast of Somalia, where 49 of the world's 53 hijackings took place in 2010.

Under the plans, the home secretary would be given the power to license armed guards for ships. No ship carrying armed security has yet been hijacked, the government claims.

Up to 200 vessels flying the red ensign — the British merchant navy flag — regularly sail close to Somalia. Officials estimate that about 100 of those would immediately apply for permission to have armed guards.

Under the 1982 United Nations Convention on the Law of the Sea every ship is subject to the jurisdiction of the country whose flag it carries.

It is thought many British-registered ships already carry armed guards because they feel they have no alternative.

However, licensing ships to carry armed guards could still fall foul of laws in other countries. Egypt recently announced that armed guards would not be permitted on ships sailing through the Suez canal.

Pirates operating out of Somalia now range over around three million square miles of sea leaving existing navy patrols stretched.

The hope will be that armed patrols act as a deterrent, but there are risks. Some experts warn of the danger of an escalation in the violence with pirates responding with heavier weapons.

The practicalities can also be complex — some countries are less willing than others to have foreign nationals working for private security companies carrying weapons in their ports or while sailing in their waters.

And while maritime and security industry experts believe this measure may help, it is unlikely to deal with the fundamental causes of the piracy problem — that will require more effective governance and stability in Somalia.

Cameron said he wanted to legalize armed guards after talks in Australia with Commonwealth leaders from the region over the escalating problem faced in waters off their shores.

But armed guards would only be permitted while passing through dangerous waters, such as the Red Sea and the Gulf of Aden.

Previous government policy had strongly discouraged the use of private armed guards on board UK vessels.

But ministers began to consider amending the position to combat piracy in 'exceptional circumstances', Foreign Office Minister Henry Bellingham said in a submission to the Commons' Foreign Affairs Committee earlier last year.

The Home Office looked at how to apply UK firearms legislation on board UK ships, and whether it was feasible to authorise and monitor the possession of 'prohibited' firearms at sea, he said.

Cameron was asked if he was comfortable with giving private security operatives the right to "shoot to kill" if necessary, and told BBC One's Andrew Marr Show: "We have to make choices.

The International Chamber of Shipping (ICS), which represents over 80% of the world's merchant fleet, welcomed the move as likely to have a deterrent effect - but said it was only a 'short-term measure'. Secretary general Peter Hinchliffe said the ICS was concerned about how pirates would respond to the move. "To date, no ships with armed guards on board have been captured. But pirates will respond with increased firepower to overwhelm the armed guards, and when that happens the impact on the crew will be pretty dreadful," he said.

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VIKING aids flood victims in Thailand

VIKING Life-Saving Equipment, a major global supplier manufacturer of safety equipment, is providing aid to residents in Thailand. The country is in the middle of the worst flooding in more than 50 years that has killed over 300 persons, displaced another 100,000 and caused widespread damage to homes and infrastructure.

"We are of course deeply touched by the situation and we naturally feel an obligation to provide assistance to a community that has given VIKING so much", says Henrik Uhd Christensen, CEO of VIKING and continues:

"We know water and what it takes to survive in water. Safety is the backbone of our business. It's what we do and who we are. So if our knowledge and our products can make a difference for the thousands of persons affected by these terrible floods, we are only proud to help."

VIKING has joined forces with the Thai Red Cross Society and the Danish Ambassador couple in Bangkok, Mr and Mrs Michael Hemniti Winther, to distribute over 400 lifejackets among towns and villages in the flood-affected areas.

The lifejackets were handed over on Friday 28 October 28 last year by VIKING's managing director in Thailand, Morten Halfdan Petersen to Red Cross Director, Dr Amnat Barlee and assistant secretary general for external relations Sawanit Kongsiri.

"Our facility in Laem Chabang employs over 650 people," says Morten Halfdan Petersen. "We have been here for almost ten years. We have deep roots in the community and it is devastating to see how much damage and despair these unprecedented water levels are causing."

In addition to the lifejackets, VIKING employees and their families have made a fantastic effort to collect 10m^3 of clothing and toys as well as cash donations for food and water supplies.

"It's been extraordinary to see how the whole community has come together to help people in distress. We are happy to be a small part of a huge international relief effort, and we hope that the lives of the affected will soon return to normal."

VIKING is a privately held corporation founded in 1960 with group headquarters in Denmark. Products, such as liferafts, lifejackets, evacuation systems, immersion suits, work suits, pilot suits, man overboard boats, davits and other life-saving appliances, are manufactured at facilities in Denmark, Norway, USA and Laem Chabang, Thailand.

About VIKING Life-Saving Equipment

Founded in 1960 and born global, VIKING is a major force in maritime safety. The company provides essential safety and fire-fighting equipment to the following segments: passenger, cargo, offshore, defence, fishing, yachting and fire.

VIKING is a privately held Danish corporation with group headquarters in Esbjerg, Denmark. Products are manufactured at facilities in Denmark, Norway, USA and Thailand.

The company offers a choice of product packages and solutions — standard or tailor-made — that are certified to the latest requirements of IMO, SOLAS, EU and the USCG. Products include chute and slide-based marine and offshore evacuation and embarkation systems, liferafts, lifejackets, immersion suits, fire suits, work suits, pilot suits, transportation suits, man overboard (MOB) boats, davits and other life-saving appliances.

A unique network of more than 50 branch offices, agents, 270 certified servicing stations and worldwide stock points makes VIKING a truly global provider offering cost-effective and convenient service whenever and wherever it is needed.

ABS strengthens presence in Korea

Major classification society ABS is further strengthening its ties to the Korean maritime industry by establishing the ABS Korea Energy Technology Center (KETC) in Busan in early 2012. This is ABS's first energy centre and will focus on applied research to a broad range of current and future technology challenges. In a related move, the society is creating the role of Vice President of Global Korean Technology Development. Dr Hoseong Lee, a veteran of ABS and respected professional in the Korean maritime industry is being appointed to this new position. As part of his new responsibilities, Dr Lee will provide guidance and oversight for the KETC. In combination, these strategic developments will better leverage the technology resources of ABS in servicing the Korean market and its clients across the globe.

Under Dr Lee's stewardship, the KETC will work in partnership with local universities, shipyards and other organizations to undertake research activities drawing upon the knowledge and experience of ABS engineering and survey staff worldwide. Priority areas for the center include offshore exploration and production technology, subsea applications, LNG technology, ship energy efficiency and renewable energy.

Dr Lee will also act as the corporate liaison for Korean businesses that work with ABS. He assumed the new role on 1 November last year. Although Dr Lee will be based in Houston, he will spend a considerable amount of his time in Korea working closely with the ABS staff as well as coordinating Korea-related business development worldwide.

KETC and the new vice president position serve to complement ABS's strong national presence, which is led by Andre Han, Country Manager for Korea. Han will also take on the role of Senior Advisor as he will maintain responsibility for managing the strategic in-country operations with shipyards, vendors, government officials and other key stakeholders. Han is entrusted with ensuring clients receive the quality service delivery that ABS is recognized for throughout the industry.

Christopher J. Wiernicki, ABS President and CEO explains that these moves will allow ABS to better anticipate the needs of its Korean customers and expedite service delivery. "Korean shipbuilders are global organizations and this renewed focus will be instrumental in providing the most effective classification service delivery that we offer," says Wiernicki.

KETC will become an integral component for ABS global energy-related research. The centre is a further extension of the global reach of ABS's Technology Research and Development group. The industry has long acknowledged ABS' leadership in the area of research and development (R&D) for both the shipping and offshore market sectors. The R&D programme has always been paramount to the organization's mission of promoting safety and environmental protection throughout the maritime industry.

Founded in 1862, ABS is a prominent international classification society devoted to promoting the security of life, property and the marine environment through the development and verification of standards for the design, construction and operational maintenance of marine-related facilities.

Panama approves first nickel ore ship

A vessel built by Naikai Zosen for Nissho Shipping will become the first NK-classed ship to incorporate special construction for carriage of liquefiable cargoes.

The new vessel, being built at Japanese shipyard Naikai Zosen Corporation for Nissho Shipping Co., Ltd., has become the first to receive approval from the Panama Maritime Authority in accordance with part 7.3.2.2 of the IMSBC code governing carriage of cargoes which may liquefy. The approval certifies that the vessel makes use of special construction features to ensure that it can safely load cargoes that may liquefy, including volatile cargoes like nickel ore, even if such cargoes exceed their transportable moisture limit.

The certification, which was obtained with technical assistance from ClassNK, was issued for a new 27,200dwt open-hatch bulk carrier being built by Naikai Zosen for delivery to Nissho Shipping in the fall of 2012. The vessel has been specifically designed to transport nickel-ore cargoes, and utilizes a special construction which allows nickel ore cargoes to be carried safely even if they liquefy in transit. This means that the vessel will be able to transport such cargoes even if unexpected rain or waves increase the moisture level past the limits laid out by the IMSBC code.

With this certification, ClassNK continues to show its leadership with regards to nickel ore cargoes, which have become an increasingly important concern following several casualties attributed to the dangerous cargo last year.

