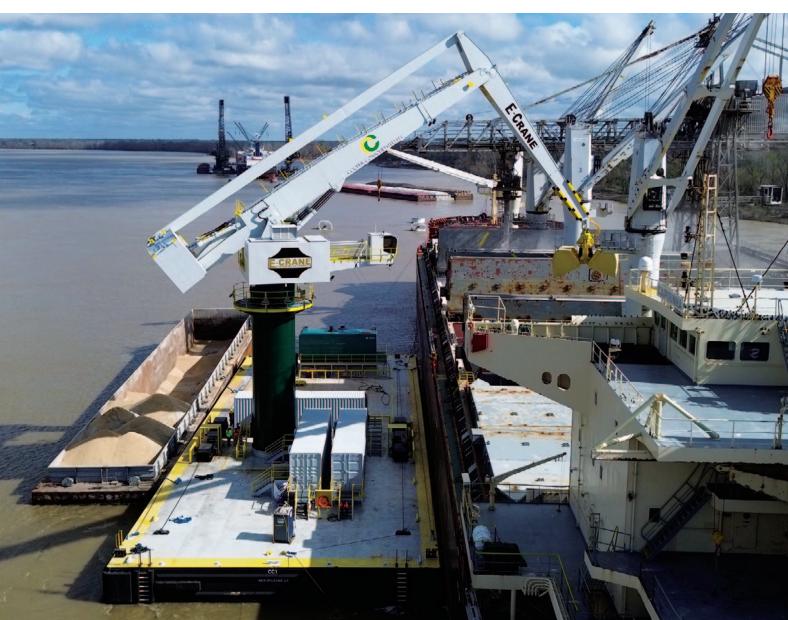


DRY CARGO international

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FEATURES

- Bauxite & Alumina Trades
- Containerized Bulk Handling
- Cranes

- Grain Handling Directory
- Inland Transportation & Handling Technologies

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



101



Cooper Consolidated, LLC, located in New Orleans, LA, has expanded its bulk unloading fleet by adding

two 4000C Series E-Cranes, the largest cranes built by E-Crane. These high capacity E-Cranes are mounted on 200' x 72' x 12' barges and handle both bulk and breakbulk cargo on the Mississippi River.

See pages 46-47 for a story on the Cooper Consolidated 'Creole King' christening.

> **E-CRANE WORLDWIDE** Koekoeklaan 53 9991 Adegem

> > Belgium

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GRAIN HANDLING DIRECTORY

DRY CARGO international

A brighter outlook for grain trade

estraints on commodity imports in a number of countries became more obvious in the past few months. If this trend persists, it could imply little or no annual growth in world seaborne dry bulk trade during 2025, and the pattern may continue into the early part of next year.

International trade policy changes and geopolitical events have exacerbated the usual uncertainties surrounding economic activity globally and in the main dry bulk importing countries. Last month analysts at the OECD organization suggested that "the global economy has shifted from a period of resilient growth and declining inflation to a more uncertain path". Forecast 2025 world gross domestic product growth was cut by almost a half percentage point to 2.9% after 3.3% in 2024.

GRAIN & SOYA

One brighter aspect emerging is the outlook for grain trade, following a sharp downturn in trade year 2024/25 now ending. In 2025/26 (starting this month for wheat, and October for corn and other coarse grains) an increase of 21mt (million tonnes) or 5% in world wheat and coarse grains is expected. US Department of Agriculture calculations show a total of 439mt, up from 418mt in the previous year.

Higher imports into China are predicted to provide a large contribution to the global revival, rising by10mt (40%)

to 34.5mt, a recovery after a slump in the past twelve months. Larger volumes into other Asian countries, the Middle East area and elsewhere could be seen. Expectations are still tentative, because the results of summer northern hemisphere domestic harvests in importing countries are awaited, and foreign buying may be modified by domestic crop yield outcomes.

COAL

A negative performance by world coal trade is becoming more likely in 2025. Weakness in China's imports has been an especially prominent feature in recent months, while there are also signs of a slacker trend in India. Several forecasters are now envisaging a large reduction in the annual global total.

The latest end-June quarterly forecast by analysts at the Australian Government Department of Industry suggests a sizeable reduction. Global trade in steam and coking coal — including some overland movements but mostly seaborne — is estimated to decline by 53mt or 3.5% in 2025 to 1,462mt, from 1,515mt last year. The breakdown shows a 58mt (11%) decline in China to 478mt, and a 4mt (2%) decrease in India to 247mt, partly offset by some growth elsewhere.

IRON ORE

Another major component of dry bulk commodity trade, iron ore, is also

'showing signs of difficulty in sustaining an upwards trend. This year's total may be flat or, perhaps more likely, down by a couple of percentage points compared with growth in the past two years.

Further evidence of subdued import demand for steelmaking raw materials is provided by steel production data. According to the World Steel Association's figures, crude steel output in the first five months of 2025 compared with last year's same period was lower in many of the main producing and iron ore importing countries — down by 1.7% in China, 2.5% in the European Union, 3% in South Korea and by 5% in Japan.

MINOR BULKS

Trade in fertilizers, mainly comprising potash, phosphates (rock and processed), sulphur and urea is a large element of the minor bulks segment. Estimates suggest brisk growth has been occurring, raising the global seaborne fertilizer trade total to about 205mt in 2024, and an upwards trend seems to be continuing.

BULK CARRIER FLEET

Handysize (10-44,999 deadweight tonnes) vessels represent about 12% of the world bulk carrier fleet. In the past four years growth has averaged 3.7%, including 4.2% in the twelve months to end-2024. Signs point to another 4% or more increase in 2025, amid higher newbuilding deliveries and an extended period of low scrapping.

TABLE 1: MAJOR GRAIN IMPORTING AREAS (MILLION TONNES) Wheat and coarse grains, crop years ending June (wheat), September (coarse grains)									
East Asia	106.0	96.5	89.7	107.2	69.3	79.7			
Southeast Asia	46.3	45.3	43.2	52.8	52.0	54.0			
European Union	21.2	26.2	37.8	34.4	32.0	31.2			
Middle East	59.7	68.5	64.6	59.8	53.0	60.4			
North Africa	49.5	47.1	45.8	52.9	53.1	53.4			
Sub-Saharan Africa	30.3	30.8	28.0	33.2	37.2	34.2			
source: US Department of Agriculture	*June 2025 fo	recast							

	2040	2020	2021	2022	2023	2024
	2019					
Newbuilding deliveries	3.2	3.0	4.3	4.4	4.4	5.7
Scrapping (sales)	0.7	1.0	0.6	0.3	0.5	0.5
Losses	0.0	0.0	0.0	0.1	0.0	0.0
Plus/minus adjustments	0.0	0.0	0.5	-0.1	-0.1	-0.1
World fleet at end of year	107.8	109.8	113.9	118.0	121.8	126.9
% change from previous year-end	+2.2	+1.8	+3.6	+3.6	+3.3	+4.2





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China buys ever more bauxite from Guinea



or the world aluminium industry to be able to meet about 40% growth in demand by 2030 requiring an additional 33.3mt (million tonnes) of metal, the supply of bauxite and alumina will have to be proportionately geared up.

China whose annual production of primary aluminium routinely well exceeds the metal's combined output in the rest of the world has in place a comprehensive 'Action Plan' for the white metal covering But in order to support production, the country is required to import large quantities of bauxite for refining into alumina, which thereafter is smelted into white metal. Last year saw a significant rise in China's bauxite imports by 12.3% to 158.767mt in which the share of Guinea was 69.41% and of Australia 25.12%. Then in the first half of 2025, Guinean bauxite exports to China surged 36% year-on-year to 99.8mt. mainstream bauxite imports in 2024, excluding shipments from Indonesia, jumped 47.9% to 8.676mt. China's own production of bauxite in 2024 was 91.38mt, a marginal rise over the previous year. Not only is the domestic bauxite production not in alignment with requirements of Chinese alumina refineries, the quality of domestic mineral in terms of alumina content is not up to the mark. Moreover, China's bauxite reserves are on the decline.

All this is making China increasingly dependent on bauxite imports to feed its alumina refineries. For a long time, China was a net importer of alumina. However, with refining capacity now at over 100mt and operating capacity exceeding 100mt, the country has turned into a net exporter. The challenge for the industry is to organize bauxite imports on a very large scale. The aluminium value chain factors have been well factored while formulating the 'Action Plan.' The plan spells out the

structural changes that the behemoth of an industry will be undergoing. Through steps being taken under the plan, Beijing is addressing several global and environmental concerns covering the value chain from bauxite mining to alumina refining to metal smelting — and also issues linked to ideal alumina refining and metal smelting capacity and production for the country.

Whatever concerns the Western world in particular may have against China for not restraining aluminium products exports at prices that smack of open and hidden subsidy, Beijing has finally begun taking corrective steps. The recent times have been marked by a crescendo of complaints and also slapping of anti-dumping duties on China-origin aluminium products by a number of countries finally leading to US President Donald Trump's tariff threats. The fact, however, remains; as smelting capacity in Europe and the US has shrunk over the years under cost pressures and





growing government and civic society oversight on environment fouling by the aluminium production chain, China was quick to seize the opportunity to grow the industry at what often appeared to outsiders at a frenetic speed.

CHINESE PRODUCTION MARCH

To China's credit, the country's production of aluminium increased from 4mt in 2004 to 43mt last year and that was 60% of 72.758mt of global output. At the same time, Europe and the US have remained in the forefront of aluminium technology development, including new alloys and as manufacturer of top end machinery and equipment. China too has achieved self-

reliance in building alumina refineries and aluminium smelters to the extent of being a supplier of technology and machines to the world market. Furthermore, whether it is aluminium or any other ferrous or nonferrous metal, China finds that, for big domestic consumption, the demand is emerging from its construction, infrastructure, manufacturing, automobile and packaging sectors. But as Chinese GDP (gross domestic product) growth slowed during the Covid-19 pandemic and its aftermath, and the housing sector is beset with loan defaults and demand fall, aluminium producers have come under pressure to export.

There is no running away from the fact

that China is destined to remain the world's largest producer of alumina (mainly for use by its own smelters) and aluminium. But driven by the compulsion of seeking a sustainable future in a progressively decarbonized environment, the industry 'Action Plan' has stuck to smelting capacity cap of 45mt introduced in 2017, setting aside pleas by some producer groups to make concessions. The cap on primary aluminium production will, however, work as an incentive for the industry to make the metal by way of recycling. China has a target to make over 15mt of metal through the secondary route of scrap smelting by 2027. The International Aluminium Institute (IAI) estimates that around 75% of



the almost 1.5bn tonnes of aluminium ever produced in the world is still in productive use, underlining the growing potential of recyclability.

SCRAP RECYCLING BENEFITS

China is not too late in embracing aluminium related circular economy, which promotes the return of end-of-life aluminium products in the recycling loop and in the process does good to environment. Even while scrap collection remains a challenge, more than 30mt of scrap is recycled annually across the globe. IAI says scrap recycling leads to energy saving of up to 95.5% vis-à-vis primary aluminium (mine to cast house chain). Major energy saving resulting in production cost lowering apart, the quality of secondary aluminium retaining the metal's properties matches that of primary metal. China generates over 10mt of aluminium scrap annually, accounting for a third of global total and plans are

metal. China generates over 10mt of aluminium scrap annually, accounting for a third of global total and plans are afoot to progressively raise scrap procurement across the vast country. Aggressive domestic procurement apart, China is also a major importer of scrap, albeit under strict quality standards. Scrap imports in 2024 were up 1.8% to 1.7852mt valued at \$3.7bn, the principal sources of imports being Thailand, Malaysia, Japan, the UK and the US.

Reuters says in a report, China's aluminium "production growth is starting to slow from the average 4% annual rate seen over the last five years." Even then, the country will end this year with aluminium output inching further closer to the official ceiling of 45mt. Stepping up scrap recycling is one strand of Chinese strategy to reduce the impact of aluminium making on environment. It is no less important to reduce the carbon footprint of primary aluminium producers who have a share of 5% of China's total emissions. The heavy carbon footprint of the industry is due to its very high reliance on coal-fired electricity.

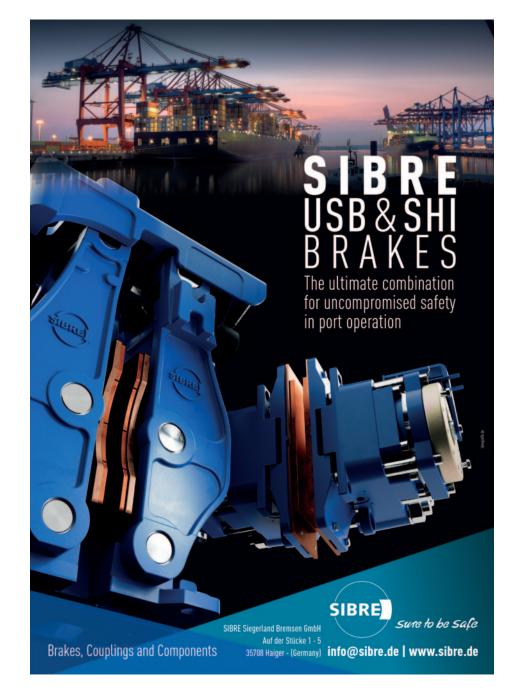
In the existing primary aluminium capacity obtains a not so insignificant percentage of old technology driven and climate fouling capacity. The industry is engaged in replacing the time-worn capacity by way of building new smelters. The government-encouraged capacity replacement drive is enabling the industry to build smelters in areas with abundant renewable energy resources. Yunnan is



a natural choice for new industry ventures to benefit from the region's immense hydropower potential. Inner Mongolia offering vast scope to harvest both wind and solar power has also become a centre for replacement smelter capacity building.

GREENING OF ALUMINIUM

India, the world's second largest aluminium maker with production in 2024 rising





marginally to 4.2mt from 4.16mt in the previous year, is already a big producer of hydropower with large new capacity periodically getting commissioned. But for logistical reasons that renewable energy is not available to Indian smelters. Thankfully, all the four aluminium groups in the country — Vedanta, Hindalco, Nalco and Balco — continue to make large investments in wind and solar energy to be able to make low-carbon metal. The industry is to invest up to \$5bn to build renewable energy capacity of up to 20GW by 2030. Vedanta Aluminium, the largest in Indian industry, is aiming to raise the share of renewables in total energy use from the present around 5% to 30% by 2030. The industry, as a whole, is actively engaged in exploring the possibility of using hydrogen in alumina refineries. Like in so many other areas, the Chinese industry is stealing a march in this pursuit too by making a commitment to use 30% renewable energy in aluminium smelting by 2027. Government pressure and industry self-realization apart, the growing demand for low-carbon or green aluminium, not necessarily confined to developed countries is seeing more and more producers working to reduce their carbon footprint.