Schat-Harding develops Secondary Safety Systems for IMO-compliant hooks

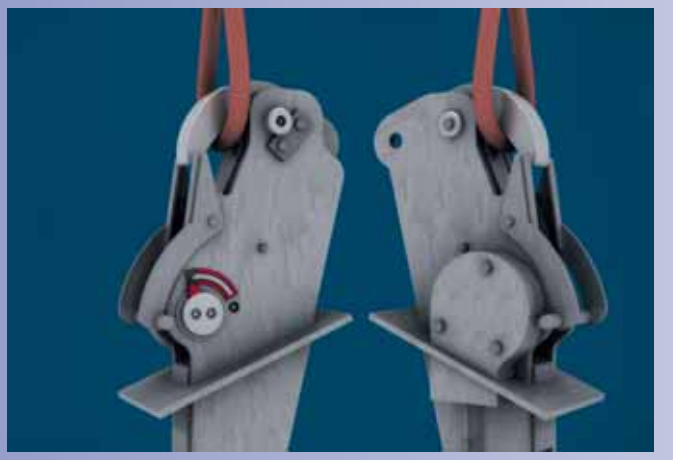
Major lifeboat manufacturer and service provider Schat-Harding has completed all tests required by IMO to ensure that its SeaCure lifeboat release and retrieval systems (the new name for hooks) meet the new IMO (International Maritime Organization) guidelines for existing and new lifeboats. Also, reacting to industry requests, Schat-Harding has developed a Secondary Safety System (SSS) for the SeaCure hook. Although not required by IMO guidelines or SOLAS (Safety of Life at Sea) regulations, the SSS is recommended by many shipping industry groups,

Birger Grathen, CEO, Schat-Harding Service, says, "IMO has issued mandatory guidelines for lifeboat release and retrieval systems under MSC.1/Circ.1392. These are unusual because they are retrospective and require owners to test and in some cases replace existing equipment. Manufacturers have also had to apply rigid new tests to all their equipment. The rules apply to new boats from 1 July 2014, but there are also tests to be applied to existing hooks, and these will have to be upgraded at the first dry-dock after 1 July 2014 if they do not meet the set standards.

"However, IMO's guidelines do not call for a Secondary Safety System. We are happy to announce that our SeaCure lifeboat release and retrieval systems meet or exceed all the IMO standards, have passed all relevant tests and are now available for shipowners to refit to existing conventional lifeboats. And we have worked with industry groups and our customers to develop a simple but safe optional Secondary Safety System for the SeaCure range. The hook and the SSS meet all industry needs, are approved by flag state and class, are available now, and are backed by our global service network, which is ready to advise owners, assess existing equipment and to fit the new equipment if required."

All shipowners are obliged to arrange an evaluation of existing on-load hooks on their vessels. Hooks which don't meet the new standards need to be replaced no later than the next scheduled dry-dock after 1 July 2014, and no later than the 1 July, 2019. If found to be compliant then an overhaul examination should be executed no later than the next scheduled dry-dock after 1 July, 2014. The one-time follow-up overhaul examination by the manufacturer or authorized representative should be in accordance with MSC.1/Circ.1206Rev1.

Says Grathen, "The new IMO requirements are complex, and are unusual in that they are retrospective. But we are convinced they will make lifeboat release and retrieval systems safer to use, and we are committed to helping shipowners to improve safety at sea. We have been doing that since 1928, and we are right at the forefront of safety with this new equipment, but more than



that, we are leading with our global network and our willingness to help owners. There are literally hundreds of types of lifeboat on-load hook system in service, there are thousands of lifeboats which need upgrading, and owners need help to understand and implement the rules. I urge them to ask us, we will help, we want to help, we want seafarers to feel confident that their lifeboats are safe."

Over 100 shipowners have already re-hooked their lifeboats using Schat-Harding service engineers and hooks. Grathen says, "We have the trained and authorized engineers and we have the equipment, but we do urge owners to come forward as soon as possible to evaluate their equipment and needs. Firstly because that way it is safer for their crews, who get the new standards in place quicker, and secondly because they could face business interruption if they leave this until the last minute rush to comply by the due date. These SeaCure hooks can be retrofitted to most types of boat now in service, not just Schat-Harding boats, so we can offer all owners and seafarers the safety of the new IMO-compliant hooks and the security of an engineering team who can assess any hooks now in service and fit the new equipment safely and without service interruption."

Schat-Harding is a major supplier of lifeboat and evacuation systems for the offshore, cruise and shipping industries. With factories and offices in Norway, the UK, the Netherlands, Germany, Italy, Panama, Singapore, Spain, Canada, the Czech Republic, the USA and China, and agents or service partners in thirty other countries, Schat-Harding provides a global service and supply network. Brands now owned by Schat-Harding include Watercraft, Viking Marine, Waterman, Fiskars, Davit-Company, MASECO, Watercraft America, William Mills Marine, Schat, Harding, Mulder & Rijke and the Beiyang Boatbuilding Co.

Wave of expansions in VIKING service network

VIKING continues its march forward in Europe and Asia with four new, well-equipped servicing stations opening in November last year.

In November last year, major marine and fire safety equipment manufacturer VIKING Life-Saving Equipment announced that it was opening four servicing stations at Brest (France), Split (Croatia), Kaohsiung (Taiwan) and Port Klang (Malaysia). The new ports further expand the company's already dense network of stations in Europe and Asia.

Henrik Uhd Christensen.

The new facility at Split, on the eastern shores of the Adriatic Sea, is the first VIKING-owned station in Croatia. One of the sunniest ports in Europe, the Port of Split is also one of Croatia's most important centres for both local and international ocean-going trade. The station, which is located in premises that have been completely refurbished for servicing purposes, will provide certified servicing for liferafts, marine evacuation systems (MES), lifeboats, davits and release hooks (LBS), and immersion suits.

VIKING's new Brest, France, servicing station, lying at the crossroads of numerous north-south and east-west sea routes and serving one of Europe's foremost food industry areas, will offer the same capabilities as its Croatian counterpart, similarly operating in custom-built premises.

Kaohsiung, Taiwan, was in 2009 rated as the world's 12th most important container port by the American Association of Port Authorities. It is the biggest port in Taiwan and an important international hub in the whole Asia Pacific region. It has been a long-standing priority to open the new VIKING facilities in Kaohsiung and it will also offer the full range of certified servicing capabilities.

The latest addition to the company's Malaysian presence was in fact established on the basis of direct customer feedback. Located at Port Klang, the fourth facility introduced in the latest wave of expansion is the result of VIKING's strategic emphasis to keep in close touch with its customers.

The Port Klang and Kaohsiung facilities are also part of the global VIKING Exchange network and will provide liferaft servicing where the emphasis is on convenience and rapid turnaround.

"Listening and responding to customers is key to the continued success and growth of any business," says Henrik Uhd Christensen, VIKING's CEO. "At the same time, Port Klang is Malaysia's largest and busiest port and a natural choice for a focused service offering that answers the needs of many of our customers operating in the area."

The new servicing stations in Split, Brest, Kaohsiung and Port Klang stations all form part of VIKING's strategic push to expand its worldwide network, now numbering over 60 branch offices and 270 certified servicing points, and the number will continue to grow at a constant rate.

Stricken carrier to be towed to Turkey for repairs

Salvage experts from the Dutch Smit company contracted to try to save the 400,000dwt-capacity *Vale Beijing* ore carrier — two of whose ballast tanks developed cracks after 230,000 tonnes of ore had been loaded at the Ponta da Madeira terminal, in Maranhao state in December last year — plan to tow the vessel to a port in Turkey for definitive repairs, once emergency repairs have been carried out.

It is still not clear whether the accident was caused by faulty loading, metal fatigue, or a design fault.

Some bunkers leaked following the incident, but most of the 5,000 tonnes of fuel on board have since been removed from the vessel, which has been towed 6km from the terminal into deep water.

Terminal officials say there was a real risk of the vessel sinking while at the terminal itself, where strong tides mean the water is more turbulent than elsewhere in the bay. The ship's pumps could not keep pace with the flow of water entering through two cracks each 60cm long, and 10cm wide.

Loading at the terminal was halted during the operation and 800,000 tonnes of ore could not be shipped as a result

A total of 50,000 tonnes of ore are to be shifted from the hold nearest the ballast tanks, to two holds further forward. The aim is to alter the balance of the vessel, so that the cracks can be repaired above the surface. The turbulent muddy waters in the area make underwater repairs extremely difficult.

The definitive repairs are expected to take between three and 12 months to complete.

The *Vale Beijing* was the fourth of 19 identical carriers being built in Chinese and South Korean yards to be delivered. The first, *Vale Brazil*, started operating in April last year. There have been no previous incidents involving the ships, which are almost 400 metres long and amongst the largest in the world.

The ships, ordered by Vale's previous president Roger Agnelli in 2008 and 2009, when the cost of shipping ore to China, where almost 40% of the 310mt (million tonnes) of the ore shipped by Vale last year was sold, shot to $100 per tonne. This compared with the usual $20 per tonne and put Brazilian ore at a considerable disadvantage.

It takes 45 days for a consignment of ore to travel from Brazil to China, compared with the 10–15 days from Australia. To combat this, Vale decided to expand its own fleet, and build the largest possible vessels to do it.

Vale's new president, Murilo Ferreira, has now decided to sell all the ships, 12 of them to be built in China, seven in South Korea, to companies who will charter them to Vale for 25 years. The *Vale Beijing* is operated by South Korea's STX Pan Ocean company.

Until now, Chinese ship operators had refused to allow the new very large ore carriers to enter Chinese ports, alleging unfair competition. The ship carrying the first consignment destined for China had to turn back after passing the Cape of Good Hope and take the ore to Italy instead.

But the first large vessel, operated by the Singapore-based Berge Bulk company, was recently allowed to enter the port of Darien in China.

To overcome the access problem, Vale is building a 40mt-capacity entre-pot facility in Malaysia, to cost $1.5 billion.

Vale that anticipates 80% of all its ore will be sold to countries in Asia in a few years' time, as demand from steel mills in Europe, the Middle East, and elsewhere stagnate, while that in China and other customers in Asia, continues to grow.

Vale, along with the other mining companies, has been forced to cut prices by about 10% from the peak of $180 per tonne in the middle of last year, as demand weakens.

The new formula for pricing, adopted only a couple of years ago, after the gap between long-term contracts and the spot price widened, forcing a new contract in which prices were altered according to the spot average of the previous three months, may be scrapped.

Vale has cut prices to some customers by up to 20%, following signs that the housing market in China, major destination for much of the steel made there, has slowed.

Vale has recently announced a two years delay in the start up of its new 'Serra Sul' mine in the Carajas complex. This new mine will eventually produce 90mt, but will not now start until 2016, rather than late next year.

Vale which has $23 billion of foreign debt, virtually all in US dollars, has been badly hit by the 13% fall in the value of the Brazilian currency, the Real, against the US$ in recent months.

Despite the slight fall in prices, the export of almost 320mt of ore earned Brazil almost $40 billion dollars last year, 14% — or $13 billion — more than in 2010.

Ore was responsible for a record 16.25% of the countries entire export earnings.

Vale itself produced 310mts of ore in 2011 and anticipates producing 320mt this year.

Ferreira says he is unhappy that less than 50% of all the ore consumed by Brazil's 40mt-capacity steel industry is from Vale mines, compared with 70% a few years ago.

The high cost of Vale ore has encouraged most steel companies to open their own mines. Some have started exporting ore, which Vale says now costs about $50 a tonne to produce and transport to destinations, giving a very attractive margin.

Patrick Knight

Smit works to secure cruise ship

The Dutch company Smit's services are in great demand at the moment. It has been contracted to pump oil from the capsized Italian cruise liner *Costa Concordia* once search operations for missing people have ended.

The vessel foundered on 13 January and, at the time of writing, rescue operations were still under way as more than 20 people were still unaccounted for. Smit is standing by to start pumping out fuel from the ship's tanks to avoid an environmental disaster.

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MANAGING RISK

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The secret to staying afloat

maximize resources, minimize costs and reduce time in port

Kostas Kakaris, GAC's Group Dry Bulk Development Manager, considers the risks of using an under-resourced ship agent.

As the means of getting goods to market, shipping is inevitably at the mercy of the highly volatile global financial and commodities markets, and an environment that leaves little margin for error in daily operations.

This is especially true in the dry bulk sector. More than 40 professions can be involved in the loading or discharging of a dry bulk cargo to a vessel. And just as too many cooks can spoil the broth, the involvement of so many parties multiplies the opportunities for errors or delays.

If a ship owner, operator or cargo owner doesn't choose a trustworthy ship agent, they could put their reputation or bottom line at risk and expose themselves to serious potential costs.

It is therefore essential to entrust your vessel and cargo to an agent able to minimize the multitude of risks that can present themselves in port. An agent that has the knowledge, experience, resources and financial stability to provide advance warnings of potential problems and respond to all manner of issues when they arise. Such problems are myriad and can include weather disruption, port congestion, legal and administrative delays, pollution, damages, non-availability of cargo, shortages of receiving trucks or equipment and load contamination.

Dry bulk transportation is highly fragmented and does not enjoy the end-to-end control commonly provided when transporting liquid cargoes. Not only must your agent be able to undertake their immediate tasks in port, they must also possess a forensic insight into the dry bulk industry, understand all operational and commercial constraints for each particular port and type of cargo, have the knowledge and foresight to account for all potential risks that can occur — and the resources to deal with problems when they arise.

For example, improperly tendered Notices of Readiness (NOR) or errors in export documentation can have dire consequences for vessel owners or the cargo traders, even delaying or halting the shipment at great expense. Likewise, agents that make mistakes in declarations or neglect to attend to arriving or departing crew members can cause serious delays to the vessel's operations, and may even incur fines to be paid to the authorities. Although agents often have no control over who is appointed to physically handle loading and unloading operations, an experienced one should have the foresight to know where potential problems could arise.

Of course, there are many highly professional and capable agents around the world. However, there are also those that operate outside the boundaries of what should be acceptable practice. While their intentions may be good, they may not have the understanding of every cargo, or they may lack the resources to ensure they are handled safely and efficiently.

Mistakes, errors or simple omissions can happen in places where the boundaries of various authorities' responsibilities may be blurred or multi-transport means are involved. A vigilant and querying eye, accompanied by a clear mind, is much needed there.

Being a dry bulk shipping agent is no easy job. Many join the profession, but only those who can endure sacrifices will last. Working round the clock, often having to be physically present on board the ship, or at the coal yard, silo berth, transhipment barge or dock, sometimes in extreme weather, and being far from friends or family, is not for the faint-hearted.

Unfortunately, there is a lack of regulation and accountability on a global, regional and even port-to-port basis that can leave owners and operators vulnerable to risk, and can expose multi-million dollar vessels or cargoes to ruin at the hands of under-resourced agents.

The Federation of National Associations of Ship Brokers and Agents (FONASBA) sets best practice guidelines and represents the interests of ship agents on a global level. The organization has consultative status with (among others) BIMCO, INTERCARGO and the International Maritime Organization (IMO), and comprises of national membership bodies, including but not limited to ECASBA (members flagged under European Union states), ASBA (USA) and CASA (China). Each regional body stipulates, to a degree, its own quality objectives, and agents that meet the overarching FONASBA Quality Standard for Ship Brokers and Agents (2007) can apply for FONASBA certification.

This certification, however, is optional and is currently not a precursor for entry into the market for aspiring ship agents.

The risk of choosing the wrong agent has been exacerbated in recent years with the increased sophistication of information technology that has lowered the barriers to entry for potential agents and local operators to start their own businesses. While developments in communication capabilities have brought efficiency savings in the dry bulk market, and the shipping and logistics industries as a whole, it has also opened the door to an increasing number of often unregulated local players. There have been cases of locals armed only with a laptop and a mobile phone getting involved in handling of multi-million dollar cargoes or vessels, as a result of a lack of due diligence on the part of an owner or operator in selecting their agent.

Therein lies the problem. How can you judge which agent will service your needs, and adequately protect your vessel and cargo and best serve your business interests?

At GAC, we believe that at the heart of every successful voyage is the ability to marry a global network with in-depth local knowledge of ports, the networks that supply them and the transits made between. Whenever an owner, operator or cargo trader entrusts their cargoes and vessels to us, we stake our reputation on our ability to consistently provide them with quality service. In turn, we entrust our reputation to the carefully selected and audited network of partners that work under our watch, and from whom we demand optimum levels of service, experience, knowledge and professional conduct.

But mitigating risks in port is more than just making sure that

your ship agent is certified to do the job. It is also about maximizing their capabilities to minimize your time in port and, importantly, to minimize total spend.

With over 9,000 staff at more than 300 offices in 40 countries, the GAC Group is a global player with over half a century of experience under its belt. Through economies of scale and the breadth of our portfolio of shipping and logistics services and solutions, we provide a level of service that guarantees the interests of our customers are managed end-to-end. And, with our subsidiary chartering and freight-forwarding partner Brobulk, we can be on hand at every stage.

There are a multitude of variables that owners and operators must consider in the transportation of dry bulk cargoes. What local loading and discharging practices apply at each port? Which local and national port and customs, immigration and sanitary authorities must be enlisted? What tug, mooring, stevedoring, bunkering and ship supply services will be required?

The benefit of using a global agent is that all of these requests can be discussed, coordinated, managed and billed by a single organization, offering a 'total arrangement', planned and scheduled before a vessel reaches each destination.

Decades of experience working across the dry bulk supply chain has given GAC the knowledge of its expert staff and specialist partners around the world and across the shipping and logistics industries. This is complemented by a dedicated marketing team that maintains contacts with existing and potential customers through regular visits, continuous education provided through the GAC Corporate Academy, and extensive local engagement giving in-depth knowledge of the operational constraints in individual ports. No one can deny GAC's global authority, hard won by years of working across the dry bulk sector, across the world, on a daily basis.

By keeping our finger on the pulse and being in a position to respond promptly and appropriately if problems arise, GAC can streamline its customers' operations and to minimize downtime and costs for vessels during port calls.

My personal guiding principle is: "Have we done everything to ensure our principal can sleep at night, confident that we will look after his interests?" If the answer is an instant and unqualified 'Yes', I consider that we have done our duty and earned our fee honourably. In the process, we will have created long-lasting business relationships that often evolve into life-long friendships.

And, after all, isn't that what we all want?

About GAC Group

GAC is a global provider of shipping, logistics and marine services. These services are constantly being refined and integrated to serve its customers' increasing need for competitive solutions. Emphasizing trust, reliability and a strong human touch, GAC has been building its reputation in its chosen markets since 1956.

Headquartered in Dubai, GAC employs over 9,000 people in more than 300 offices worldwide. DCi

What we can expect from freight rates this year

Another year of volatile, bottom-dwelling rates faces owners as excess supply swamps the market. The idling of vessels could provide some respite in 2012, but only an unlikely demand growth surge can rescue rates from the newbuilding overhang, writes Michael King.

As the end of 2011 approached, Capesize freight rates had soared to their highest levels of the year. But this end of year surge disguised the painful reality facing owners as they entered the New Year — almost any analysis of the shipping markets points irrevocably to the conclusion that vessel supply growth will far-outweigh any increase in demand for seaborne bulk cargo capacity through 2012 and beyond.

Indeed, even as charter rates for Capes surged in December, pulling up the Baltic Dry Index in the process, secondhand values were plunging. This was a sure sign that even amidst the enthusiasm generated by a rebound after a moribund 2011 during which many vessels had been operating below the cost of operation, buyers remained staunchly bearish in their forward outlook.