At this point, 25% of global aluminium production is considered green. Explaining the outlook for low-carbon white metal, Companhia Brasileira de Alumino (CBA) CEO Luciano Francisco Alves told Fastmarkets: "Currently, there is an available supply of green aluminium for an incipient market, concentrated mainly in the auto sector and end-consumer products, but if this market starts to demand more and other sectors start to (increase) demand, few companies will be prepared to meet this, so there may be a bigger demand for

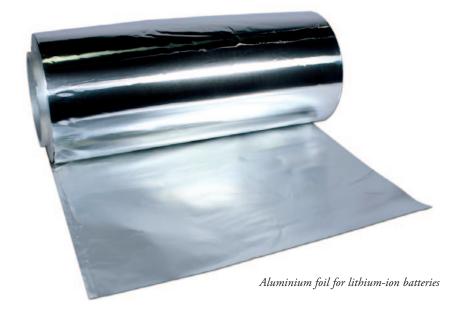
differential premiums for producers like us." Aluminium makers set on the green journey will rightly expect to be compensated for investment in renewable energy and other related facilities such as disposal of mine tailings, bauxite residue and dry alumina residue by way of premiums.

The market experience of CBA is to be seen as representative of the industry. Alves said: "We can't charge more for providing green aluminium right now, but we already know that we have higher sales volume because we produce low-carbon material." The hope is as user sectors from automobile, construction and consumer products warm up to using green materials, they will pay a premium for low-carbon aluminium.

WEAPONIZATION OF TARIFFS

The fact also remains that as US President Donald Trump has upset normal global

trade by way of weaponization of tariffs, the fallout could not but be some shift of focus from greening of aluminium to managing aluminium surpluses that must be sold in the world market after meeting domestic demand. In the meantime, in an attempt to blunt criticism of exporting at artificially low prices, Beijing in December last did away with tax rebate subsidies of 13% on exports of aluminium products. To the extent of rewinding of export subsidy, competitiveness of Chinese aluminium in the world market will be compromised. The debating point now is if Chinese aluminium exports have already peaked. Reuters says analysts at Macquarie Bank have forecast Chinese exports are to "fall by 8% over 2025 with any sharper collapse unlikely since the world outside of China is heavily dependent on its products to the tune of around 15% of total demand." Principal destinations for Chinese aluminium exports are the US, Mexico, South



Korea and Japan. Vietnam, Australia, India and Thailand also receive good volumes of aluminium products of China origin.

Trump's tariff blitz is seen as an attempt to stop any further hollowing out of the US 'rust belt' industries such as aluminium now inviting 25% import levy and instead create condition for restart of capacity building. After over four decades of industry hibernation, Century Aluminium, backed by significant funding by the US Department of Energy, will be building a large smelter, the details of capacity and location are in the process of finalization. But what is known is that the smelter will be will be low carbon and electricity to be used will be largely from renewable sources. The US aluminium production shrank from a high of 7.48mt (primary 3.78mt and secondary 3.70mt) in 1999 to 4.28mt in 2024 in which the share of secondary was 3.60mt and primary 680,000 tonnes. As a result, the US was required to import 4.8mt of aluminium (crude and semi-manufactured) last year, which trump berates.

High energy bill resulting from Russian invasion of Ukraine in February 2022 and also rises in labour cost have rendered a substantial portion of European primary aluminium capacity idle. IAI data points to a steady decline of the European industry through the decade. The Western and Central European primary production fell 25.5% from 3.8mt in 2010 to 2.83mt in 2024. But in the corresponding period, production fall in Russia and Eastern Europe was much less at 5.57% from 4.25mt to 4.16mt. The European production may be on a downslope. But, according to the environmental profile report by European Aluminium, since 1990, the carbon intensity of primary aluminium production in Europe has been reduced by

more than half, positioning Europe as a global leader with one of the smallest carbon footprints — almost 60% lower than the global average and nearly onethird of the Chinese average. However, the global warming potential (GWP) of European aluminium imports has risen by 11% since 2021, driven largely by increased reliance on ingots produced with nonrenewable energy sources. This stark contrast highlights the urgent need for EU policymakers to prioritize and support aluminium made in Europe with lowcarbon energy. Beyond primary production, the European industry is making impressive strides in improving environmental performance of semifinished rolled and extruded products.

Will the Chinese 'Action Plan' defining production discipline and export restraint be the trigger for the European industry to revive smelting capacity idled earlier? Will the US for the same reason have new capacity beyond what Century has proposed? Besides what China will hopefully do, a report prepared by CRU International for IAI says that the global aluminium industry will be required to make an additional 33.3mt by 2030 to meet demand growth of almost 40% to 119.5mt from 86.2mt in 2020. Transportation, construction, packaging and electrical sectors will be the principal drivers of demand growth accounting for 75% of metal use.

Expectedly, two-thirds of the demand growth will come from China amounting to 12.3mt. The rest of Asia will need an extra 8.6mt, North America 5.1mt and Europe 4.8mt. Together, the four regions will have a share of over 90% of the additional aluminium to be generated by 2030. Parallel to making that extra aluminium, the industry will have to "advance its

sustainability credentials... and work along the vale chain to deliver more sustainable products and services to consumers," says CRU's aluminium head Zaid Aljanabi. To support that kind of production growth, the bauxite bearing countries such as Guinea, Australia, India and Brazil will have to open new mines along with stepping up production at the present operating sites. The world will need new alumina capacity matching the extra bauxite that will come for processing in 2030.

INDIA CAPACITY DRIVE

Among all aluminium making countries, of course excluding China, capacity expansion will be most vigorously pursued in India. All the groups have major expansion plans across the value chain to take advantage of aluminium demand CAGR (compound annual growth rate) of 7% to 9% during the period 2023-28. The demand growth will be primarily driven by transport sector, rapid urbanization, construction and infrastructure projects. "This is as it should be, since the country owns large volumes of high-quality bauxite, mainly found in Odisha where mining, refining and smelting capacity is largely concentrated. The country can do without aluminium imports, except for some alloys for special applications. But I think, parallel to the industry building new smelting capacity to cater to rising domestic demand for the metal, it should create large surplus alumina capacity for exports," says a mines ministry official.

Vedanta Aluminium, the largest industry entity has proposed an investment of \$15.42bn to build a 6mt refinery, a 3mt smelter and a 4,900MW captive power plant, both in Odisha where it already owns a 1.8mt smelter and a 3.5mt refinery. In the meantime, the majority government owned Nalco has clarified that there is no holdup of its plan to build a 500,000-tonne brownfield smelter at the present site at Odisha's Angul with technology from Rio Tinto Aluminium.

Pitching for the latest smelting technology, the company says discussions with Rio are on the right track. The smelter to be backed by a 1,200 MW power plant "integrated with renewable energy" is set for commissioning in 2030. As for Hindalco, expansion will cover both upstream and downstream facilities. It will have a new refinery, expand smelter capacity (brownfield), make fused alumina and speciality alumina for the steel industry. In the downstream, a breakthrough project will result in production of aluminium foil for lithium-ion batteries.



Reederei Bernd Sibum awarded NaMKü funding for



Reederei Bernd Sibum has received funding from the German Government for investment in sustainable ship technology. As a result, the four Combi Freighters (CF) 3850 that Damen is currently building for the company will be upgraded to sail with significantly lower emissions.

The funding, known as NaMKü (Nachhaltige Modernisierung von Küstenschiffen/sustainable modernization of coastal ships), is awarded by the Federal Ministry of Digital Affairs and Transport (BMDV) with the aim of improving the efficiency and environmental footprint of short sea shipping. It requires coinvestment on behalf of the vessel owner.

NEXT GENERATION DESIGNS

Reederei Sibum placed the order for the four vessels in June last year. The CF 3850 is a next generation design offering a considerable boost in efficiency, with a 30% reduction in fuel consumption.

The vessels, currently under construction at Damen Yichang Shipyard in China, were being built with the capability to sail 100% on biofuel, as well as with batteries for peak shaving and port operations. They were also being prepared hybrid ready.

FULL HYBRID UPGRADE

Now, thanks to the NaMKü award, the vessels are being upgraded to sail on hybrid propulsion, with a PTO/PTI system. This upgrade provides the option of fully electric propulsion. This is not only an environmentally friendly technology, but also a huge safety aspect, as it provides the ships with redundancy for the diesel propulsion engine.

Damen's modular construction approach allows for its vessels to be built ready for rapid upgrade at any stage of construction, or later as a retrofit project, with the minimum of downtime.

Another upgrade that the vessels will now receive is the installation of Econowind VentoFoils. This wind assisted ship propulsion solution is operated fully automatically to the prevailing wind conditions using intelligent technology. This system is expected to lower the vessels' fuel consumption in the region of 12.5% over the year, facilitating a significant reduction in emissions.

ZERO EMISSIONS IN PORT

The vessels will use their batteries while manoeuvring and for a short-term port stay. If the time in port is longer, they can switch from battery operation to shore power. The upgrade with extended shore power capacity will provide all electric systems on board with sufficient electric capacity.

Other features enabled by the NaMKü funding include installation of a heat recovery system, using heat from auxiliary engines that would otherwise be wasted, thereby eliminating gasoil consumption of the oil fired boiler while the vessel is in port.

With all these modifications, the vessels will be able to operate completely emissions free in harbour.

Reederei Sibum Managing Director Bernd Sibum says, "I'm very grateful to the German Government for the support we have received with this NaMKü award, which has made it possible for us to invest in these green technologies. I'm also grateful to Damen for thinking along with us and preparing the vessels in such a way that they could be quickly adapted. I'm confident that these vessels will offer the market the green tools it will require in the



green upgrades to Damen Combi Freighters 3850



years ahead. It is a clear fact that they will have everything that is feasible according to the current state-of-the-art that is also suitable for practical ship operation. I am particularly happy about the fact that I was able to reach company Mare Trust AG from Oldenburg in Germany as a co-investor for this project."

delivers in the region of 100 vessels per year, with a total production value of over €3 billion. Damen offers direct employment to approximately 12,500 people. In all that it does, Damen aims to ensure a positive impact on the local environment and society.

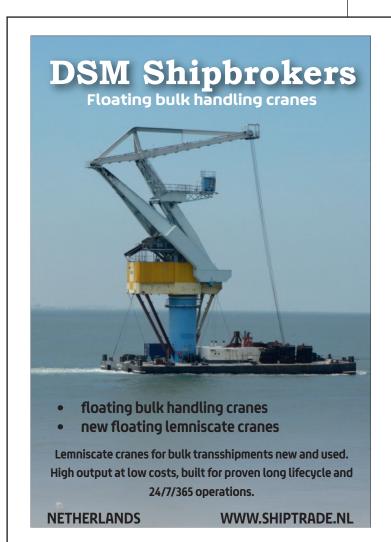
WIDER RECOGNITION

Commercial Director of Damen Cargo Vessels Remko Bouma adds, "We have designed the latest generation of CF 3850 with the aim of achieving the increased efficiency and reduced environmental impact required of vessel operators today. Reederei Sibum, with the support of the German Government, are thinking beyond the present and preparing their fleet for the future. They are to be praised for their pioneering approach to maritime sustainability. The bold steps they, and other forward thinking vessel operators, are taking are worthy of wider industry recognition. In the coming years, these vessels are going to need increased access to relevant infrastructure, for example, the shore power connectivity required to operate zero emissions in port. Such infrastructure will play a vital role in realising the full potential of the investments that are being made in maritime innovations and pave the way to zero emission operations."

DAMEN SHIPYARDS GROUP — OCEANS OF POSSIBILITIES

Damen Shipyards Group has been in operation for over ninety-five years and offers maritime solutions worldwide, through design, construction, conversion, maintenance and repair of ships and ship components. By integrating systems we create innovative, high quality platforms, which provide its customers with maximum added value. Damen's core values are fellowship, craftsmanship, entrepreneurship and stewardship. Its goal is to become the world's most sustainable shipbuilder, via digitization, standardization and serial construction of its innovative vessels and through use of circular materials.

Damen operates 35 shipyards and 20 other companies in 20 countries, supported by a worldwide sales and service network. It



Constant connectivity, anywhere: a new era for dry cargo ships

The crew onboard cargo ships today can connect in ways they couldn't have dreamed of a decade ago, writes David Fotheringham, Senior Director of Product Management at Kymeta. The days of expensive pay-per-minute calls home are almost a thing of the past, and instead, access to good, reliable broadband — even in the remotest stretches of the open and desolate ocean — is fast becoming the new normal

As high-speed internet connectivity at sea has moved up the hierarchy of needs; it's become a major recruitment driver for talent. The modern generation of seafarers has grown up always connected with instant access to friends and family, and social media and gaming at their fingertips.

This constant always-on connectivity plays a key role in crew wellbeing and morale — and a ship without it is sailing with one hand tied behind its back.

Those of us who have our feet or perhaps our chairs placed firmly on dry land would struggle to imagine what a connectivity blackout would do to our wellbeing and it's the same for those onboard. We must consider the fact that most crew members are away for many months and staying connected with people and the world has become a basic human requirement.

Satellite communications (SATCOM) technology has come on leaps and bounds in the last decade. Terminals can now connect to satellites in Geostationary Orbit (GEO) and Low-Earth Orbit (LEO), offering the benefits of consistency and broadcasting with the former and faster response times and higher bandwidth with the latter. In this way, multi-orbit network connectivity is about leveraging the best parts of both types of satellites.

The benefits of satellite connectivity extend far beyond crew welfare. Resilient, and now multi-orbit connectivity, enables a plethora of crucial modern technologies, such as automation, a full digital bridge and sensor monitoring to name a few. On top of this, always-on, resilient connectivity helps to keep cargo ships secure by offering secure methods for software updates and ensuring systems stay online in any conditions.

Vastly enhanced by modern SATCOM technology, the digitalization of the bridge is becoming increasingly common as vessels go through modernization. Picture a huge terminal, much like what you'd expect in the cockpit of a commercial airplane but

with many more screens, interfaces and terminals. To optimize a digital bridge, always-on, resilient connectivity provided by multi-orbit satellite connectivity is a must — accurately displaying such a large amount of data all at once is simply not possible without fast and reliable points of communication that operate through the ship, providing real-time updates and feedback.

Whilst digital bridges come with benefits, from enhanced safety to improved data management, they also bring risks. Of course, the possibility of piloting ships from the comfort of one's home office is gamechanging, but it also opens the door to threat actors. As well as online threats, unmanned cargo ships, dependent on a single network, are also at risk of attack from actual pirates at sea. After all, it only takes the network being compromised for remote operators to lose control.

Ship data uploads and packets are also at risk of interception when being transmitted via a single network pathway. However, with the use of multi-orbit connectivity, these packets can be transmitted across separate orbits to ensure optimum security. For example, the information pack can be uploaded via LEO, while a security key to unlock it can be sent via a GEO connection to add an extra layer of protection to the process.

That's why redundancy is so crucial. It's all about back-up options. Keeping communications redundant means you have prepared for all outcomes and if one network goes down, there's another or two others ready to go — seamlessly switching from one to the other with no human input required. Cargo ships today simply cannot afford to rely on a single, siloed network connection.