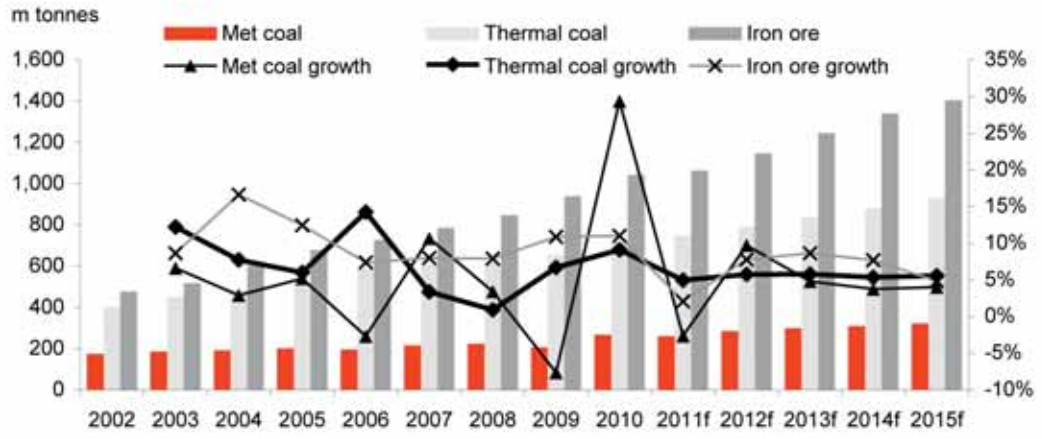
The late Cape rates push was primarily caused by a jump in iron ore exports from Brazil into China and Korea as world prices for the commodity fell. Indeed, China's National Bureau of Statistics said that Chinese iron ore imports would total more than 560mt (million tonnes) for 2011, an 11% increase compared to 2010.

The big tonne-mile demand gain any uptick in this long distance trade always brings to the market was given additional impetus by improved exports of coal from Australia as the year came to an end.

This pushed the Baltic Dry Index past 1,900 points in mid-December, a vast 84% improvement on the low point of the year in early February of 1,043, and also far above the 1,535 average index in 2011. However, the resurgence still left rates a long way behind the average index recorded in 2010 of 2,758 points.

Analysts disagree on the extent to which coal and iron ore shipments will continue to drive bulk carrier demand growth in the coming years, not least because of factors such as global economic uncertainty, slowing growth in China and wide divergences over when exactly India's huge predicted coal import volume leap will kick in. But the elephant in the room for bulk carrier owners and operators is the monstrous size of the orderbook, notwithstanding the huge number of vessels delivered last year.

Future supply growth of main bulks



Source: Macquarie Research, December 2011

In the 12 month period to the end of November, RS Platou figures revealed that the post-Panamax fleet had grown by 68.5% compared to a year earlier, the Capesize fleet was up 17.6%, the Handymax/Supramax fleet by 13.3% and the post-Panamax/Kamsarmax by 8.6%. Only the ageing Handysize sector with substantial numbers of older tonnage had escaped the excesses of owners, growing just 3.8% in the 12 month period.

But despite the substantial number and size of deliveries in 2011, Drewry said the orderbook still totalled some 231,745dwt at the end of October, a whopping 39.3% of the active fleet of 589,894dwt. Moreover, over 170,000dwt of orders were due to be delivered by the end of 2012.

The orderbook is even more harrowing reading for owners with vessels in certain classes. As a percentage of the active panamax/mini-cape 80-110,000dwt fleet in October 2011, orders on the books due for delivery within the next few years totalled 99.2%. Newbuilding deliveries due in the coming years in the 200,000+ dwt range which includes the controversial Vale-class super iron ore carriers will total 88.4% of the current active fleet.

Even though 2011 was difficult for vessel owners and operators, it could have been worse. Analysts vary on the exact numbers, but scrapping brought some stability last year with something between 22–30m dwt deleted. Even so, this still meant net fleet growth of around 70m dwt in 2011, a historically huge jump in fleet size and, at more than 10%, easily outweighing demand growth.

Looking forward, Drewry expects tonne mile demand of some 5–7% per annum over the next five years with Chinese imports of iron ore and coal leading the market. However, the analyst warns that a "prolonged slowdown in many countries in Europe or a double dip in the US could lower the growth in dry bulk demand". Any Chinese government action to cool down its housing market, curb inflation or consolidate its steel industry could also see iron ore demand slow.

Brokers RS Platou predict that dry bulk trade volumes will increase by around 5–6% in 2012 with more long-hauls of iron ore and factors such as port congestion adding a further 1–2% of demand. "But even though tonnage demand could increase

Order book and delivery schedule for dry bulk vessels

m dwt	Year-end fleet 2008	2009	2010	CAGR 2007-10	Fleet 01-Nov-11	Order-book	% of fleet	2011 delivery	% of order-book	2012 delivery	2013+ delivery
Capesize (>100,000dwt)	143.4	169.9	209.3	16.7%	237.9	97.8	41%	19.9	20%	51.2	26.8
Panamax (60-100,000dwt)	114.7	120.9	136.4	8.1%	151.5	65.7	43%	10.9	17%	36.0	18.8
Handymax (40-60,000dwt)	82.9	91.9	109.0	12.3%	122.8	40.2	33%	10.5	26%	19.7	9.9
Handysize (10-40,000dwt)	76.3	75.5	81.6	2.8%	83.5	21.0	25%	7.9	38%	10.0	3.1

Source: FactSet, Macquarie Research, December 2011

strongly next year, the recurring problem in the dry bulk sector is still the oversized orderbook," said the company's latest report. "Even though we estimate 25–30% slippage compared to the scheduled orderbook, deliveries will most likely end up in the region of 90–95m dwt. Assuming around 30–35m dwt will be sold for scrapping, the net fleet increase will be in the region of 11–12%."

RS Platou concludes that even with record growth in tonnage demand, this will still be easily absorbed by fleet expansion.

Other analysts believe that RS Platou is overly optimistic on fleet deletions. They expect that the recent surge in scrapping rates will be short-lived. Not only will rising volumes and the recent rate increases dissuade owners from scrapping, but the recent upsurge in deletions has already seen most older vessels leave the fleet leaving fewer obvious options in 2012 and beyond.

Janet Lewis, Macquarie Capital Securities' regional head of industrials and shipping research, said the point on which there was unanimity between analysts was that the orderbook overhang would remain a problem and keep rates under pressure throughout 2012.

"Buoyed by the pick-up in scrapping activity in 2011, optimism was expressed (by other analysts and industry insiders) that this would help to restore balance," she said. "We agree that this is a key element — we are looking for 25m dwt to be scrapped in 2011, up from just 6m in 2010 and a further 37m dwt in 2012.

"Against this, however, we expect 96m dwt in deliveries in 2011 and 70m dwt in 2012, keeping pressure on rates, especially for Capesize and Panamax, for which the overhang of capacity is greatest.

"In addition to gradually working through the orderbook — and hoping that the restraint in limited orders seen in 2011 extends into 2012–13 — scrapping remains the main hope of bringing the market back into balance as bulk volumes to be carried gradually grow."

Rahul Kapoor, a Singapore-based shipping analyst with investment bank RS Platou Markets, believes 2012 will see bulk carrier rates remain "highly volatile" with a weaker start to the year followed by various surges through the year much like in 2011. Through to 2015 he believes that any major upsurge in the markets will only come from Chinese import policy.

If China carries on with another round of monetary easing and sticks to its plans to rely more iron ore imports, then demand growth could contain a few positive surprises for owners. "The Chinese government on 7 December said it forecasts steel consumption to reach 750mt in 2015, thus giving iron ore consumption of 1,130mt, mainly to be secured from overseas," added Kapoor.

"The statement said iron ore imports accounted for 67% of [China's iron ore] consumption in 2010 and had grown by about three percentage points per year over the last decade. Assuming the same trend going forward, imports would be 82% by 2015, which would mean 927mt of imports, up from 675mt estimated for 2011.

"We believe that this 252m tonne increase would give work for an additional 218 standard Capesize vessels, assuming a declining market share of iron ore supplies from India, based on assumptions from RS Platou Economic Research."

"By comparison the orderbook in late 2011 stood at 390 Capesizes, although many were larger than 180,000dwt. If we assume 33% permanent slippage, actual deliveries would be about 260 ships. Hence, China alone could potentially absorb a large part of the Capesize orderbook.

"As can be seen currently, despite the muted steel demand, the latest iron ore import data reaffirms the fact that Chinese iron ore buyers are highly price sensitive and any price below the cash costs of domestic iron ore production — estimated in the range of USD$120-140/tonne would inevitably pull the Chinese buyers into international imports."

However, Kapoor still takes the view that, given the current global economic uncertainty and general lack of market confidence, the downside risks in the supply-demand equation easily outweighs the potential upside risks. "We still expect a weaker 2012 and things to turn positive late 2012/early 2013 as the fleet orderbook gets absorbed and demand stays modest," he said. "That said, if demand was to slowdown materially, and we experienced a global slowdown and a hard landing in China where construction spending still accounts for +50% of GDP, I would say all bets are off and we could see a protracted low freight rate environment for the next three years."

Singapore-based Jayendu Krishna, senior manager at Drewry Maritime Services, said with low rates and high bunker prices driving up operating costs, the best hope for rates was that some owners begin to lay-up vessels. "It's hard to see much more older tonnage being scrapped, but lay-ups have already started to happen," he told *DCi*. "This has increased demand, but it's a temporary solution because these ships will come back to the fleet if there is cargo."

Lewis said there was a general consensus among analysts that rates — and the bottom lines' of most owners — would remain under pressure in 2012, but how long the supply overhang will dominate demand growth was open to debate. "A few optimists expect scrapping to put the market in balance by the end of 2012, while others expect the overbuilding to be a problem until 2015," she said. "We believe 2012 will be the low-point for rates but that the recovery back to a BDI average around 2,000 will take until 2014."

Bulk carrier supply and demand

Iain McIntosh

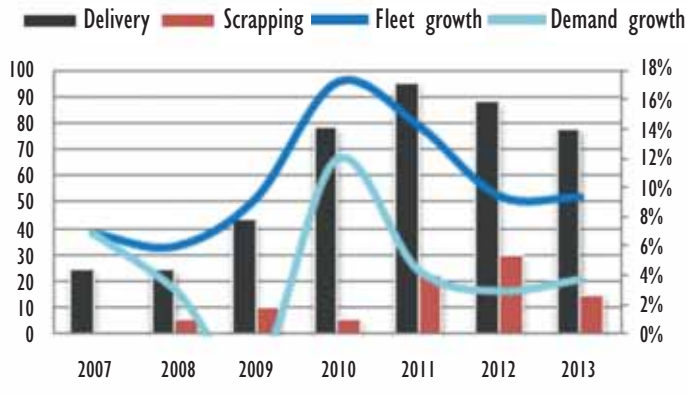
At the start of 2011, it was clear that the sheer weight of the delivery schedule would impact heavily on the dry cargo market and certainly in Q1/2011 this was the case with the Baltic Dry Index (BDI) reaching levels of 1,100–1,150 dragged down by the very low Cape Index. This certainly helped on the demolition rate of vessels, which started to accelerate. However by late July 2011, the Capesize index started to show remarkable recovery as demand for tonnage increased on the back of good demand for iron ore and coal in the second half of the year. This was also coupled with an upturn in congestion to vessels in key loading and discharge ports as the demand picked up. Finally, the tonne–mile equation showed some upward changes, notably with iron exports declining from India and having to be sourced from longer haul areas. The irony, however, is that in a year of good demand with 2011 producing 5.5% growth over a previously strong 2010, this was however damaged by over supply of new tonnage.

The rally in the Capesize index does look weak as we enter Q1/2012 and already in the opening days of trading it has lost 25% of its late December highs.

During 2011, whilst both the Panamax and Handy sectors were less robust, they did generally hold up with reasonable employment throughout the year.

An updated graph below, showing delivery and scrapping with demand and supply curves overlaid. This goes through to 2013 and, in spite of 22mdwt of tonnage scrapped in 2011, over

Bulk fleet delivery, scrapping & growth



Source Data – Clarkson's/BIMCO.

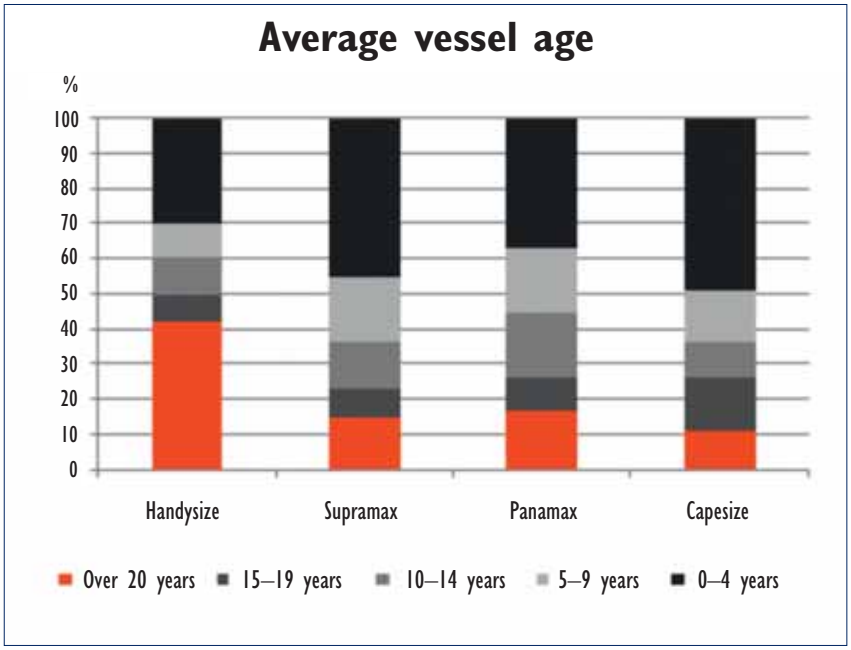
STATISTICS

	Feb11				Dec 2011			Reductions	
Type	Size	5YO S&P	Newbuild	Type	Size	5YO S&P	Newbuild	5YO	New
Capesize	170K	$50m	$55m	Capesize	170K	$36.3m	$48m	–27.4%	–12.7%
Panamax	75K	$36m	$34m	Panamax	75K	$26.5m	$28.5m	–26.4%	–16.2%
Supramax	55K	$28m	$31m	Supramax	55K	$22.8m	$27m	–18.6%	–12.9%
Handysize	30K	$25m	$25m	Handysize	30K	$21m	$22m	–16.0%	–12.0%

The final part of the process of ship scrapping.

95m dwt of tonnage delivered, representing the largest-ever delivery volume, ensured a flat performance in the market with 14% fleet growth. The total bulk fleet has moved from 540mdwt in 2010 to approx 615mdwt at the end of 2011, and the delivery schedule of 2012/ 2013 also looks extremely robust. The graph takes account of some order book slippage, but has assessed demolition to continue and at a stronger pace. Whilst most assessments for demolition allow for vessels 30 years and over, this would only represent scrapping of 18mdwt during the next two years and this is simply not enough. What did happen in 2011 was that as well as a large number of both Capesize and Panamax being scrapped, the profile of these vessels was a lot younger (for example, of the total 70 Capes which were scrapped, some 32 of these were in the age category of 20–25 years old). It is very likely that this pattern will continue in 2012 and we are therefore showing a conservative 45mdwt of scrapping over the next two years which will help move the supply curve a little closer to the demand curve but the gap is still large.

The demolition market has its own challenges whether it's the ongoing on/off Bangladesh situation (when open, this did accelerate demolition in Q2–3/2011), the price of and demand for steel and as we saw in the second half of the year a deceleration of breaking due to the upswing in cargo demand. The large delivery schedule over the next two years will ensure that demolition should accelerate again.



Source Data – SSY/Clarksons.

Sale & purchase market

One of the main problems of the 2006–2008 new build ordering boom followed by stagnant orders was that newbuilding prices fell in 2009/2010 and were not much higher than 5YO S&P prices. With the cargo boom in 2010, this stimulated further growth in new building rather than S&P and has in many ways worsened the supply side problem.

Since February 2011, a significant reduction in both new build prices and 5YO S&P prices has happened but more importantly in the larger size category the S&P price reduction has accelerated faster. Whilst yards will of course be encouraging newbuilding orders as existing deliveries complete, the S&P price for relatively new tonnage is becoming increasingly attractive; whilst the market continues to remain soft as purchasers no

doubt wait to see if further reductions arise, there is no question that — importantly for the market — new building orders remain light whilst S&P picks up, and this will greatly assist the forward supply side equation. The current numbers favour S&P growth.

The Capesize fleet is getting ever-younger.

Bulk fleet age profile and demolition

One year on, an updated age profile of the current fleet is worthwhile looking at. Predictably, due to the large scale of deliveries, the percentage of fleet 0–4 years old has grown dramatically in all sectors with Capesize notably accelerating from 42% to nearly 50% in 2011. Panamax also followed a similar path moving from 32% to 38% over the same period. Supramax vessels also accelerated to a much younger fleet profile by late 2011 due to a large delivery schedule in 2011.

The key area, being over 20 years old, remains the focus with still good opportunity for re-cycling a sizeable portion of the older fleet to re-balance the supply side; however, owners of larger tonnage will need to continue to re-cycle younger units as they did in 2011.

The Handysize (10–40,000dwt) sector, where fleet age over 20 years still remains high (42%) — and even with an order book representing 24% of the existing fleet — the fleet continues to be a well managed one, due to good recycling keeping fleet growth in check. With good growth in the minor bulks trade, their future remains healthy.

A summary of demolition activity is shown below and illustrates a year of two halves, still resulting in the highest-ever demolition of tonnage. In the first half, sales were dominated by large Capesize scrapping and, to an extent, Panamax demolition. The weak Cape market forced an increase in scrapping where vessel age was less of a consideration and, coupled with good scrap prices, this aided the process. Once the freight market improved, this slowed down scrapping in Q3/2011 and the driver once again became age of vessel. Panamax demolition followed a similar path, with age being less of a consideration. Owners of tonnage less than 70,000dwt also took the opportunity to recycle this less attractive tonnage, with 44 out of the 69 units scrapped less than this size.

In the Handy sector, this followed a normal process of over 30 years old tonnage being the driver, and a healthy volume of tonnage was recycled which has kept this fleet sector in a healthy supply side position.

The supply side of the bulk fleet continues to be of great concern given the growth, but there continue to be factors in play which will address this in the coming year. The facts remain that the bulk sector has always been influenced by period cycles, and we can expect to be in a low cycle for the next two years as the large order book continues to be worked off. Further strong deliveries in the first half of 2012 will continue to depress the market and, in turn, increase demolition again, whilst other factors like an improving S&P market at the expense of newbuilding will also help.