Constant connectivity also helps cargo ships to glean insights via technology solutions onboard, utilizing data to make smarter, more accurate decisions in real time. If a fire alarm is triggered in a hold filled with flammable cargo, for example, the cargo could be destroyed in error by immediately deploying an extinguishing system. Whereas, in a ship with fast, accurate data management fuelled by high-speed connectivity, the crew could be alert to the error via camera and sensor feedback — assessing the situation and making informed decisions to save the cargo.

Enabling the use of real-time sensors across the ship is critical for any type of cargo — be it perishable, sensitive or high



Kymeta's Peregrine u8 terminal provides high bandwidth, low latency coverage from satellites in Low-Earth-Orbit (LEO).



value. Imagine a hold full of unpackaged wheat. There are multiple containers, meaning numerous cameras and sensors deployed to constantly check moisture levels and prevent mould. Without fast, accurate connectivity that can handle the load of heavy data brought on by sensors, alarm systems and other tech, the ship runs the risk of a data deluge. In this case, it is the constant connectivity provided by multi-orbit satellites and on board terminal receivers that enable crews to manage that data effectively.

To match the huge data demands of modern cargo ships, mobile, turn-key terminals offer wide operating ranges so that vessels can rely on constant connectivity. Kymeta's Peregrine u8 terminal, for example, provides high bandwidth, low latency coverage from satellites in Low-Earth-Orbit (LEO). This means wherever a cargo ship may be — more than 25 miles offshore or pulling into a well-connected harbour — it can stay connected. Switching is automatic, so cargo crews can focus on the important things.

Always-on connectivity enables the crew to keep themselves safe and keep the ship secure. Whether it be fast, accurate data from alarm systems to prevent fires or hybrid messaging systems being deployed to prevent sensitive data from being leaked, multi-orbit connectivity offers a vital buffer to potential risks.

Critical to the security and safety of cargo ships, SATCOM enables real-time navigation updates, emergency response coordination, weather alerts, and constant contact with shore-based operations. In high-risk regions or during unforeseen events, reliable SATCOM can be the difference between disruption and disaster.

Steelpaint secures contract with Winning International to protect Capesize bulker

Steelpaint GmbH has received its first order from Singaporebased Winning International Group to supply its advanced two-coat polyurethane-zinc coating system for the cargo holds of Winning Kindness, a 184,000dwt capesize bulk carrier.

The contract marks the first formal collaboration between Steelpaint and Winning and extends the German manufacturer's reach among major Asian shipowners.

The order will see the protective coating applied at a yard in Zhoushan, China, with drydocking scheduled for September 2025. The coating will be applied to the tank top and the lower hopper/stool structure across a 2m area prone to aggressive corrosion.

"This latest contract signals strong momentum for our corrosion resistant coatings across Asia," said Steelpaint Director Frank Müller. "Owners are seeing the long-term value of switching to a system that not only reduces lifecycle costs but extends vessel service life. We're proud to be part of that shift."

In addition to the Stelpant product, Steelpaint will supply onboard maintenance coats, allowing the Winning Kindness crew to carry out touch-up work as needed to maintain longterm corrosion protection performance throughout the vessel's service.

The order follows a successful test patch trial on Winning Rich, proposed after the shipowner's superintendent observed the coating's performance on a competitor vessel during a drydocking at the Shanhaiguan Shipyard.

"Vessels between 10 and 15 years old typically suffer thinning of tank top plating and if not addressed, can result in expensive steel renewal work, said Dmitry Gromilin, Chief Technical Supervisor at Steelpaint. "Our PU-zinc system offers reliable protection, especially in high-stress areas."

Shipboard testing and operator assessments showed that Stelpant retained its protective layer even after 17 months of exposure to high impact loading in cargo holds, helping to extend maintenance intervals to 2.5 years and reduce steel

renewal costs by an estimated US\$4.5 million per vessel over its operational life.

A senior superintendent at Winning International said: "Our decision to move forward with Steelpaint was based on both technical performance and long-term cost benefits of its Stelpant product. What stood out was the track record Steelpaint has with other major operators and the results from our own trials. Compared to traditional coatings, the Stelpant system showed significantly better resistance to wear and corrosion."

With several older capesize bulkers in its fleet, Winning is expected to closely monitor the performance with a view to possible wider adoption across the fleet.

This is the second contract Steelpaint has signed with Singapore-based ship operators in recent months. In April, the company was awarded a contract from one of the world's largest bulk carrier operators to supply Stelpant to an initial 20 dry bulk vessels.

"With demand for dry bulk tonnage holding strong and shipyard slots at a premium, owners are increasingly turning to coatings that deliver reliable protection and reduce time out of service," furthered Müller.

"Over the past few years, Asian shipowners have become more active in the sale and purchase market, especially for second-hand Capes. This opens the door for us to support operators looking to extend vessel life while keeping maintenance costs under control."

Developed in the early 1980s, Stelpant has its origins in civil engineering and has gained growing traction in the shipping industry over the past decade, particularly among owners looking to safeguard ageing vessels operating on mineral-intensive Asia-Pacific trades

ABOUT STEELPAINT GMBH

For more than 40 years, Steelpaint has enhanced the life and durability of heavy-industry facilities, particularly in the maritime sectors. Thanks to one-component polyurethane resins, the Germany-headquartered company's special high-tech coatings have raised the technological bar in corrosion resistance, offering impressive benefits over conventional epoxy coatings solutions.

Steelpaint has origins dating back to the 1890s. Its products are used widely in port and offshore facilities, sheet pilings, internal and external linings, tanks, bridges, and ship structures. They can be used in combination with cathodic protection.





Training our sights on inland transportation

rail and barge cargoes - the green solution



LTG Cargo: shaping sustainable transport

Rail freight company LTG Cargo stands as the largest rail freight operator in the Baltic States, playing an important role in connecting Lithuania and the wider region Europe, markets across developing of the Northwest-South corridor and new routes, including intermodal projects. As a subsidiary of LTG Group, the company has built a strong reputation for reliability, innovation, and commitment to sustainable logistics, which has become increasingly important in today's environmentally conscious market.

In recent years, the global emphasis on reducing carbon footprints has significantly influenced the transport sector. Rail freight is widely recognized as a more environmentally friendly alternative to road and air transport, producing considerably lower greenhouse gas emissions per tonne-kilometre. This advantage has positioned LTG Cargo favourably as companies and governments seek to decarbonize their supply chains. LTG Cargo has responded by investing in modern, energy-efficient electric locomotives and rolling stock, while also optimizing operational processes and efficiency — decisions that also benefits the demands of clients.

In 2024, LTG Cargo transported approximately 25.7mt (million tonnes) of freight, serving key sectors such as

agriculture, construction, manufacturing, and energy. LTG Cargo's freight portfolio is diverse, reflecting the varied industrial and commercial activities of the Baltic region. The company transports a wide array of commodities, including bulk goods such as grain, crushed stone, and various mineral resources. A significant portion of its freight volume consists of oil and petroleum products. The company has also seen growth in containerized freight, supporting intermodal transport that links Lithuanian capital Vilnius with the Baltic port of Klaipėda, or second largest city Kaunas with Duisburg in Germany, with a stop in intermodal terminal in Lodz

(Poland). Additionally, LTG Cargo handles construction materials like cement and aggregates, as well as timber and wood products, which are important to the region's economy.

Recent developments at LTG Cargo further underline dynamics and market responsiveness. LTG Cargo is expanding its market reach westward through its subsidiaries in Poland and Ukraine, tapping into new freight corridors and diversifying its cargo base.

LTG Cargo also continues expanding the geography of transport services: in 2024, company has been making regular shipments of petroleum products on the route Bugeniai (Mažeikiai district) – Valga (Estonia). For the first time, using only the European-gauge track (1,435mm) LTG Cargo transported 220 new Škoda passenger cars, for the Baltic market, to Kaunas from the Czechia. From Austria, it transported more than 600 tonnes of new rails.

To meet the demands of modern logistics and maintain high service standards, LTG Cargo operates a substantial and varied fleet. The wagon fleet is similarly diverse, featuring specialized equipment designed for bulk, liquid, containerized, and other types of cargo. The company also boasts modern intermodal platforms enabling seamless transfers between rail and road transport modes. This integrated approach allows LTG Cargo to offer flexible, door-to-door solutions that cater to the needs of its clients.

LTG Cargo is actively expanding and modernizing its rolling stock fleet. Recent and planned investments include:

200 new open-top wagons for bulk cargo such as dolomite and granite crushed stone, expected to increase annual transport capacity by 0.7mt. These wagons support the construction sector and infrastructure projects, including Rail Baltica — railway infrastructure megaproject aiming to





connect Estonia, Latvia, Lithuania, and Poland with a modern, high-speed, and sustainable rail line, fully integrated into the European rail network.

- Up to 500 new grain wagons to meet the growing demand from the agricultural sector, ensuring reliable transport during peak harvest seasons. These new wagons will allow LTG Cargo to significantly increase its freight transport capacity it is expected that the company will be able to transport an additional 1.2mt of freight per year.
- 17 new electric locomotives from Stadler, designed for energy efficiency and extreme weather resilience, scheduled to arrive in Lithuania in 2027. Electric locomotives will carry freight on the route between Vilnius and the port of Klaipėda, where half of the country's rail freight is transported.

LTG Cargo's ability to combine traditional rail freight strengths with modern innovations and sustainability commitments benefits clients. The company's customer-centric approach ensures that solutions are tailored to meet specific logistical challenges, whether that involve specialized wagons, customized routes, or handling complex freight requirements.

In 2024, LTG Cargo continued to promote sustainable transport by issuing Green Kilometers certificates, which verify the environmental benefits of freight transported by rail. These certificates quantify the reduction in carbon emissions compared to road transport, highlighting LTG Cargo's commitment to greener logistics. By providing these certificates to its clients, LTG Cargo helps businesses demonstrate their contribution to reducing their carbon footprint. In 2024 alone, the company issued certificates covering over 30,000 tonnes of saved carbon dioxide, reinforcing its prominent role as an expert in eco-friendly freight solutions.

LTG Cargo's blend of experience in 1,435mm and 1,510mm gauge, strategic investments, and customer-focused changes enables it to meet the challenges of a rapidly changing transport landscape. Its commitment to sustainability, efficiency and service excellence continue to attract clients seeking reliable, efficient, and environmentally responsible logistics solutions in the Baltic region and beyond.



GB Railfreight unveils Britain's most advanced locomotives at Peterborough HQ



n investment of £150 million in new Class 99 locomotives is set to reduce rail freight emissions by more than half on a typical journey. Rail freight plays a key role in driving the green economy — delivering £2.5 billion of economic benefit with each train removing up to 129 HGVs from the road network. Political support for the new trains is widespread, with Rail Minister, Lord Hendy set to attend the 17 July launch event.

GB Railfreight (GBRf), one of the UK's leading rail freight operators and backed by Infracapital, unveiled it new Class 99 locomotives on 17 July at its Peterborough headquarters. The new fleet, which represents a £150 million investment from GBRf, will revolutionize Britain's rail freight network. Representing a major leap forward for sustainable transport, these powerful new locomotives will play a key role in decarbonizing Britain's supply chains while supporting regional growth and helping to deliver a cleaner, faster, and more resilient freight network.

The Class 99s can run on both electricity and renewable fuels, offering customers the most sustainable freight solution on the market and halving carbon emissions.

These new locomotives, which were manufactured by Stadler in Valencia, will move a vast range of consumable goods and materials across the country. They will support critical projects and stock shops nationwide.

GB Railfreight transports goods across the country including materials for house building, aviation fuel to airports, clothes, white goods, wine and materials used to heat homes — all of which play a significant role in driving the UK economy.

Lord Hendy of Richmond Hill, Minister of State for Rail, said of the Class 99: "Major private sector investments like this £150 million commitment to revolutionary Class 99 trains, demonstrate the confidence the rail freight industry has in its future under this government.

"With robust protections for fair network access and ambitious growth targets a part of our plans for Great British Railways, we're ensuring the rail freight sector has what it needs to thrive so it can continue removing thousands of HGVs from our roads whilst delivering huge economic benefits across the country.

"I look forward to seeing the Class 99s entering commercial service later this year and seeing the transformative impact they'll have in decarbonizing our rail network."

John Smith, CEO of GBRf, said: "The Class 99 locomotives set a new benchmark for performance and sustainability in UK rail freight. With hybrid capability, these locomotives provide the resilience and flexibility our customers need to meet today's demands and tomorrow's standards while supporting the UK's drive towards net zero."

Ben Fletcher, Chief Operating Officer of Make UK, said: "A modern and efficient rail

network is the hallmark of an advanced economy and will be crucial to boosting growth whilst, at the same time, helping accelerate the decarbonization of our economy and a substantial reduction in road transport emissions.

"Manufacturers are keen to make greater use of rail logistics and new freight technologies such as the Class 99 will make a critical contribution to cleaner, faster and more efficient supply chain movement."

The Class 99s are designed to power the future of freight. By running on electric lines where available and switching seamlessly to renewable fuels elsewhere, the Class 99s ensure that goods arrive at their destination sooner and more reliably, all whilst dramatically reducing the industry's carbon footprint.

Rail freight plays a vital role in the UK economy, contributing £2.5 billion annually — with 90% of the social and economic benefits felt outside London and the South East. Each freight train removes up to 129 HGVs from Britain's roads, reducing congestion, improving road safety, and cutting emissions. The arrival of the Class 99 will support even greater regional growth while easing pressure on the nation's transport infrastructure.

KEY FEATURES OF THE CLASS 99s INCLUDE

Hybrid power: operates on both electricity and renewable fuels for maximum flexibility and minimal emissions.



- Enhanced performance: delivers faster acceleration, reduced downtime, and increased productivity.
- Sustainability-driven: sets a new standard for green rail freight, supporting customers to meet their sustainability targets and lead the race to zero emissions.

The launch event at GBRf's Peterborough HQ brings together industry leaders, customers, and stakeholders to witness the arrival of a new era in sustainable transport. "With the Class 99, we're not just keeping pace with a changing network — we're shaping its future," added John Smith. "This is the cleanest, greenest, and fastest way yet to move freight by rail in the UK."

Andrew Pakes, MP for Peterborough, said: "Peterborough is proud to be at the forefront of Britain's rail freight innovation. The new Class 99 locomotives are a game changer for our city and the national effort to build a greener, more sustainable future.

This investment will help cut emissions, create local jobs, and drive economic

part of the journey to net zero and are pleased to support GBRf with its investment into the Class 99s. Rail freight is already significantly less carbon-intensive than road freight, and with this new locomotive, GBRf is providing customers further decarbonisation of their supply chains whilst driving economic growth."

lñigo Parra, CEO of Stadler Valencia, said; "Today's launch of the Class 99 redefines UK rail freight. Its dual-mode capability cuts CO_2 emissions, providing operational flexibility and greener, safer and cost-effective transport services. This locomotive will drive modal shift from road to rail and power Britain's net-zero journey."

Adam Cunliffe, CEO of Beacon Rail, said;



growth across the region. I am proud to see our city playing such a key role in shaping the future of rail freight."

Peter Mitchev, Managing Director of Infracapital, said; "We see the decarbonisation of transport as an integral

"The arrival of the Class 99s marks an important step forward for rail freight in the UK. They reflect Beacon's commitment to investing in modern, efficient, and lower-carbon transport solutions that are built to meet the needs of an evolving industry and changing world."

Once testing is complete, the new locomotives will enter commercial service this winter.

The Class 99 was officially unveiled at InnoTrans in Berlin last year.

ABOUT GB RAILFREIGHT

Founded in 1999 and headquartered in London, GB Railfreight (GBRf) is one of the fastest-growing companies in the rail industry, transporting goods for a wide range of customers across the country.

With a workforce totalling more than I,400 staff from across the UK, in recent years, GBRf has won a number of industry awards including most recently the 'Freight and Logistics Excellence' award at the Rail Business Awards 2024.



Associated Terminals advances marine cargo innovation with investment in two Liebherr CBG 500 E Cranes

Associated Terminals has announced the commissioning of two Liebherr CBG 500 E-Cranes, customized with advanced hybrid power systems, to be mounted on newly designed crane barges purpose-built for efficiency, longevity and environmental performance. This reinforces the company's commitment to innovation in cargo handling along the Lower Mississippi River.

In keeping with the company's principle that people are the driving force behind its success, Associated Terminals continues its tradition of naming its cranes after team members. As a tribute to individuals who have helped shape the company's culture and growth, one crane will be named the *Bill S.* in honour of Bill Sullivan, Vice President of Sales, and the other will be named the *D. Lopez* after Dawn Lopez, Vice President of Marketing and Public Relations for Associated Terminals and Turn Services.

The *D. Lopez* crane and crane barge will be sent to Boh Bros. for assembly this month and is scheduled to enter service in August. Following factory-acceptance testing at the Liebherr facility in Germany in August, the second crane is projected to arrive in the United States in September, where assembly of the crane barge, *Bill S.*, will occur at Boh Bros. The date of the official christening will be announced at a later time.

ADVANCED CRANE TECHNOLOGY FOR RIVER OPERATIONS

Built on modified 250' x 72' platforms, the newly commissioned crane barges are engineered for high-capacity bulk handling in the demanding conditions of inland waterways. Their hybrid-capable power systems supplied by Louisiana Cat blends diesel and battery technologies to reduce emissions and fuel consumption, featuring four Caterpillar C18 generators (565ekW each), a Caterpillar C4.4 generator (118ekW), and a CAT XES120 127kWh battery system. The systems incorporate intelligent load sensing logic with automated power scaling switch gears. This setup supports flexible energy management and redundancy, delivering up to 1,435kW of peak crane power while minimizing engine wear and balancing runtime across all engines. A keel cooling system eliminates the need for raw water intake or cumbersome radiator maintenance, further enhancing environmental performance and long-term reliability.

Each crane barge is outfitted with a Liebherr CBG 500 E crane — an advanced

model representing a major step forward in marine cargo handling. With boom lengths of up to 50 metres, these cranes can lift 90 tonnes in sheltered waters and 65 tonnes in open water. A hybrid energy recovery system captures and reuses power from dynamic braking and load lowering to improve efficiency. Operator-focused features include climate-controlled, ergonomic cabins, secure staircases, and remote diagnostics and control systems.

The system also offers a maximum bucket capacity of 83.7 cubic yards and can reach throughput rates of up to 2,460 tonnes per hour with optimized cycle times. Designed for continuous service, each crane is configured for approximately 5,200 operating hours per year to maximize productivity and uptime.

"Our engineering team, led by Curtis Blank and Ethan Palma, worked closely with Liebherr and LAD Shipyard to customize the cranes and barges to meet the unique demands of round-the-clock operations on the Mississippi River," said Chief Operating Officer Zeljko Franks. "The result is a powerful, flexible, and future-ready system built for long-term performance."

Todd Fuller, President of Associated Terminals, shared his perspective on this milestone: "These Liebherr cranes are more than just equipment; they represent our commitment to continuous improvement, environmental responsibility, and employing advanced technology in marine cargo handling. The level of innovation in these systems aligns perfectly with our long-term strategy for operational excellence. It's also an outstanding opportunity for our organization to recognize two of our most valued leaders, Bill Sullivan and Dawn Lopez. Their names on these cranes symbolize decades of hard work, integrity, and dedication that have helped make Associated Terminals the industry leader it is today."

ABOUT BILL SULLIVAN

William 'Bill' Sullivan, Vice President of Sales, joined Associated Terminals in 2001 and quickly rose through the ranks. A native of Lexington, Kentucky and raised in Lincoln, Nebraska, Bill attended the University of Nebraska – Lincoln, but compelled by a sense of duty, enlisted in the US Navy as an Aviation Ordnanceman prior to the commencement of Operation Desert Storm in 1991. Known for his deep respect for field teams, he's often quoted as saying, "Sales may get us the opportunity,

but it's your hard work and professionalism that brings return business."

Reflecting on the honor, Bill said: "I am humbled by the recognition. Ownership has always placed the highest value on the men and women of the various companies within the organization. It is a great honour to be able to continue to represent their dedicated commitment to excellence."

ABOUT DAWN LOPEZ

Dawn Lopez, Vice President of Marketing and Public Relations for Associated Terminals and Turn Services, joined the company in 2012. A Louisiana native and LSU Law graduate, she has led strategic communications efforts that spotlight the company's growth, partnerships, and people. Known for her advocacy of the maritime workforce and involvement in regional economic development, Dawn is dedicated to telling the stories of the Associated Terminals and Turn Services team members — celebrating their contributions and strengthening the company's presence in the communities it serves.

Grateful for the distinction, Dawn shared: "I'm deeply honoured to have my name on one of these new cranes — not as a personal accolade, but as a tribute to the incredible teams who make our success possible. From the operations team who execute with precision and pride, to the leadership and partners who drive innovation, this moment is a shared achievement. Growing up on the banks of the Mississippi River, I witnessed firsthand the strength, resilience, and purpose of this industry. It is a privilege to help share that story every day."

ABOUT ASSOCIATED TERMINALS

Founded in 1990, Associated Terminals is a premier provider of stevedoring and marine logistics services on the Lower Mississippi River and Headquartered in Convent, Louisiana, the company operates one of the largest fleets of midstream cranes in the United States and provides full-service cargo handling, logistics support, and terminal operations to customers in global trade. With a steadfast commitment to safety, innovation, and service excellence, Associated Terminals plays a vital role in facilitating commerce, supporting job creation, and driving economic development in the communities it serves.

CN: major North American transportation and logistics company

CN is a behemoth of the rail transportation of bulk — and more — throughout Canada and Mid-America.

Essential to the economy, the CN team of approximately 24,000 railroaders transports more than C\$250 billion worth of goods annually for a wide range of business sectors, ranging from resource products to manufactured products to consumer goods, across a rail network of approximately 20,000 route-miles spanning Canada and mid-America.

CONNECTING MARKETS

Spanning Canada and Mid-America as well as connecting ports on three coasts, the CN network penetrates deep into resource-rich and manufacturing-intensive regions, to move raw materials, intermediate goods and finished goods to market.

CN's reach extends beyond rail to offer fully integrated transportation and logistics services. Its network is an excellent connection to North America and the world. Whether shipping across its rail network of approximately 20,000 routemiles of track, shipping globally through the many ports, CN services on three coasts, and leverages 23 strategically located intermodal terminals across its network; it connects customers with the people that matter most: their customers.

FROM COAST TO COAST TO COAST

CN's tri-coastal network spans Canada from east to west and down through the Midwest to the Gulf of Mexico.

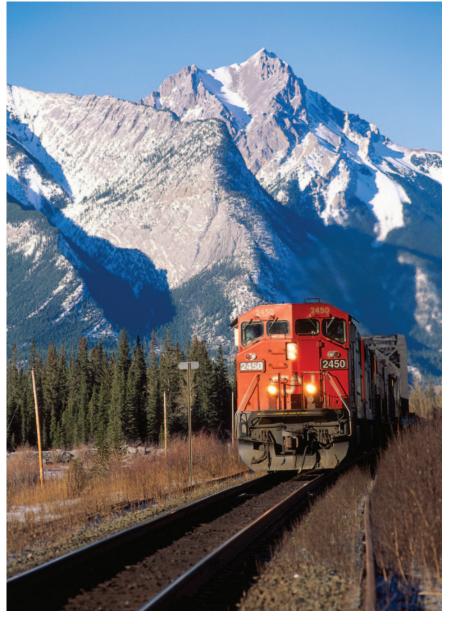
CN's 2025 CAPITAL INVESTMENT PROGRAMME

CN TO INVEST \$38 MILLION IN IOWA; \$50 MILLION IN LOUISIANA; AND \$110 MILLION IN WISCONSIN TO BUILD CAPACITY AND POWER SUSTAINABLE GROWTH

At the end of June this year, CN announced three major investments — in Iowa, Louisiana and Wisconsin.

The lowa investment will support track maintenance and strategic infrastructure initiatives in the state. The projects will help ensure the safe movement of goods and support long-term sustainable growth in lowa and across CN's network.

US Congresswoman Ashley Hinson, lowa's 2nd Congressional District, says, "CN's \$38 million investment into our state's infrastructure is a big win for lowa's farmers, businesses, and communities. This project will not only improve the resiliency and efficiency of transporting lowa



products across North America, but it will also create jobs and support long-term sustainable growth in lowa. Investments like this help ensure lowa remains a leader in feeding and fuelling the world, and I'm grateful to have CN invest in lowa's future."

In 2024, CN invested approximately US\$31 million in lowa for track maintenance and key infrastructure initiatives. Highlights of this investment include:

- Approximately US\$1.4 million to upgrade the track and build capacity on CN's Osage Subdivision near Cedar Rapids
- Over US\$1 million towards upgrades at CN's Waterloo rail yard to improve operations.

IOWA IN NUMBERS

Capital investments: more than US\$31 million in 2024.

- Employees: approximately 258.
- Railroad route miles operated: 572.
- Community investments: US\$ 98,000 in 2024.
- Local spending: US\$29 million in 2024
- Cash taxes paid: US\$6.2 million in 2024.

CN's Louisiana investment is for US\$50 million in Louisiana, as part of its 2025 capital investment programme. This investment will support track maintenance and strategic infrastructure initiatives in the state. This includes projects to build capacity in New Orleans area and upgrades to improve operations at CN's Geismar railyard. These projects will help ensure the safe movement of goods and support long-term sustainable growth in Louisiana and across CN's network.

Says The Honorable Jeff Landry, Governor of Louisiana, "I applaud CN for

DCi

their investment in the State of Louisiana. The implementation of strategic infrastructure initiatives, projects to increase operational capacity, and planned system wide upgrades will continue to show CN's commitment to safely move freight through the cities and parishes of Louisiana. This investment also shows CN's commitment and partnership toward ensuring our vision of economic growth and prosperity is realized for citizens of Louisiana."

In 2024, CN invested approximately US\$52 million in Louisiana for track maintenance and key infrastructure initiatives. A highlight from this investment includes over \$18 million for bridge upgrades in New Orleans.

LOUISIANA IN NUMBERS

- Capital investments: more than US\$52 million in 2024.
- Employees: approximately 330.
- Railroad route miles operated: 227.
- Community investments: US\$ 72,000 in 2024.
- ❖ Local spending: US\$25 million in 2024
- Cash taxes paid: US\$9.2 million in 2024.

In Wisconsin, CN is investing \$110 million, as part of its 2025 capital investment programme. This investment will support

track maintenance and strategic infrastructure initiatives in the state. This includes investments in infrastructure, technology and capacity, as well as network improvements. These projects will help ensure the safe movement of goods and support long-term sustainable growth in Chicago and across CN's network.

Says Don Vruwink, Wisconsin Commissioner of Railroads, "CN's investment in Wisconsin infrastructure supports safer crossings and more reliable service statewide. These improvements help ensure that Wisconsin communities remain connected, competitive, and protected."

In 2024, CN invested approximately US\$110 million in Wisconsin for track maintenance and key infrastructure initiatives. Highlights of this investment are

- More than US\$3.5 million for new equipment, including vehicles as part of a multi-year fleet renewal programme for Wisconsin and across the network.
- Over US\$1.5 million for upgrades at CN's Stevens Point railyard to improve operations.

WISCONSIN IN NUMBERS

- Employees: approximately 1,197.
- Railroad route miles operated: 988.
- Community investments: US\$ 146,000 in 2024.

- Local spending: US\$ 251 million in 2024.
- Cash taxes paid: US\$14 million in 2024.

Says Tracy Robinson, President, and Chief Executive Officer of CN, "We believe that investing in our network is about building for the future. Our continued infrastructure investment in Iowa [and Louisiana and Wisconsin] will help strengthen the resiliency and efficiency of our network across the state. Our focus remains on providing exceptional service to our customers and supply chain partners, supporting strong economic growth for North America and across communities where we operate."

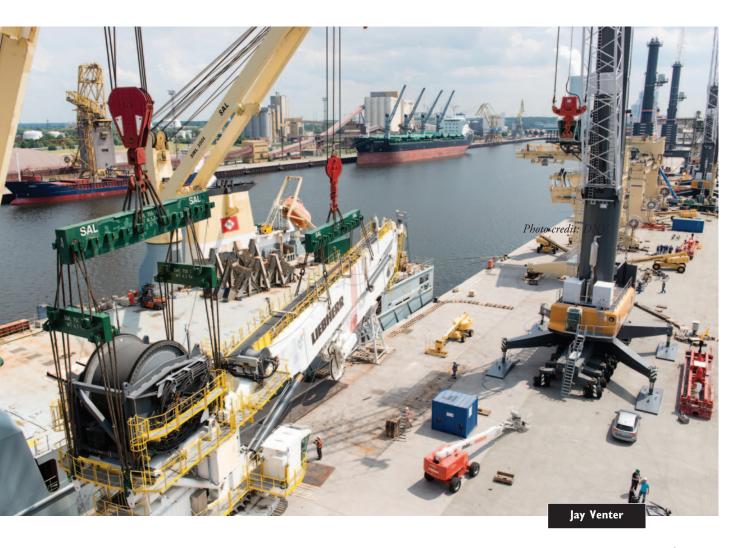
ABOUT CN

CN powers the economy by safely transporting more than 300 million tonnes of natural resources, manufactured products, and finished goods throughout North America every year for its customers. With its nearly 20,000-mile rail network and related transportation services, CN connects Canada's Eastern and Western coasts with the US Midwest and the US Gulf Coast, contributing to sustainable trade and the prosperity of the communities in which it has been operating since 1919.



Rules to drift by

bulker classification



Raising the bar: how new rules and tools are reshaping bulk carrier safety and efficiency

he bulk carrier industry is undergoing a quiet but powerful transformation, writes Morten Løvstad, Vice President, Business Director — Bulk Carriers, DNV Maritime. A wave of new regulations, class notations, and digital tools is redefining how vessels are built, operated, and maintained, placing safety, compliance, and efficiency at the forefront. From structural integrity to crew safety and cargo optimization, these developments reflect a broader shift toward smarter, safer, and more resilient maritime operations.