The demand side also does continue to grow with 3–4% per annum forecast over the next two years and with tonne-mile growth exceeding trade growth; coupled with inevitable port congestion, this will further soak up tonnage demand. The Handy and Panamax sectors will more likely trade at a better level than Capesize with the latter fleet size placing enormous pressure on its supply side. DCi

BULK VESSEL DEMOLITION 2011

Type	Data	Q1/2011	Q2/2011	Q3/2011	Q4/2011	Total
Capesize	Number	20	30	17	3	70
	MDWT	3.07	4.83	2.75	0.55	11.21
	Ave US$ per LDT	484	502	520	447	499
Panamax	Number	15	19	27	8	69
	MDWT	1.04	1.33	1.92	0.53	4.83
	Ave US$ per LDT	476	498	497	451	488
Handymax	Number	50	44	70	43	207
	MDWT	1.26	1.36	2.06	1.41	6.1
	Ave US$ per LDT	464	494	493	472	482
Total number		85	93	114	54	346
Total DWT		5.38	7.53	6.75	2.49	22.15
Total ave US$ per LDT		475	499	503	464	490

Source various – Intermodal/Golden Destiny

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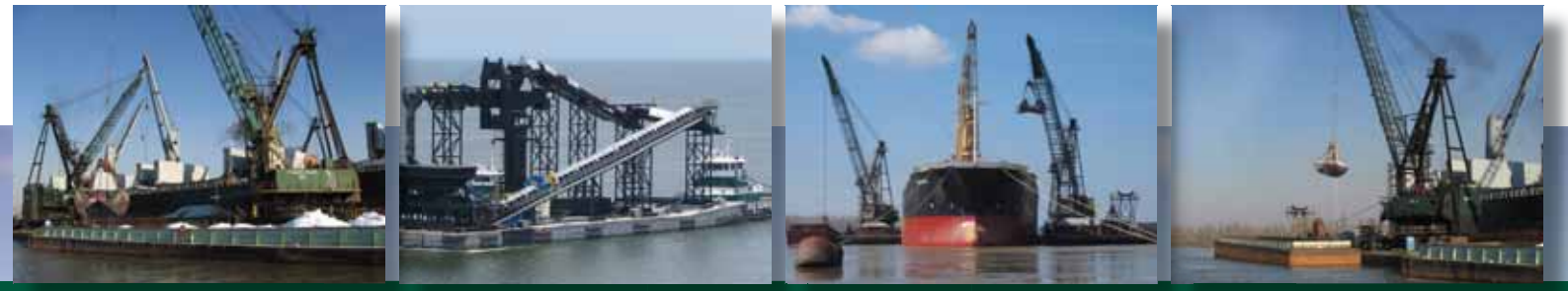

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US Gulf ports and terminals

Bulk vessel approaching the Port of Houston.

The Gulf Coast of the United States comprises the coasts of American states that are on the Gulf of Mexico, which includes Texas, Louisiana, Mississippi, Alabama, and Florida and are known as the Gulf States.

The Gulf Coast is a major centre of economic activity. The Port of South Louisiana and the Port of Houston are two of the ten busiest ports in the world by cargo volume.

The Port of Houston

The Port of Houston is a 25-mile-long complex of diversified public and private facilities located just a few hours' sailing time from the Gulf of Mexico. The port is ranked first in the United States in foreign waterborne tonnage (14 consecutive years); first in US imports (20 consecutive years); second in US export tonnage and second in the US in total tonnage (20 consecutive years).

The Port of Houston is made up of the Port of Houston Authority and the 150-plus private industrial companies along the Houston Ship Channel. All together, the port authority and its neighbours along the ship channel are a large and vibrant component of the regional economy.

More than 220mt (million tonnes) of cargo moved through the Port of Houston in 2009. More than 7,700 vessel calls were recorded at the Port of Houston in that year. The Houston Pilots navigate each vessel through the Houston Ship Channel.

The Port of Houston has an impressive listing of firsts, from unloading the world's first container ship to becoming the country's first port to receive ISO 14001 compliance.

The Houston Ship Channel

The Houston Ship Channel has been a catalyst for growth in Harris County since the first journey of a steamship up Buffalo Bayou in 1837. The ship channel plays a critical role in today's community as well. It generates jobs and opportunities that allow businesses to flourish. A 2007 study by Martin Associates says ship channel-related businesses contribute to more than 785,000 jobs throughout Texas while generating nearly $118 billion of statewide economic impact. Additionally, more than $3.7 billion in state and local tax revenues are generated by business activities related to the port. It is projected that the Port of Houston will continue to be an important factor as north-south trade expands.

Galveston Bay

Galveston Bay is an irregularly shaped, shallow body of water, approximately 30 miles long (48km) in a general

north–northeast and south–southwest direction, about 17 miles (21 km) in width at its widest part and generally about 7 to 9 feet (2.1 to 2.7m) deep.

Midway the length of the bay, it is nearly separated into two parts by Red Fish Bar, a chain of shoals. The part of the bay northward of Red Fish Bar is generally designated as 'Upper Bay' and the part southward as 'Lower Bay'. The northeastern end of the Upper Bay is called Trinity Bay. Ship channels to Houston, Galveston, Texas City and Port Bolivar extend from Bolivar Roads in the southern part of Galveston Bay.

From the Gulf of Mexico, deep-draught vessels enter Galveston Bay between Bolivar Peninsula to the northeast and Galveston Island to the south. This entrance is called Galveston Harbor and extends from deep water in the Gulf of Mexico through the pass formed by the jetties extending from Galveston Island and Bolivar Peninsula to Bolivar Roads, the deep-water area between Bolivar Roads, the deep-water area between Bolivar Point and Pelican Island Fort Point.

Intracoastal Waterway

The Apalachee Bay, Florida, to Brownsville, Texas, section of the Gulf Intracoastal Waterway extends through the lower part of Galveston Bay. This route follows a dredged channel inshore along Bolivar Peninsula, through Bolivar Roads and joins Galveston Channel at its east end. From the west end of Galveston Channel, the route passes through the lower part of Galveston Bay and continues through West Bay.

An alternate route of the Intracoastal Waterway crosses the Houston Ship and Texas City channels and passes through the northern end of Pelican Island.

Port of South Louisiana: America's largest tonnage port district,

The Port of South Louisiana extends across a 54-mile span of the Mississippi River between New Orleans and Baton Rouge. Within its district, there are seven grain elevators, more than 40 liquid and dry bulk terminals, multiple midstreaming operations, and the Globalplex Intermodal Terminal, the port's public facility. In 2009, the facilities in the port's jurisdiction handled over 226 million short tonnes of cargo, of which 95% were liquid and dry bulk commodities, making the Port of South Louisiana the largest tonnage port in the Western Hemisphere and eleventh largest in the world

As America's largest tonnage port district, the Port of South Louisiana is the premier sea gateway for US export and import traffic.

The installations of the Port of South Louisiana are primarily private enterprises, such as ADM, Cargill, Mosaic, Dupont, Valero, Shell, etc. However, the port also serves as landlord to five facilities that are leased to companies through 30-year lease purchase agreements.

Port facilities, traffic and throughput

Governed by a board of seven Commissioners, the Port of South Louisiana, which stretches 54 miles along the Mississippi River, is the largest tonnage port district in the western hemisphere. The facilities within St. Charles, St. John the Baptist, and St. James parishes (counties) handled over 246mt (million short tonnes) of cargo in 2010, brought to its terminals via

vessels and barges.

Over 4,000 oceangoing vessels and 55,000 barges call at the Port of South Louisiana each year, making it the top ranked in the country for export tonnage and total tonnage.

With exports of over 48mt of cargo in 2010 — more than any other port in North America — the Port of South Louisiana cargo throughput accounts for 15% and 57% of total US and Louisiana exports, respectively.

The Port of South Louisiana has five first-rate port-owned facilities, ranging from grain elevators to general cargo facilities. It serves as landlord of these, which are leased to operating companies such as Occidental Chemical and Archer Daniels Midland. The exception is the Globalplex Intermodal Terminal, purchased by the Port in 1992 that is being redeveloped into a world-class complex to accommodate a variety of dry bulk and breakbulk cargo.

The port's goals are:

❖ to serve the maritime transportation needs of its resident industry;

❖ to assist resident industry in the development of maritime and/or industrial facilities;

❖ to encourage foreign and domestic investment within the River Parishes Region and Louisiana; and

❖ to attract foreign and domestic cargo to the Globalplex Intermodal Terminal.

The River Region truly offers an intermodal transportation network of waterways, roadways, rail, and air, an advantage resident companies enjoy. The region sits at the intersection of the Mississippi River and the Gulf of Mexico, which allows speedy and expeditious distribution of products throughout the Americas and to the world.

Globalplex Intermodal Terminal

As its name suggest, this is a world-class intermodal terminal. It offers storage and warehousing, space for light manufacturing and a very active Foreign Trade Zone.

Based in the heart of the Port of South Louisiana's jurisdiction on a 335-acre (135-hectare) site, the Globalplex Intermodal Terminal is a public terminal — owned by the Port of South Louisiana and operated by Associated Terminals and Kinder-Morgan — for both vessels and barges. It provides handling and storage for bulk, breakbulk, and containerized cargoes. Globalplex is an excellent location for manufacturing, distribution, and logistics companies.

Formerly a sugar refining complex and an integral part of the economic and social history of the region, the Globalplex Intermodal Terminal is a one-of-a-kind public facility on the lower Mississippi River. Its redevelopment is guided by a master plan that focuses on the dynamic needs of today's shippers and manufacturers. Flexibility, efficiency, and connectivity are the hallmarks of the redesign and new construction.

Globalplex Bulk Terminal

Globalplex Intermodal Terminal's deep-draught bulk terminal is dedicated to handling materials including, but not limited to, cement, mineral ores, and woodchips. This terminal, operated by Kinder-Morgan, is equipped with a Carlsen screw-type unloader for special handling of cement. The cement facility, which includes dome storage, is one of the largest in the United States. Cargo is quickly moved to and from landside storage via an extensive covered conveyor system.

Transportation

Water

Within the 108 miles (174 kilometres) of deepwater frontage on both banks of the Mississippi River are more than 50 piers and docks. Vessels draughting 45 feet (14 metres) call at the port district throughout the year. Rarely is river commerce halted because of river depth or weather conditions.

The Port of South Louisiana transfers cargo to and from vessels and barges arriving in the lower Mississippi River. The inland barge system, comprised of 19,262 miles (30,992 kilometers) of waterway, moves more than 233mt of cargo upriver to major US markets in the Midwest and Northeast.

Highways

Three major interstate highways connect the Port of South Louisiana to major US markets. Interstate 10 extends across the nation from the Atlantic to the Pacific. Interstate 55 reaches points as far north as Chicago, Detroit, and St. Paul. Interstate 59, which originates near the port's northern boundary, allows direct entry to cities in the eastern United States. Just within 600 miles are 20 metropolitan area markets in the southeast US accessible via these interstates.

Throughout the port's jurisdiction, an excellent state highway system feeds traffic to these major interstate arteries. Shipments can flow easily, without congestion, into the mainstream of the interstate highway system.

Rail

The Port of South Louisiana is served by three trunk line railroads, two on the east bank of the Mississippi River and one on the west bank. The Union Pacific railroad on the west bank provides service to western US markets, whereas the Canadian National and Kansas City Southern railroads, both on the east bank, serve the mid-continental United States, Canada, and Mexico.

Port of Corpus Christi looks to the future

Strategically located on the western Gulf of Mexico, the Port Corpus Christi is the sixth largest port in the United States in total tonnage. With a straight, 45ft deep channel, the port provides quick access to the Gulf, the United States inland waterway system and the world beyond. The port delivers outstanding access to overland transportation with on-site and direct connections to three Class I railroads and uncongested interstate and state highways. The port is protected by a state-of-the-art security department and an award-winning environmental management system. With outstanding management and operations staff, Port Corpus Christi lives up to its motto of 'More Than You Can Sea'.

The Port of Corpus Christi boasts:

- 45ft channel depth;
- more than 125 acres of open storage and fabrication sites;
- heavy lift capabilities;
- shipside rail and truck access;
- excellent highway access;
- flexible and productive labour force; and

Corpus Christi bay.

- more than 295,500ft^2 of covered dockside storage

Port mission

It is the mission of the Port of Corpus Christi to serve as a regional economic development catalyst while protecting and enhancing its existing industrial base and simultaneously working to diversify its international maritime cargo business. In pursuit of this mission, the port is guided by the following basic principles:

- the port shall conduct its affairs in a positive, open, and co-operative manner;
- the port shall operate in a fiscally responsible manner;
- the port shall be a positive and proactive force in the protection of the region's marine and water related resources; and
- the port shall be committed to serving its customers — present and future.

Among recent developments at the Port of Corpus Christi is its decision to enter into a memorandum of understanding with China's Port Tianjin. This memorandum of understanding (MOU) aims to generate new business through both ports.

Recent news

Bridge opening: new link for commercial traffic

On 17 October last year, a ribbon cutting ceremony was held for the opening of a direct connector bridge linking Interstate 37 to the Joe Fulton International Trade Corridor. The Texas Department of Transportation constructed the 4,415ft-long bridge as part of a $32 million project to improve mobility and safety. The bridge is projected to carry approximately 500 large trucks per day to Port Corpus Christi between southbound Interstate 37 and the Joe Fulton International Trade Corridor.

Texas Department of Transportation Corpus Christi district engineer John A. Casey said the new bridge is a strategic advantage for the Port of Corpus Christi. "Today a new doorway to international trade opportunities is opened signalling that the Coastal Bend is

open for business," Casey said.

Port Commission Chairman Mike Carrell, Commissioner Richard Borchard, and Commissioner Mike Scott, as well as other local dignitaries including State Senator Juan 'Chuy' Hinojosa, State Representative Connie Scott, Nueces County Judge S. Loyd Neal, Nueces County Commissioner Joe Gonzalez, Nueces County Commissioner Oscar Ortiz, Corpus Christi City Council Member Chris Adler, and Corpus Christi City Council Member Nelda Martinez all took part in the ceremonial ribbon-cutting ceremony.

MOU with China's Tianjin Port

In October last year, the Port of Corpus Christi and the Tianjin Port (Group) Co., Ltd signed the MOU which is aimed at generating new business by promoting the all water route between Asia and the Port of Corpus Christi Authority, and by promoting the all water route between North America including Gulf of Mexico and the Tianjin Port (Group) Co., Ltd. "Our port is honoured of signing this agreement today. The enhancement of the port's relationship with the Tianjin Port Group plays a very important role in linking our port with ports in Asia as we continue to develop strategic business partnerships with countries in the Eastern Hemisphere," said John LaRue, executive director of Port Corpus Christi.

As part of the agreement both ports will co-operate with each other in achieving a generation of new improved business by increasing the level of services available. These opportunities will support the levels of opportunities for economic growth for each of the region's the ports are located.

Tianjin Port is the largest artificial port in China. It is located at the estuary of Haihe River and the cross point of Beijing-Tianjin city band and Bohai Rim economic circle. It is the sea gateway of Beijing and Tianjin, the important international trade port in northern China and the link to connect Northeast Asia and Central and West Asia. Tianjin Port covers water and land area nearly 310km^2, in which land area is 107km^2. At present, the main navigation channel is 35km long with a water depth of 19.5m. This allows for 250,000dwt ships to enter and leave at all times, and 300,000dwt vessels to transit at hight tide. In total, there are 151 berths at the port, including 96 berths for over 10,000 tonnes. Total quay length is 32,000m.

Panama Canal and Port Corpus Christi sign agreement

The Panama Canal Authority joined the Port in Corpus Christi on 14 September last year at the Congressman Solomon P. Ortiz International Center to celebrate the Port's 85th anniversary and sign a memorandum of understanding (MOU) to work with one other to promote trade opportunities.

With cotton as its first cargo, 85 years ago Port Corpus Christi opened its doors to the world of commerce.

"We are proud of Port Corpus Christi's dedication to economic development throughout South Texas over the last 85 years. It is important that we remain committed to establishing partnerships with ports in the United States as we move forward with the expansion of the Panama Canal. Our agreement will strengthen this commitment and promote trade along the Gulf Coast of the US," said ACP Administrator/CEO Alberto Alemán Zubieta.

The port plans to diversify its cargo base, develop important infrastructure projects, such as the dredging of the extension of the La Quinta Channel and the expansion of the port's rail capabilities, which will enable the port to better serve its customers. These projects, as well as several others, continue to attract new industry to the port, helping to create new jobs for the region and to open new shipping trade routes opportunities through the Gulf of Mexico . By taking advantage of the opportunities the Panama Canal, Port Corpus Christi will become South Texas's strategic shipping link to the world through the Gulf of Mexico.

"We are honoured to have the Panama Canal Authority part of the celebration of our 85th anniversary. It gives us the opportunity to celebrate our friendship as we work together for the future," said Mike Carrell, Port Corpus Christi Commission Chairman, adding, "the enhancement of the port's relationship with the Panama Canal Authority plays a very important role in linking our Port with ports in Asia as we continue to develop strategic business partnerships with countries in the Eastern Hemisphere."

Future projects

Future private investment projects are expected to impact the growth of the Port of Corpus Christi in the near future, namely the construction of a steel pipe mill by Tianjin Pipe Corporation, the expansion of the port's bulk terminal to support long-term leases with Ambre and Millennium for the handling of their coal exports operations to Asia, South America and Europe, the extension of the La Quinta Channel and the construction of the La Quinta Trade Gateway Multipurpose Facility. DCi

Port Corpus Christi.

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Chronos BTH enjoys record level of demand

Chronos BTH Limited, based in Nottingham in the UK, has reported that it continues to enjoy a record number of plant upgrade, retrofit and refurbishment projects, with international projects also now having been secured.

This continued success in this market sector reflects the continuation of challenging economic circumstances, where in some cases capital equipment spend has sometimes been difficult to justify. These latest Chronos BTH retrofit/upgrades have enabled further companies to maximize the use of their existing systems.

As with previous upgrades, equipment modified includes bagging scales/feeders and a variety of near obsolete controllers; all of which have been modified or replaced for operation to current Weights & Measures regulatory standards, across several industries.

Chronos SpeedAC NXT controller.

Flour milling

- the onsite upgrading of four manual E55 bagging weighers in a Kuwait Flour Milling Complex, from Speedac8 controllers to SpeedAC NXT controllers; and
- planned replacement of 2 PC454 scale controllers at a South Lincolnshire flour mill to operate with PC456 controllers.

Animal feed compounding

- working around the intensive production requirements of a Midlands feed supplements plant to upgrade several controllers to SpeedAC NXT operation; and
- the supply of a reconditioned belt fed scale and a SpeedAC NXT controller to a UK feed mill and using existing equipment to upgrade the feed packing line.

Food & malting

- improving weighing accuracy by using a SpeedAC NXT to replace a competitor's controller in a food ingredients plant; and
- upgrading competitor supplied grain malt and milled malt weigher controllers to SpeedAC NXT operation and to be able to meet weights & measures legislation.

Chemicals

- replacing a competitor's control system with a SpeedAC NXT controller to provide Weights & Measures-approved FIBC filling in a fertilizer plant; and
- retrofitting 2 SpeedAC NXT controllers and supplying new loadcells for two barrel filling lines to provide enhanced lubricant weighing accuracies and improved reliability.

Chronos BTH Limited incorporates Richard Simon Limited, Verville and Premier Tech Chronos — America; for European spares, refurbishments, service, installation and commissioning.

Japan crude steel output to fall for second year running

Japan's crude steel output will drop for a second straight year in 2012 as a stronger yen hurts exports and domestic manufacturing remains weak despite a pickup in reconstruction demand, an industry body has said.

Steelmakers across Asia have been curbing production as a shaky global economy dents consumption with top producer China forecast to see slower growth in output this year.

Crude steel output in Japan, the world's No. 2 producer, will drop by around 2–3mt (million tonnes) from 107.6mt in 2011, said Eiji Hayashida, chairman of the Japan Iron and Steel Federation. That would follow a 1.8% decline in output last year.

"A strong recovery in exports is unlikely to happen at the current yen rate, while domestic demand will dip slightly," Hayashida, who is also head of the world's No. 5 steelmaker JFE Holdings, told a news conference.

The yen's rise to a record high of 75.3 yen against the US dollar in October has hit Japanese exporters, with shipments of passenger cars falling more than 10% in April–November.