RECENT REGULATORY DEVELOPMENTS AFFECTING BULK CARRIER INDUSTRY

From a regulatory perspective, some key developments have been introduced or taken effect over the past year, all of which will serve to enhance the safety of bulk carrier operations.

In 2022, the ESP Code (International code on the enhanced programme of inspections during surveys of bulk carriers and oil tankers) was amended and subsequently adopted by the IMO Resolution MSC.525(106) and the IACS Unified Requirements.

Under the new requirements, which have been in force for surveys commenced on or after I July 2024, any coating condition rated below 'GOOD' must be recorded and re-examined annually. For vessels over 20 years old and longer than 150 metres, annual inspections of double-skin void spaces are now mandatory if coatings are rated 'POOR'.

This shift not only raises the bar for structural maintenance but also carries commercial implications. Downgrades in coating condition can lead to increased inspection demands, operational delays,

and reduced charter appeal, making proactive hull management a competitive necessity.

New regulations affecting structural features enhance safety of bulk carriers

Complementing this focus on structural integrity is the upcoming SOLAS Chapter II-1, Regulation 3-13, which introduces stricter oversight of lifting appliances. Effective from January 2026, all lifting appliances installed on or after this date must be surveyed and tested by a classification society. The regulations are now under the SOLAS safety regime, instead of the previous International Labour Organization (ILO) scheme.

Previously, inspections could be carried out by any "'competent person', but under SOLAS this is now stricter and under a more formalized process. This is in response to a rise in lifting-related accidents. For existing equipment, compliance is required by the first renewal survey after the regulation takes effect. Owners must now also implement structured maintenance and inspection regimes, maintain onboard records, and ensure crew are trained and familiar with the equipment. This regulation not only enhances safety but also reinforces accountability in onboard operations.

Meanwhile, the 2026 amendment to the Grain Code formally recognizes a common but previously non-compliant loading condition: partially filled holds in the way of the hatch opening, with untrimmed ends. This scenario often arises when vessels reach maximum draught before full hold capacity.

By acknowledging this practice and providing a framework for its safe execution, the amendment offers greater flexibility without compromising stability. For newbuilds, this condition must be included in the grain loading manual and implemented in the loading computer. For vessels already in service, updates are optional but may be necessary to meet port requirements.

HARNESSING TECHNOLOGY FOR IMPROVED SAFETY AND EFFICIENCY

Technology is also playing a transformative role. Remote inspection techniques (RIT), particularly the use of drones for close-up surveys and ultrasonic thickness measurements, are gaining traction in the bulk carrier segment. DNV has been a pioneer in this space since 2015, and with the 2025 ESP Code update, drone-based inspections will be formally recognized.



This development reduces the need for scaffolding, lowers costs, and improves safety, especially in hard-to-reach areas.

Looking ahead, DNV is exploring Al-driven defect recognition, autonomous drone navigation, and integration with digital twins through the REDHUS Project. These innovations promise to make inspections faster, more accurate, and less intrusive.

Advancements in digitalization are also reshaping cargo operations. The Steel Load Planner, a self-service tool developed by DNV, enables operations teams to create rule-compliant steel coil loading plans in the latest release this may be completed in less than five minutes! By replacing cumbersome tables and manual calculations with instant structural verification, the tool may improve cargo intake by 10-15% while also contributing to more efficient and, thus, more sustainable operations, and enhancing safety through precise load distribution. The upcoming Version 2, which will be launched later in 2025, will further streamline the process by auto-generating optimized plans based on coil data and vessel-specific structural capacity.

This service has already proven to be a significant success and is a prime example of how digital tools can bridge the gap between regulatory compliance and operational efficiency.

THE EVOLVING ROLE OF BULK CARRIERS

The role of bulk carriers is constantly evolving, particularly as global markets develop and the need for new materials and components changes.

Most recently, this has seen increased demand for the transportation of non-

standard cargo such as wind turbine blades, and other large industrial components. As these cargoes grow in size, weight, and complexity, traditional vessel designs and operational assumptions are being challenged. As a result, bulk carriers — particularly Ultramax and Kamsarmax types — are becoming increasingly favoured for the transport of these components, due to their deck space and structural capacity.

DNV's new deck cargo class notation reflects this evolving role, ensuring that vessels are not only structurally reinforced to handle these loads but also meet critical operational criteria. The notation sets specific requirements for the strength of the weather deck and hatch covers, including coamings and securing arrangements, while also addressing intact and damage stability and navigational field of vision.

These standards help shipowners demonstrate compliance with class and international regulations, streamline planning and approval processes, and reduce the risk of delays or disputes during port operations.

STAYING IN STEP WITH A FAST-EVOLVING MARITIME INDUSTRY

Together, these developments are reinforcing the safety and reliability of bulker operations, helping bulkers owners to stay in step with a fast-evolving maritime industry. With the regulatory environment expected to continue to develop, particularly related to the topic of decarbonization, the ability to adapt and be flexible, and stay on top of regulatory and technological developments will help bulker owners to make better-informed decisions and remain ahead of the curve.

Dry cargo operators ignore RightShip's age-trigger policy at their peril

The global shipping industry is entering a new era of risk management, where compliance is no longer a tick-box exercise, writes Fabian Fussek, CEO, Kaiko Systems. Now ship owners need to prove their adherence to diligence, monitoring vessel condition and performance in real time. With RightShip's newly updated agetrigger inspection policy now in force, dry cargo operators would be wise not to dismiss it.

From this month, (yes you read that correctly) vessels over 12 years old without a satisfactory annual inspection will face mandatory RightShip checks. By October, that threshold drops to ten years. While this initiative targets many more dry cargo vessels than before, it is a trend that is likely to continue. But rather than seeing this as a threat, companies should view this as an opportunity to demonstrate continued maintenance on a vessel, regardless of age, to prove it is still fit for purpose.

Even if not yet directly targeted by RightShip's age trigger, market forces, as well as charterers, insurers, and regulators, will inevitably push similar expectations across the wider industry. Older vessels, especially those approaching the 12–15-year mark, will come under increasing scrutiny, whether by official policy or commercial demand.

WHY AGE ALONE SHOULD NO LONGER BE THE BENCHMARK

The issue isn't just about whether a ship has passed its last inspection. It's about whether owners can proactively and continuously demonstrate that their vessels remain safe, well-maintained, and ready to perform reliably under operational scrutiny.

Platforms like Kaiko Systems are enabling this shift by offering structured, Al-led tools to inspect, report, and manage ship conditions across entire fleets. These solutions turn vessel health into qualitative data that can be analysed, benchmarked, and, crucially, shared with stakeholders.

For example, rather than viewing a 13-year-old vessel as inherently riskier than a nine-year-old one, shipowners can use digital inspections and corrosion tracking to show an objective proof of condition which is timestamped, structured, and verifiable.

However, this is far more important than just passing RightShip inspections. It's about maintaining commercial relevance. In an increasingly digital, ESG-focused market,



perception matters. With the right inspection data, owners can strengthen a vessel's profile by demonstrating it is well-maintained and operationally sound — even if age remains a factor in chartering decisions.

Charterers are already moving toward more transparent vetting workflows. Kaiko's new RISQ self-assessment tool, designed in collaboration with senior mariners, prepares crews for inspection with the same approach used in actual audits. It is able to transform inspection readiness into a streamlined, proactive process. Aligned directly with the official RISQ 3.1 framework, the platform enables ship crews to conduct thorough preinspections, identify deficiencies, and resolve them before they appear in an official inspection report.

More importantly, it enables proof. Every inspection log is time-stamped, user-attributed, and includes distance travelled as metadata, building a transparent and structured overview of a vessel's inspection readiness. In a world where trust is increasingly data-driven, that's invaluable.

Key features include:

- Mobile & offline access: selfassessments can be completed at sea via tablet or smartphone, even without internet — replacing outdated Excelbased processes.
- Role-specific task guides: each crew member receives a tailored checklist relevant to their responsibilities, removing ambiguity and improving thoroughness.

- Live fleet dashboard: up-to-date data oversight for shore teams, offering clear visibility into preparation status as soon as crews upload data from onboard inspections.
- Early issue flagging: incorrect answers or findings are automatically flagged and communicated between ship and shore for timely resolution.

Kaiko's software acts like a virtual inspector — guiding crews step by step through the standards RightShip uses. By flagging problems early, shipowners avoid unnecessary findings, improve their Safety Scores, and keep their vessels charter ready.

With charterers increasingly relying on RightShip scores to make their decisions, strong inspection outcomes are more than a regulatory issue, they're a business imperative. Ships with poor scores risk delays, lost opportunities, and reputational harm. By contrast, operators who demonstrate a proactive and transparent safety culture can secure greater trust and repeat business.

Whether it's expired certificates, equipment maintenance, or procedural gaps, many issues that hurt vetting results are entirely preventable. Kaiko's RISQ Self-Assessment helps crews catch them early, fix them quickly, and prove that the fleet is inspection-ready and commercially reliable. With more vessels being impacted from this year onwards, this is something which ship owners need to prepare for before it's too late.

WHY IT MATTERS NOW

RightShip's evolving methodology places operational behaviour at the centre of its risk profiling. Ship owners should see this as a signal that the industry is shifting from reactive to proactive safety models. As a result, compliance will be driven not just by regulations, but by competitive pressure.

As safety standards rise and digital vetting tools become the mainstream, the market will begin rewarding those who can demonstrate continuous, data-backed oversight.

As such, age alone should not doom a vessel's commercial viability. But in the absence of data, assumptions will remain and older vessels will be at a disadvantage.

In today's climate of heightened scrutiny, that's not just smart, it's essential. Dry cargo operators who fail to prepare for RightShip's age trigger policy now may soon find themselves left behind.

DCi

INTERCARGO-member fleets outperform on safety and compliance

Dry bulk carriers entered with INTERCARGO continue to demonstrate stronger performance than the global fleet average on safety and compliance, according to the Association's latest Benchmarking Report. The report highlights meaningful differences across the sector, with significant variations in inspection outcomes, operational risk and regulatory performance.

INTERCARGO-member ships consistently show a lower incidence of regulatory deficiencies and detentions compared with the global fleet.

"These results show that quality is measurable," said John Xylas, Chairman of INTERCARGO. "Responsible, quality operators are delivering safer, more compliant ships, and benchmarking helps identify strengths, highlights areas for improvement and promotes operational integrity throughout the industry."

The report also identifies continued disparities in class and flag performance. Some parts of the global fleet remain consistently linked to higher levels of risk exposure and weaker inspection outcomes. These trends reinforce the importance of transparency, strong oversight, and data-informed decisionmaking in ship operations and management.

INTERCARGO also notes regional shifts in enforcement activity, with some

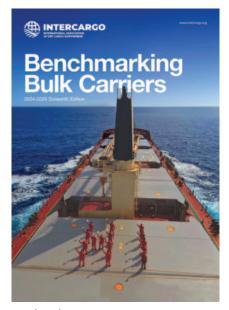
Port State Control regimes taking a more active approach to inspections and detentions. These developments underline the importance of consistent and equitable Port State Control.

The Benchmarking Report draws on a range of public and commercial data sources. By identifying trends and supporting greater transparency, the Association seeks to strengthen safety, compliance and performance across the global dry bulk sector. More information and access to the report is available on INTERCARGO's website.

ABOUT INTERCARGO

International shipping is vital for the global economy and prosperity as it transports approximately 90% of world trade. The dry bulk sector is the largest shipping sector in terms of number of ships and deadweight. Dry bulk carriers account for 43% of the world fleet (in tonnage) and carry an estimated 55% of the global transport work.

The International Association of Dry Cargo Shipowners (INTERCARGO) unites and promotes quality dry bulk shipping, bringing together more than 290 forward thinking companies from 30 countries. INTERCARGO convened for the first time in 1980 in London and has been participating with consultative status at the International Maritime Organization (IMO)



Benchmarking Report 2025. Credit: INTERCARGO.

since 1993. INTERCARGO provides the forum where dry bulk shipowners, managers and operators are informed about, discuss, and share concerns on key topics and regulatory challenges, especially in relation to safety, security, the environment, and operational excellence. The Association promotes its members' positions at the IMO, EU as well as other shipping and international industry fora, always maintaining free and fair competition as a focal principle.

2026-27 World Maritime Day theme to take policy to practice

TWO-YEAR THEME TO FOCUS ON PUTTING INSTRUMENTS INTO ACTION, BACKED BY TECHNICAL SUPPORT.

'From Policy to Practice: Powering Maritime Excellence' has been selected as the International Maritime Organization's World Maritime Day theme for 2026 and 2027, culminating in the annual celebration on the final Thursday of September each year.

Meeting in London for its 134th session (7–11 July), the IMO Council endorsed a proposal from Secretary-General Arsenio Dominguez to keep the theme for a two-year period.

The theme highlights the Organization's clear commitment to develop Member States' capacity to put policies into practice, by providing technical assistance, training and other essential services.

Secretary-General Dominguez said: "The theme transmits a clear message of our commitment to ensuring regulations are put into action and providing the



Photo credit: IMO.

necessary technical assistance for implementation to Member States. This ultimately strengthens the confidence that global rules agreed at IMO can lead to safer, more secure and environmentally sound shipping worldwide."

TURNING REGULATIONS INTO TANGIBLE RESULTS

'From Policy to Practice' in the theme underscores IMO's core mission of ensuring that the global regulatory framework it develops is not merely

adopted in principle but translated into concrete national legislation, enforcement and day-to-day operations across the maritime sector.

'Powering' signals the momentum and targeted support through capacity-building, technical cooperation and knowledge sharing which IMO, together with its partners, provides to drive this transition.

'Maritime Excellence' conveys the ultimate objective: a consistently safe, secure, efficient and environmentally sustainable shipping industry, operating to the highest international standards and continually striving for improvement.

Together, the theme conveys a holistic, action-oriented commitment: turning collective regulatory decisions into real-

world results that deliver tangible benefits

70 YEARS OF REGULATORY ACTION

For over 70 years, the IMO has worked to develop a comprehensive framework of international maritime conventions, with associated codes, guidelines and recommendations. The full benefits of this framework can only be realized through ratification, effective implementation and constant enforcement.

The IMO Member State Audit Scheme (IMSAS) has reported gaps in national legislation and enforcement, indicating a real need to improve regulatory effectiveness.

Global attention on the theme in

2026–2027 could accelerate the national action towards implementation of all IMO instruments.

The theme supports the United Nations 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), in particular:

- SDG 9 on industry, innovation and infrastructure;
- SDG 13 on climate action;
- SDG 14 on life below water; and
- SDG 17 on partnerships.

The theme highlights the IMO's continued contribution to broader global efforts, as well as the importance of cross-cutting and effective maritime governance in sustainable development.



ClassNK releases 'ClassNK Technical Journal: introducing the latest technological trends for the protection of the marine environment-

ClassNK has released *ClassNK Technical Journal No.11 2025 (1)*. This issue features the title 'Latest Technological Trends for Protection of the Marine Environment', providing the particularly well-received presentations on 'Underwater Noise from Ships' and 'Safe Decarbonization' from 'ClassNK R&D Forum 2025', which was attended by more than 200 participants.

ClassNK Technical Journal, has been published to contribute to the advancement of technology and society through the outcome of R&D and technical activities. The contents of the latest issue are as follows:

Special feature articles on 'Latest Technological Trends for Protection of the Marine Environment':

- Guidelines for Underwater Noise from Ships and Trends in the IMO, Etc.
- Development and Application of Ship Underwater Radiated Noise

- Estimation Tool for Preservation of the Marine Environment.
- Measurement of Ship Noise in Shallow Sea Area.
- Recent Information on the Development of IMO Guidelines for the Safety of Ships Using Ammonia as Fuel and Initiatives of ClassNK for Practical Application of Ammonia-Fueled Ships.
- Research to Develop Safety Assessment Measures of Alternative Fuel/New Cargo Transportation.
- Commentary on 'Bayesian Estimation of Ammonia Leak Frequency for Risk Assessment of Ammonia-Fueled Vessels'.

Technical topics include:

Revealing a Fuel-Saving Tip for Main Engine Operation in Rough Sea Conditions.



- Introduction of Examples of the Use of AIS Data.
- Recent Topics at IMO.



New bulk discharge system commences operations at Callao

At the Peruvian Port of Callao, which notably serves the capital city of Lima, the North Quay has begun trial operations of a new grain unloading system, which encompasses two high capacity continuous ship unloaders linked to an automated dispatch system. The terminal, which is under concession to APM Terminals Callao, is now claimed to be the fastest in South America using this type of operation.

Dwell times for vessels is expected to be significantly reduced as are loading and discharge times for HGVs.

In its pilot operation, a 77,000-tonne shipment was offloaded, which the terminal operating company believes to be the largest dry bulk consignment ever to be handled in Peru to date. In any event, it was much higher than the average consignment to pass through any Peruvian ports.

According to operations director of APM Terminals Callao, Javier Vidal, by having a greater volume, the terminal will also unload a greater quantity of grain in less time, thereby improving the overall efficiency of the operation.

The North Multipurpose Terminal nowadays handles 73% of the wheat, 100% of the barley and 54% of the corn consumed throughout Peru. *Barry Cross*

Brazil's northern ports growing in export performance

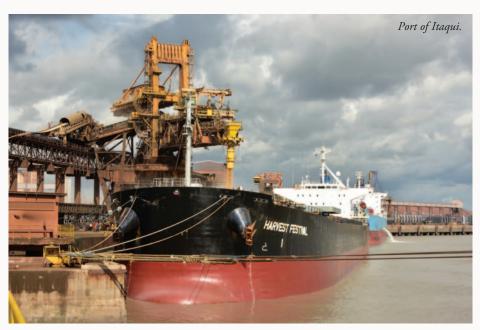
According to figures released in Brazil's Agrologistic Yearbook for 2005, corn and soybean exports from the country's northern region have more than doubled in the past half decade. Ports in the so-called Northern Arc have seen exports rise from 36.7mt (million tonnes) in 2020 to 57.6mt last year.

This growth is attributed to increased investment in multimodal infrastructure, which encompasses both rail and increasingly inland waterways in the Amazon region.

Much of the export produce is produced in the

states of Maranhão, Tocantins, Piauí and Bahia, grouped domestically under the MATOPIBA moniker. The northern states are now being seen as a much more cohesive entity in overall agricultural production.

The Yearbook notes that, in 2024, Northern Arc ports such as Itaqui, Barcarena and Santarém, when added to



established giants Santos and Paranaguá (PR), accounted for 81.2% of Brazilian soybean and corn exports. Of this, on their own, ports in the country's north accounted for about 38% of the whole.

There are also notable differences in the performance of the emerging northern ports. At Itaqui and Barcarena, growth in the volume of corn and soybean exported in the 2020–2024 period was 80.3% and 70.3% respectively.

The situation in Maranhão is also distinct. There, volume increases are down almost purely to enhanced rail links, with volumes up from 11.21 million tons in 2020 to 20.22 million in 2024.

Barry Cross

San Nicolás seeks to diversify commodity base

The Argentinean Port of San Nicolás, which is located on the west bank of the Paraná River in Buenos Aires province, is actively seeking new dry bulk commodities to add to its portfolio of products that currently make use of the river terminal.

At present, it functions almost uniquely as a facility that handles imported fertilizer, with imports of this commodity accounting for half of all traffic.

The port is therefore investigating new technologies, looking at ways of increasing its discharge rates and also attracting new investment. Vacant land is available for new concessions

As for 2025, the port's peak season commenced in May (rather than April), which means that, although still on course

to make budget, the year is not proving to be without certain difficulties. However, it may not be until 2026 that volumes at San Nicolás return to pre-pandemic levels. The situation is not being helped by the lack of any overall strategy in the Argentinian market as a whole, thereby leaving the port still to be find a direction to head for.

Barry Cross

Castellón trials digital windsock

In Spain, the Mediterranean Port of Castellón is backing new initiatives as laid out in a development programme promoted by the national Ports of the State authority.

The first of these is the Windsock project developed by Row Innovation Commission (RIC). This encompasses the development of a digital wind sleeve to optimize safety at port facilities, especially in periods of adverse weather and particularly to mitigate the impact of the dry bulk handling sector.

Castellón has been negatively impacted over the years by the accelerated deterioration of its current wind sleeves. This has been triggered by bad weather and also due to the suspension of particles generated by bulk handling activities.

RIC members have looked into several innovative solutions to address both security and visibility problems, and have devised a digital alternative. The reinforced and connected version integrates wind sensors and visual signalling into a digital

platform. If necessary, this can be powered by solar energy, and can also be customized to meet the needs of individual ports by, for example, incorporating additional sensors, such as rainfall, air quality meters, sirens or information panels.

The digital interface not only allows conditions to be monitored in real time, but also stores them to later apply machine learning techniques to optimize port operations through predictive analytics.

Barry Cross

CONCOR to acquire 1,000 tank containers for cement transport

The Container Corporation of India Ltd. (CONCOR) has upgraded its bulk cement transport operations. Recently, it has introduced real-time tracking of specialized tank containers containing the commodity. This is the first time it has moved into so-called loose-form cement logistics.

The initial pilot involved moving tank containers from My Home Cement Siding in Mellacheruvu, in the state of

Andhra Pradesh, to CONCOR's Inland Container Depot (ICD) at Whitefield, Bangalore. This first train carried 2,199 tonnes of bulk cement.

The introduction of the tank containers has displaced former movement of cement using conventional bags. CONCOR says that this initiative is aimed at supporting the cement sector by offering efficient and secure transport whilst simultaneously contributing to

environmentally responsible logistics practises. CONCOR now plans to add around 1,000 tank containers to its initial fleet of 90, these latter having been purchased from Braithwaite, which is a public sector company set up by the Ministry of Railways. A steering committee has also been established to monitor the new service, and will explore its expansion to other industrial corridors around India. *Barry Cross*



Portwise partners with HES International to enable future-proof asset planning

Portwise has recently announced that it been selected by European seaport infrastructure operator for dry and liquid bulk products, HES International, as their partner in conducting simulation-based asset planning. This collaboration marks an important step in HES Internationals long-term strategy to strengthen operational insight and support investment planning across its dry and liquid bulk terminals.

HES International operates a network of strategically located terminals in the Netherlands, Germany, Poland and France. With access to deep draught berths and strong hinterland connections via barge, rail, road and pipeline, these terminals play a vital role in Europe's bulk logistics chain. Across 13 terminals in 4 countries at strategically located ports in Europe, HES International handles over 100mt (million tonnes) of dry bulk annually, supported by 1.9 million cubic metres of liquid bulk storage and 1.5 million cubic metres of covered storage.

The dynamic simulation tool of Portwise will be applied for long-term asset planning for six of HES International's key terminals:

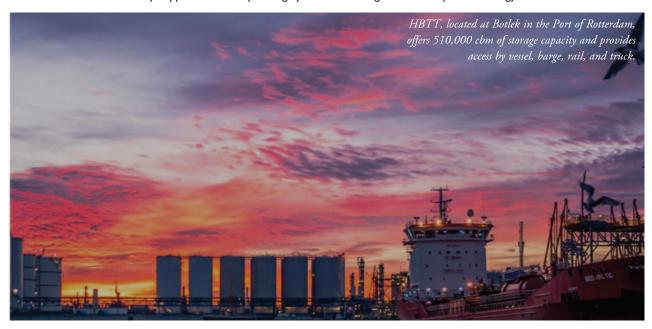
Three dry bulk terminals: HBTR (Rotterdam), HBTM (Botlek and Europoort), and HBTA (Amsterdam),

Two liquid bulk terminals: HBTT (Botlek) and HWTT (Wilhelmshaven),

One dry and liquid bulk terminal: HGBT (Gdynia, Poland).

By simulating the full terminal operation – from vessel arrival to landside dispatch – Portwise will provide detailed insight into performance under current and projected volume scenarios. This will allow HES International to benchmark existing operations, identify capacity gaps, and plan infrastructure and equipment investments accordingly.

With over 25 years of experience in bulk terminal design, Portwise combines operational and logistical expertise with advanced simulation tools to deliver future-proof solutions. Through close collaboration with HES International's terminal teams, Portwise will ensure outcomes that directly support the 2025 planning cycle and the long-term development strategy.



HES International and Marcegaglia explore collaboration at Fos sur Mer

HES International and Marcegaglia are pleased to announce the initiation of a strategic dialogue aimed at developing a long-term collaboration at Fos sur Mer. Under this potential partnership, HES would provide deep-sea terminal infrastructure and operational support for the import of raw materials and export of finished steel products for Marcegaglia's evolving site.

At Fos sur Mer, Marcegaglia is undertaking a major industrial redevelopment of the former Ascometal site, which has been designated a Project of Major National Interest by the French government. The €800 million investment will transform the facility into a state-of-

the-art, low-carbon steel production hub. Once complete, the site is expected to reach a production capacity of ~2 million tonnes per year.

The leadership of both companies met on 15 and 16 July 2025 onsite in Fos sur Mer to explore various scenarios for handling infrastructure, dedicated equipment, and storage solutions at the HES FOS terminal. These discussions represent an important step toward building a robust and efficient logistics interface between the two sites.

Antonio Marcegaglia, CEO of Marcegaglia, commented: "We are delighted to work with HES International in Fos sur Mer.Their expertise in deep-sea

terminal operations is a key enabler for our ambitious expansion and supply chain security and reliability."

Paul van Gelder, CEO of HES International, added: "We are excited to become the logistics partner of Marcegaglia in Fos sur Mer. This further anchors HES's ambition to be the preferred deep-sea terminal operator for industrial players across Europe, supporting their growth and sustainability goals."

A joint project team has been established and is actively working on planning and feasibility. Both parties aim to reach a Final Investment Decision (FID) by Q2 2026.



Northern California bulk terminal is a hidden jewel

Situated on the north end of San Francisco Bay is a deep-water bulk terminal with direct access to the US's largest class I railroads, the UP and BNSF. The Levin Richmond Terminal Corporation (LRTC) is on the site where "Rosie the Riveter" worked to build WWII ships and has excellent transit times to Tokyo, Shanghai, Hong Kong, Busan, and Singapore.

"We are a unique terminal with much more flexibility than our larger competitors," said Chris Schaeffer, CEO of LRTC. "This enables us to provide customized transportation solutions for our customers."

LRTC has another advantage — it relies on operating engineers, enabling it to cross-train employees and put labour wherever it is needed. "We have a very cohesive management team that runs both the terminal and railroad, so we have a direct line of communication, making us more agile and efficient," said Schaeffer. "This also allows us to keep costs down and invest in expansions." LRTC is a private company that owns its short-line railroad, known as the Richmond Pacific Railroad Corporation (RPRC).

Levin has been upgrading its existing rail as well as laying more track to reach a short-line of II miles. It is also methodically electrifying the railroad and terminal. All its locomotives are tier 4 final. All forklifts and sweepers will be electric by the end of this year.

"We have been operating for decades and want to continue to focus on sustainability and be a responsible community partner," said Jeff Schwab, Director of Rail Operations.

The terminal modernized its cargo handling equipment to utilize ecofriendly electrical conveyor systems, high walled cargo storage corrals, totally enclosed conveying systems and misting systems to control fugitive dust. All terminal areas have stormwater and wastewater systems to protect the surrounding marine environment.

LRTC prides itself in being a reliable partner and providing the highest possible service levels. "Every visitor remarks how we run a very clean operation," said Joe Vezzali, VP of Sales and Marketing for LRTC. "This is part of our effort to be an exceptional community partner and always put safety first." Having operated 1,200 consecutive days without a lost-time incident, LRTC's safety record puts it in the top 5% of its industry.

The terminal's business strategy is rooted in sustainability and metals conservation through recycling. The company was formed in 1981 when LRTC acquired the current maritime facilities. Cargos at the time included recycled scrap metal, ores, fluorspar, potash, chrome ore, bauxite, limestone, and various other bulk commodities.

In 2002 the RPRC short-line was created connecting with the UP and BNSF.

This railroad currently serves dry bulk and liquid bulk partners who are growing in sustainable biofuels, critical minerals mining, and fertilizer logistics ensuring food security.

LRTC is a rare, but vital tool in the national strategic interest of the US. The ability to export raw materials will help American companies balance the trade deficit. In January of 2025, the US trade deficit reached a record high of \$131.4 billion, a 34% increase from December 2024. Balancing the US trade deficit must involve export diversification, raw materials, and the support of strategic port options like LRTC.

LRTC continues to partner with the State, Local and Federal Government entities to work cleanly and efficiently. Their commitment to the surrounding community is one of transparency and partnership to facilitate common goals, economic growth, and prosperity on the local and national levels.

Looking towards the future, RPRC is strategically positioning itself to handle the growing commodity of renewable diesel to make up for the declining coal market. The company is also exploring other commodities to move in and out of the terminal.



Port pressures: capacity is key



Grain port facilities, which are critical to the global food supply chain, face increasingly complex challenges (photo from AGI archives).

Grain port facilities are critical to the global food supply chain, yet they face mounting pressures from freight scheduling and ageing infrastructure to environmental regulations and shifting trade dynamics.

As AGI's Vice President of Global Engineering, Justin Paterson works closely with port operators across the Americas to develop equipment solutions that meet these evolving challenges. Recently, *Dry Cargo International* sat down with Paterson to discuss the issues grain terminals face today and how global ag equipment and engineering providers like AGI are helping them adapt and thrive.

TIME PRESSURES AND THE COST OF DELAY

In today's global trade environment, time is money — especially at grain ports. Operators face steep demurrage fees when vessels are delayed.

"In Brazil, these costs can reach \$30,000 to \$40,000 per day, while in North America, they have approached \$100,000," says Paterson. "The financial penalties create intense pressure to load vessels quickly and efficiently."