China, whose steel output is six times bigger than Japan's, is likely to see production growing around 6% to 728mt in 2012, slower than the 8.9% pace in 2011, as Beijing keeps a tight grip on its property sector.

Reconstruction of river banks and other engineering projects after last year's massive 11 March earthquake will boost steel demand, but he said the increase will only be limited to 500,000–600,000 tonnes.

Imports of cheaper-priced steel will not exceed the current 5–6mt level in the next fiscal year that starts in April, because the usage is limited, Hayashida said. The current import volume represents about 10% of domestic demand.

"It is unlikely that imports will rise further because of specification issues," he said. He also said that Tokyo Electric Power Co's plan to raise rates for corporate customers would be difficult for steelmakers to cope with, particularly producers of construction steel who are now operating mostly at night and on weekends to take advantage of lower electricity rates. "The rate rises could push many of those into the red. We should be aware that high energy costs will deal a substantial blow to Japanese industries.

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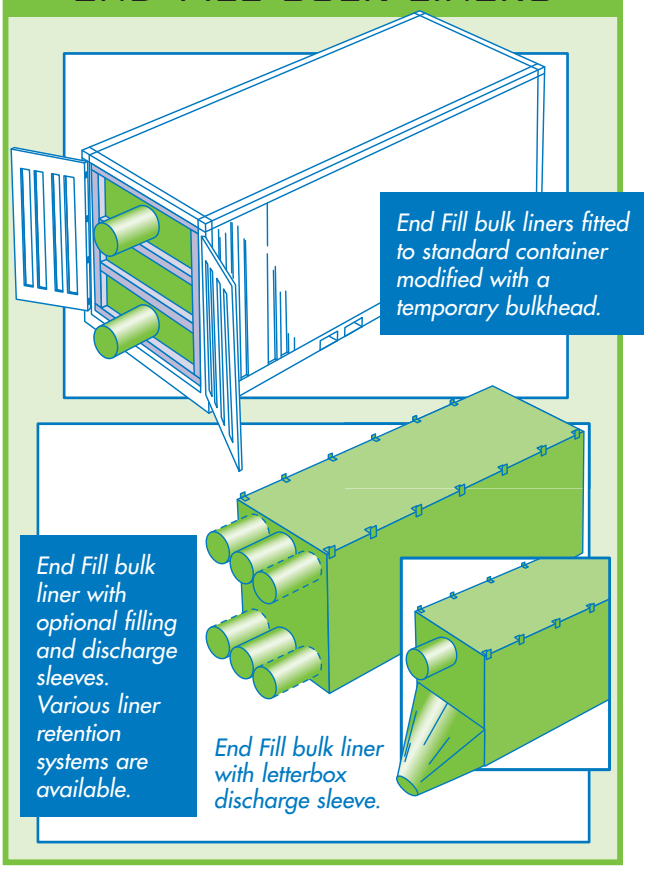

End Fill bulk liners fitted to standard container modified with a temporary bulkhead.

End Fill bulk liner with optional filling and discharge sleeves. Various liner retention systems are available.

End Fill bulk liner with letterbox discharge sleeve.

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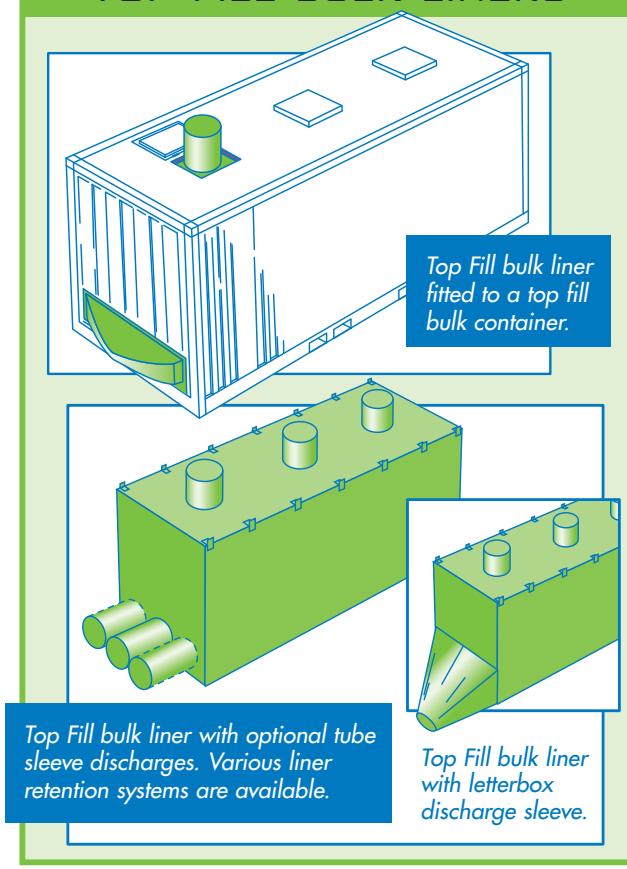
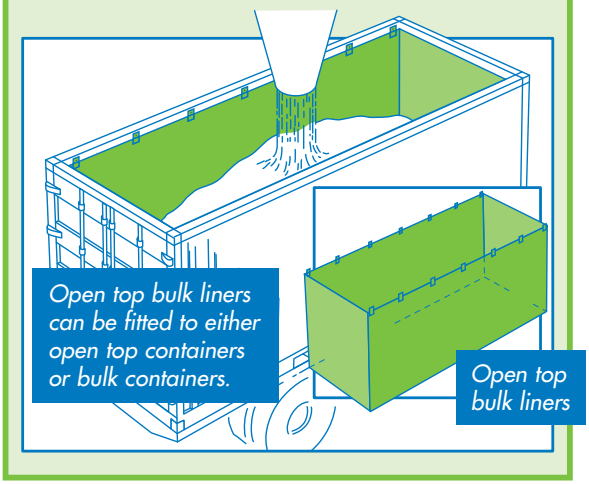


Top Fill bulk liner fitted to a top fill bulk container.

Top Fill bulk liner with optional tube sleeve discharges. Various liner retention systems are available.

Top Fill bulk liner with letterbox discharge sleeve.

OPEN TOP BULK LINERS



Open top bulk liners can be fitted to either open top containers or bulk containers.

Open top bulk liners

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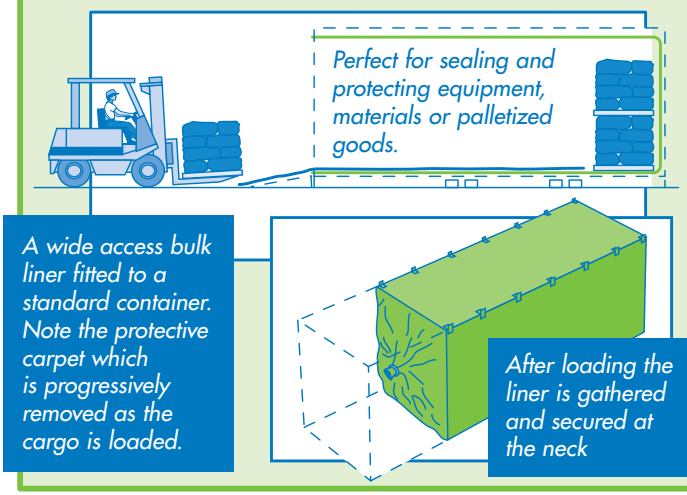

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Dinnissen unveils Smart Discharge

Many companies in the animal feed industry who need to feed micro ingredients, pre-mixes and other ingredients from a holding location into processing lines do so only from silos. Although this is a classic solution, it's not always a practical one for storing and handling smaller quantities or ingredients that are sensitive to contamination. Dinnissen Process Technology is therefore introducing a new system which makes it possible to feed ingredients into a processing line directly from the big bag. The new system also offers advantages to companies looking for greater flexibility or for a cost-efficient solution to a shortage of silos or premix storage units.

Effective solution for ingredients used in small quantities

Manufacturers of animal feeds are using an increasing variety of (macro or micro) ingredients and pre-mixes stored at an appropriate location in order to produce an even greater variety of high-quality or tailor-made products. In particular when ingredients are involved that are used in relatively small quantities (300g/h to 8,000k/h), a classic storage solution using silos or pre-mix storage units has many disadvantages. Products often have to be transported to silos located high up in the plant, and silos as well as transport lines can become contaminated with residual materials. In addition, the use of many different types of ingredients requires the installation of many small silos and therefore a significant investment.

Hygienic, efficient and improved results

Dinnissen's new infeed system feeds ingredients for compound feeds (compound feeds are feedstuffs that are blended from various raw materials and additives), fish feed and petfood production directly into the system from the big bag. To do so, the big bags are fed into a big bag emptying station and automatically connected to a dosage/weighing station and a pneumatic Slow-Flow transport system from Dinnissen. After the ingredients have been automatically dosed or weighed out, they are fed into the mixer via a vacuum-assisted or blower type transport.

To accomplish this, the Slow-Flow transport system uses low air speeds and a relatively high loading factor, making it very energy-efficient. As a result, Slow Flow Conveying is very suitable for hygienically, carefully and efficiently transporting bulk solids that are fragile, sticky or sensitive to wear and tear. Feeding the ingredients in directly from the big bag prevents contamination and build-up of residual materials in transport lines and cells.

The new system offers cost savings and flexibility to producers using many different (expensive) micro-ingredients, premixes and other products held in interim storage units. As the direct infeed system also prevents the build-up of residual products and contamination in transport lines, the end product quality is also better.

Finally, such a system is also very cost-efficient. Users also have the option of feeding ingredients into the system directly from 25kg bags. The bags are then first placed in a Dima bag discharge station supplied by Dinnissen Process Technology (based in Sevenum). The maximum infeed capacity for feeding ingredients directly from big bags or bags vary somewhat, but lies between 10 and 20 tonnes per hour.

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