To address this, Paterson says AGI has developed high-capacity, continuous-operation equipment to optimize time and improve high-capacity load and unloads.

"For example, we recently commissioned a 2,500tph [metric tonne

per hour] bucket elevator in Santos, Brazil—the largest of its kind in the agricultural sector," says Paterson. "And, a 3,000tph version is already in the pipeline."

These systems are designed not only for speed but also for reliability and ease of maintenance, ensuring minimal downtime during critical loading windows.

INFRASTRUCTURE AND MAINTENANCE

Many North American grain terminals are operating with infrastructure that is 50 to 80 years old. These ageing facilities often have limited space and narrow maintenance windows, making upgrades and repairs particularly challenging. In contrast, Brazil has taken a more aggressive approach, in some cases demolishing and rebuilding outdated infrastructure to meet modern standards.

According to Paterson, to address these challenges suppliers must be experts in integrating new equipment with existing structures.

"Every port project is a bespoke solution," he says. "Our engineering teams conduct detailed site assessments, often working from old blueprints or direct measurements, to ensure our equipment fits seamlessly into the available space."

AGI also prioritizes low-maintenance designs, such as the AGI Hi Roller enclosed

belt conveyors, which reduce the need for frequent servicing and housekeeping.

ENVIRONMENTAL AND SPACE CONSTRAINTS

Urban encroachment and environmental regulations are placing new demands on port facilities. In large urban centres like Vancouver, operators must contend with noise restrictions, dust emissions and limited real estate.

Globally, many facilities lease land from the government, adding another layer of complexity to long-term planning.

Paterson says the right equipment and dust-control technologies can have an enormous impact in providing solutions. For instance, in Brazil, AGI Hi Roller enclosed belt conveyors have become the industry standard, helping to reduce fugitive dust emissions.

"These systems are also quieter and more aesthetically compatible with urban environments," he says. "Our dust control solutions, including spot and central filtration systems, help operators meet stringent environmental standards while maintaining operational efficiency."

FLEXIBILITY AND FUTURE-PROOFING

Grain terminals must be prepared to handle a variety of commodities and adapt to changing trade patterns. Equipment that once handled soybeans may now need to

convey sugar or corn.

To solve this, today's terminal customers require tough, reliable hybrid equipment that can adjust to constantly changing conditions.

"AGI designs hybrid equipment capable of handling multiple commodities without cross-contamination. Our self-cleaning conveyors and enclosed systems are ideal for

facilities that need to switch between products quickly and safely," adds Paterson. "By building flexibility into our designs, we help terminal operators future-proof their investments against market volatility and regulatory changes."

GLOBAL TRADE SHIFTS AND STRATEGIC POSITIONING

The global grain trade is in flux. Brazil has overtaken the US in soybean exports, and geopolitical tensions continue to reshape trade routes. In this environment,

"Every port project is a bespoke solution. Our engineering teams conduct detailed site assessments, often working from old blueprints or direct measurements, to ensure our equipment fits seamlessly into the available space."

Justin Paterson, AGI VP, Global Engineering

operational agility is more important than ever.

This is a core strength for companies like AGI, which has manufacturing facilities in Canada, the United States, Brazil, India, France, and Italy and a worldwide distribution network. AGI can leverage its global footprint to adapt successful systems from one region to another.

"For example, we've localized North American equipment designs for the Brazilian market, adjusting for local materials, metric standards, and commodity requirements," he says. "This approach ensures that our solutions are both globally informed and locally optimized."

ADAPTABILITY IS CRUCIAL

Ultimately, the ability to adapt is as crucial to suppliers as it is to terminal customers.

Grain port facilities face a complex web of challenges, from ageing infrastructure and environmental regulations to shifting trade dynamics and labour shortages. Smart, flexible equipment solutions are crucial to enabling terminal customers to overcome these obstacles.

That is AGI's approach. By combining engineering expertise with real-world operational experience, the company aims to deliver systems that are robust, efficient and tailored to each facility's unique needs.

"Whether it is a high-capacity bucket elevator in Brazil or a dust-controlled conveyor in Vancouver, our goal is to help grain terminals everywhere, operate more effectively today — and be ready for whatever comes tomorrow," says Paterson.

Klaipeda Port leads Baltic States in cargo growth

In the first six months of this year, nearly 19 million tonnes of cargo were handled at Klaipeda Port. Compared to the same period last year, this marks an increase of 16%. Positive trends are observed in most cargo segments.

"The decision not to back down during challenging times, not to freeze vital projects, and to continue investing in port modernization is paying off. Cargo volumes at Klaipeda Port continue to grow. The first half of this year saw a 16% increase over the same period last year. Looking ahead to the second half of the year, there's probably no doubt that we will remain among the ports reaching the one million TEU threshold. We're also anticipating the peak of the grain shipping season," says Algis Latakas, CEO of Klaipeda State Seaport Authority.

The increase in cargo during the first half of this year was primarily driven by a significant rise in containerized cargo, stable ro-ro and oil product flows, and marked growth in the liquefied natural gas (LNG), mineral, and construction material segments.

Containerized cargo volumes through Klaipeda Port grew by 38% — 6.5mt (million tonnes) were handled. Nearly 700,000 TEUs were processed in

the first half of the year. It is therefore likely that the port will surpass the one million TEU mark this year. TEU cargo statistics show a balanced distribution between exports and imports — 40% and 41%, respectively. The share of transshipment operations grew this year to nearly one-fifth of total container volumes.

The most notable growth — 48% — occurred in the mineral and construction materials segment, with one million tonnes handled. This increase reflects intensive road and railway construction projects in Lithuania.

Compared to last year, liquefied natural gas (LNG) volumes grew by 47%, reaching 1.1mt. In May last year, the FSRU Independence was taken to a dry dock for inspection, suspending cargo operations for a month — an impact clearly reflected in last year's statistics.

The growth was marked in the ro-ro and oil product segments. Ro-ro cargo volumes grew by 6% to 3.2mt in the first half of the year. Oil product handling increased by 4%, slightly exceeding 2mt.

The number of passengers arriving and departing through the port also increased. Port services were used by

164,000 passengers — a 20% increase from last year. The number of cruise passengers grew by 66%.

During 2025, two ships were built and 35 repaired at Klaipeda Port shipbuilding and repair companies.

Scrap metal volumes dropped by a quarter compared to the first half of last year. Grain shipments reached 1.4mt — 14% lower than during the same period in 2024. Timber cargo also declined slightly: 354,000 tonnes were handled in the first half of the year, which is 11% less than last year. Fertilizer cargo volumes fell by 4% to 783,000 tonnes.

Total cargo volumes at all Baltic Sea ports reached 46.4mt in the first half of this year — a 5% increase.

Among the Baltic States, Klaipeda Port performed the best, achieving the highest growth rate at 16%. Klaipeda Port also increased its market share: Lithuania's only seaport now holds 40.8% of the Baltic States' market, up from 37.1% a year ago.

In the first half of 2025, Klaipeda Port maintained trade shipping connections with 56 countries. The largest cargo flows were to and from Germany, Sweden, Poland, the United States, and the Netherlands.

MCube RFP: early detection of costly roller failures with real-time monitoring



Roller failures account for 75% of all mechanical faults on conveyor belts. These failures often lead to unexpected production halts, high energy costs, and safety risks. REMA TIP TOP's innovative MCube RFP system precisely detects vibrations and can be seamlessly integrated into existing maintenance processes for predictive maintenance.

Modern conveyor systems face constant cost challenges, as even brief periods of downtime can result in significant expenses. Rollers account for approximately 40% of a conveyor belt's energy consumption. Even a minor blockage can double energy consumption. Maintenance is often reactive, i.e., performed only in the event of a fault or damage, which increases the risk of consequential damage or even fire.

The MCube RFP system from REMATIP TOP records the vibrations of the roller bearings during an inspection in just three seconds with the 'MCube RFP Mobile' version, while the 'MCube RFP Fixed' system supplies real-time data directly to the maintenance management system. Both versions complement conventional maintenance routines, can be seamlessly integrated into existing systems and significantly increase system availability. Whether as a mobile solution for changing locations or as a permanently installed solution for continuous monitoring — MCube RFP ensures that maintenance teams intervene exactly when it is really necessary.

"With MCube RFP, we offer a flexible, modular solution that provides precise data

and helps sustainably reduce operating costs and increase safety," says Dr.-Ing. Daniel Kasperek, Head of REMA Engineered Technologies at REMA TIP TOP. "This allows plant operators to act proactively and minimize costly downtime and safety risks."

Thanks to MCube RFP, system operators benefit from significantly reduced maintenance and energy costs as well as increased availability of their conveyor belts. As part of the comprehensive MCube portfolio, the system complements solutions for belt thickness measurement, belt tear detection, steel cord inspection and X-ray diagnostics - for holistic maintenance concepts that combine efficiency, safety and sustainability.

ABOUT REMA TIP TOP

REMA TIP TOP is a globally operating system provider of services and products in the field of conveying and treatment technology as well as tyre repair. The company has a global service network and offers a wide range of rubber products, linings and coatings for both the industrial and automotive sectors. Over almost a hundred years, the company has built up unique expertise in materials development and industrial services and is active in the sectors REMA Conveying, REMA Surface Protection and REMA Motion. At the end of the 2023 financial year, REMA TIP TOP generated sales of about more than €1.4 billion. Worldwide the company employs 9,000 employees and has more than 200 subsidiaries and associated companies including well-known brands such as Dunlop Belting Products South Africa and Asplit.









Negrini company, established in 1967, specializes in engineering and manufacturing a comprehensive range of grabs and buckets for rope machines and crawler mounted cranes; they are employed to do many jobs. Negrini buckets and grabs are very well-known for quality as well as for the very accurate and skilful engineering work; in fact Negrini supports their clients by analyzing the job to be done and, if needed, by adjusting the standard design of grabs and buckets to enhance their performance once in operation.

VIA TORRICELLI 4 - CASTELFRANCO E. (MO) - ITALY



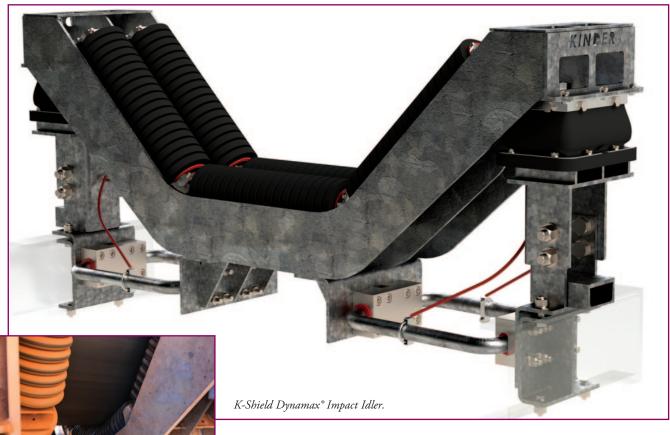








Redefining load zone protection with impact ready innovation



In high-impact conveyor environments, protecting the load zone is more critical than ever. The increasing frequency of equipment damage and costly downtime in these areas highlights the urgent need for robust, reliable solutions.

The K-Shield Dynamax® Impact Idler represents a significant step forward, offering an engineered approach to absorbing intense material load forces and extending the operational life of conveyor systems.

Designed for extreme conditions, the K-Shield Dynamax® Impact Idler is not a one-size-fits-all product. Its modular, inhouse engineered design can be customized to handle diverse operational variables, including belt widths, lump sizes, drop heights, tonnes per hour and belt speeds. This flexibility makes it a practical option for industries facing harsh and unpredictable load conditions.

A key feature of the idler is its heavyduty frame construction, which provides the foundation for reliable support in demanding load zones. But it's the advanced suspension and cushioning system that truly sets it apart. Each idler frame is mounted above anti-vibration spring elements that significantly reduce the impact forces transmitted to the belt and structural components. This cushioning effect not only preserves belt integrity but also minimizes damage to idlers, frames and bearings, all of which are common failure points in high-impact areas.

The addition of a sway bar suspension with polyurethane bushes ensures optimal stability and movement control. This system allows the idler to respond dynamically to impact without comprom ng alignment, reducing the likelihood of material spillage or tracking issues.

Uniform material loading is another crucial factor in minimizing wear and tear. To support this, the K-Shield Dynamax® Impact Idler features a dual trough roll configuration that can be tailored to suit a wide range of trough angles and roller layouts. This uniform cross-sectioning enables even material distribution across the belt, enhancing performance and reducing concentrated wear.

Maintenance access is another standout advantage. High-impact load zones are notoriously difficult and dangerous to service, often leading to prolonged downtime. The K-Shield Dynamax® Impact Idler addresses this with an integrated jackdown or lowering facility that enables efficient and safe roller replacement. By

reducing maintenance time and exposure to risk, this design supports better uptime and safer site practices.

Feedback from operational case studies has reinforced the idler's value in real-world conditions. Sites that have implemented the K-Shield Dynamax® Impact Idler have reported measurable improvements in conveyor reliability, reduced belt wear and longer-lasting component life. For maintenance teams and operations managers, these improvements translate directly into lower costs and fewer disruptions.

As industries strive for greater reliability and efficiency under increasingly tough conditions, innovations like the K-Shield Dynamax® Impact Idler are reshaping the standards for load zone protection. Rather than retrofitting basic solutions in high-impact zones, this approach begins with the understanding that extreme environments demand purpose-built systems.

In today's productivity-driven climate, reducing unplanned downtime and extending component life are no longer optional, they are operational imperatives. With its engineered resilience and focus on both performance and maintenance, the K-Shield Dynamax® Impact Idler is delivering a smarter, safer and longer-lasting solution to one of the most punishing zones in any conveyor system.

INCREASE YOUR PROFITS WITH INTELLIGENT SOLUTIONS



Your challenge might be finding a grain-handling solution that ensures the profitable, sustainable growth of your business.

Our expertise can provide just that. A totally enclosed Bruks Siwertell solution that ensures operations are efficient, reliable, and free from dust and spillage.





AUMUND Group expands its portfolio with the integration of ESI Eurosilo B.V.

STRATEGIC ADDITION IN THE FIELD OF BULK MATERIAL STORAGE

AUMUND has announced that, as of 25 June, 2025, ESI Eurosilo B.V., headquartered in Purmerend, the Netherlands, has officially joined the internationally operating AUMUND Group. The integration of ESI Eurosilo strengthens AUMUND's strategic position as a full-range provider of high-quality bulk material handling solutions.

TECHNOLOGICAL AND MARKET-STRATEGIC SYNERGY

ESI Eurosilo is a globally recognized leader in space-efficient and cost-effective vertical storage solutions for materials such as FGD gypsum, potato starch, sugar, fertilizers, coal, petroleum coke and a variety of other bulk solids.

With over 50 years of experience in developing innovative silo technology, ESI Eurosilo's products and expertise perfectly complement AUMUND's existing portfolio of conveying technologies. With the bigger network of global partners, customers will be served even better in all aspects: from enquiries to service and after-sales.

"By integrating ESI Eurosilo, we are adding a strategically important component to our offering — safe, space-saving, and environmentally friendly storage of bulk materials increasing again the huge portfolio of our technical solution in bulk material handling and storages from integrated solutions along the entire process chain. On top the usual care of AUMUND during the full lifecycle of our machineries to support always our clients will be extended to ESI products" says Dr. Pietro de Michieli, CEO AUMUND Group.

SYNERGIES FOR SUSTAINABLE GROWTH

"Both companies share a common focus on customized plant solutions for clients around the world. The combination of AUMUND's global market presence and ESI Eurosilo's expertise in vertical silo systems creates new business opportunities — particularly in the fertilizer, energy, and mining sectors," says Henri De Boer, Managing Director of ESI Eurosilo B.V..

STRENGTHENING MARKET POSITION

The integration of ESI Eurosilo marks another important milestone in AUMUND Group's long-term 'Move Forward' strategy. With more than 100 years of experience, AUMUND stands for innovation, reliability, and customer proximity. With ESI Eurosilo, the Group is consistently expanding its technological leadership becoming more and more a single source provider in the bulk materials sector.

ABOUT THE AUMUND GROUP

Operating in over 150 countries worldwide, the AUMUND Group is a recognized expert in bulk material handling. Its technically advanced, innovative solutions can be seamlessly integrated into virtually any customer or site-specific setup. AUMUND systems for the safe transport of hot, abrasive materials, optimized cooling processes, advanced storage and blending bed technology, as well as mobile loading and unloading systems, have made the Group a key player in demanding industries.

At the same time, AUMUND companies are reliable partners for plant manufacturers and operators — whether

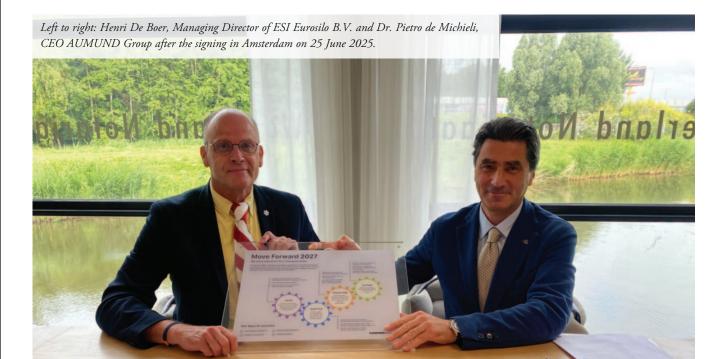
for new builds, conversions, or modernization projects. Multiple production sites with engineering and R&D capabilities, strategically located warehouses, in-house spare parts production, international service companies, service centres, and numerous sales locations ensure maximum plant availability for customers worldwide — while supporting resource conservation. Since 2023 the Aumund Foundation has been the new proprietor of the AUMUND Group with the aim of a long-term and sustainable company development.

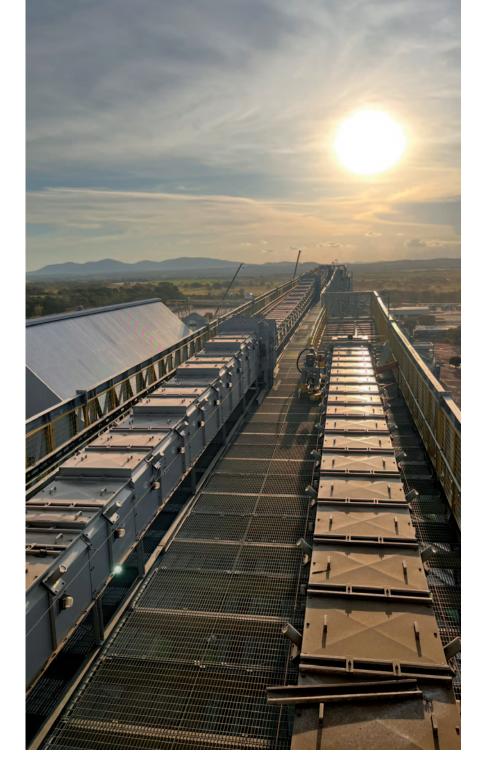
Alongside reliable plant availability, customers can also count on the sustainability of solutions from AUMUND. Each Group company and each service provider offers ecological solutions, which are environmentally sound, and follow the principle of the circular economy.

ABOUT ESI EUROSILO B.V.

Headquartered in Purmerend, the Netherlands, ESI Eurosilo B.V. has been designing vertical storage solutions since the early 1970s, starting with silo systems for potato starch. Over the decades, the company has expanded its expertise to provide advanced storage technologies for a wide range of difficult-to-handle bulk materials such as FGD gypsum, potato starch, sugar, fertilizers, coal and petroleum coke and many more.

ESI's silos feature integrated systems for controlled material handling, and are known for their compact footprint, high reliability, and automated operation. With more than 190 systems installed in over 25 countries, ESI Eurosilo has built a strong global reputation across the energy, mining, chemical, and agri-food sectors.





The Noctua IoT Platform

transforming asset management and operational efficiency

The Noctua IoT Platform, developed by TMSA, is an innovative asset management solution that harnesses the Internet of Things (IoT) to connect industrial equipment to an intelligent digital ecosystem.

By integrating advanced sensors and powerful analytics, the platform collects critical operational data in real time, empowering users to make strategic decisions based on accurate, up-to-date insights.

Created in partnership with global technology leader WEG, Noctua IoT delivers real-time monitoring, prescriptive maintenance capabilities, and enhanced operational efficiency through a scalable and robust architecture.

KEY FEATURES

Real-time monitoring: continuously tracks equipment conditions and system performance, ensuring operational reliability and maximum uptime.

Prescriptive maintenance: anticipates and detects failures before they occur, enabling data-driven maintenance planning and reducing unexpected downtimes.

Energy management: monitors and optimizes energy consumption, lowering operating costs and enhancing environmental sustainability.

Customizable reports: delivers tailored reports and dashboards with actionable insights into equipment and process performance.

Advanced telemetry: offers compre-

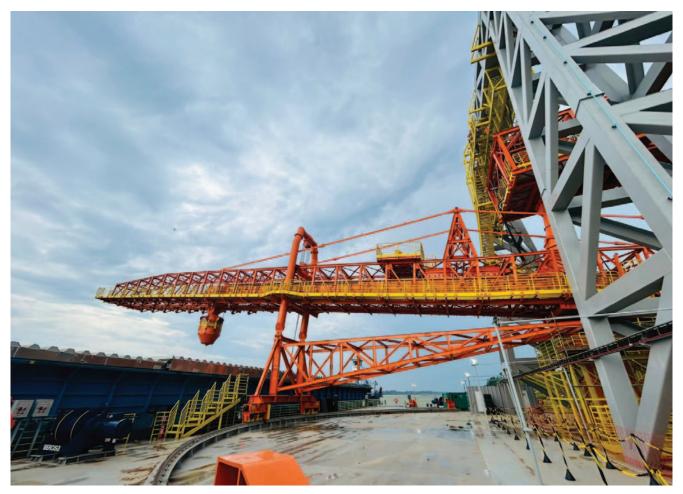
hensive telemetry data including alarm history, variable trends, event logs, and OEE (Overall Equipment Effectiveness) indicators.

BENEFITS OF THE NOCTUA IOT PLATFORM

Increased reliability and performance: real-time visibility improves equipment uptime and ensures more consistent and predictable operations.

Enhanced safety: continuous monitoring helps mitigate risks by identifying anomalies that could lead to safety incidents.

Reduced operational costs: efficient energy management and targeted maintenance reduce resource usage and improve cost-efficiency.



Process optimization: real-time analytics support KPI-based decision-making, enabling continuous improvement and productivity gains.

Lower carbon emissions: efficient fleet and process management reduces energy waste, supporting compliance with global environmental standards.

PRESCRIPTIVE MAINTENANCE AND EXTENDED EQUIPMENT LIFE

With real-time IoT data, maintenance teams can implement prescriptive strategies, scheduling interventions only when necessary.

This proactive approach minimizes

downtime, reduces unnecessary maintenance, and extends asset lifespan — delivering significant cost savings over time by avoiding premature replacement of components or systems.

MONITORING OF MOTORS, GEARBOXES, AND BEARINGS

- Failure prevention: continuous condition monitoring detects issues such as abnormal vibrations, overheating, or excessive wear allowing timely corrective actions before failure occurs.
- Improved workplace safety: early detection of mechanical faults prevents

hazardous situations, promoting safer operational environments.

APPLICATIONS ACROSS KEY INDUSTRIAL SECTORS

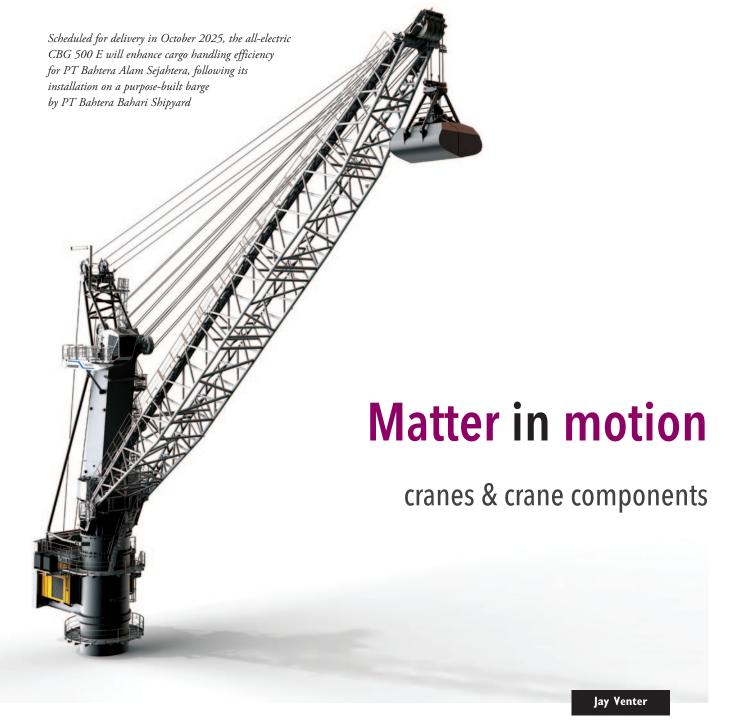
- Ports: enhance the performance of ship loaders, belt conveyors, dust collectors, and related equipment, while reducing environmental impact.
- Mining: monitor critical assets such as conveyors, feeders, and silos to ensure uninterrupted operation and predictive maintenance.
- Agribusiness: automate and optimize grain cleaning, conveying, and drying systems to boost throughput and operational consistency.

WHY CHOOSE THE TMSA NOCTUA IOT PLATFORM?

TMSA combines decades of industrial expertise with cutting-edge digital innovation. The Noctua IoT Platform was purpose-built to address the challenges of asset-intensive industries, offering a robust and customizable solution that not only monitors equipment but transforms operational data into strategic intelligence.

With Noctua IoT, clients gain a trusted partner to support predictability, safety, and efficiency in their operations — paving the way for a more connected, automated, and sustainable industrial future.





PT Bahtera Bahari Shipyard brings Indonesia's first all-electric CBG 500 E to life

PT Bahtera Bahari Shipyard (PT BBS) is setting a new benchmark in maritime infrastructure with the acquisition of Liebherr's all-electric CBG 500 E crane. As the first of its kind in Indonesia, the crane will be mounted on a custombuilt barge named Leo Trans 10, designed and constructed by the company itself. The crane will be operated by PT Bahtera Alam Sejahtera (PT BAS), a sister company specializing in bulk cargo logistics. This strategic collaboration reflects commitment to innovation, sustainability, and operational excellence across the two companies. CBG 500 E, with its maximum reach of 43 metres and a load capacity of 65

tonnes SWL in grab operation, will primarily handle coal, significantly boosting PT BAS's handling capacity.

Scheduled for delivery in October 2025, the all-electric CBG 500 E will enhance cargo handling efficiency for PT Bahtera Alam Sejahtera, following its installation on a purpose-built barge by PT Bahtera Bahari Shipyard.

INNOVATIVE MILESTONE IN TRANSSHIPMENT

PT Bahtera Bahari Shipyard (PT BBS) has taken a bold step in advancing Indonesia's maritime capabilities with the purchase of Liebherr's CBG 500 E. Scheduled for delivery in October 2025, the crane will be installed on a barge currently under

construction at their Batam facility. The CBG 500 E features a rope luffing mechanism, a 65-tonne safe working load in grab operation, and a 43-metre outreach — making it ideal for high-volume coal handling. Its all-electric drive system, supported by the Licatronic energy recovery system and supercapacitors, ensures reduced emissions and optimized energy use.

The crane also integrates Liebherr's Master V control system, offering advanced diagnostics and future-ready automation support. The acquisition — finalized during the Bauma 2025 event in Munich, Germany — represents a significant advancement in the transshipment sector, particularly in Indonesia.

LEADING THE WAY IN INNOVATION

PT BBS's investment in the CBG 500 E is a forward-looking move designed to support the operational needs of its sister company, that will deploy the crane in its coal transshipment activities. PT BAS, based in Kota Tanjung Pinang, has a long-standing relationship with Liebherr and already operates several CBG 350 and CBG 360 cranes. The new unit will significantly enhance its handling capacity while aligning with broader environmental goals.

"The CBG 500 E represents a powerful addition to our fleet, significantly increasing our handling capacity in the bulk handling sector," said Selamet Widodo, President of PT BAS and PT BBS. "We are confident its innovative drive system and performance

parameters will meet our operational needs and set new standards in efficiency."

COMMITMENT TO EXCELLENCE

PT Bahtera Bahari Shipyard (PT BBS), established in 2005 in Batam, Indonesia, is renowned for its shipbuilding solutions, including barges, tugboats, and landing crafts. The shipyard spans over 52 hectares and features modern production facilities and a skilled engineering team. The CBG 500 E will be mounted on a crane barge built at PT BBS, enhancing the operational capabilities of PT BAS. The crane's advanced features, such as its high handling capacities and speed, will address their need for improved efficiency and capacity in bulk handling operations.

"Our partnership with both companies gives proof to our shared commitment to excellence and innovation in the maritime industry," said Jonathan Weu, Sales Manager Ship Cranes, Port and Transshipment Solutions from Liebherr. "The crane's delivery and subsequent operation will send a positive signal to the market, demonstrating the efficiency and reliability of Liebherr's transshipment solutions."

As the CBG 500 E prepares for its journey to Indonesia, the project stands as proof to the power of collaboration and strategic foresight. With PT BBS leading the investment and PT BAS driving operations, this initiative sets a new benchmark for environmentally conscious transshipment in the region.

Landmark handover of 2,000th LHM at Marcegaglia



This special delivery reflects a partnership built on much more than industrial logistics, with an emphasis on mutual respect, tradition and the belief that collaboration drives lasting value.

A milestone in European industry was marked on 8 July in Ravenna, where Liebherr officially delivered its 2,000th mobile harbour crane. The LHM 600, now Marcegaglia's largest in the local fleet, will support the handling of steel coils, billets, and plates, which are core to the site's

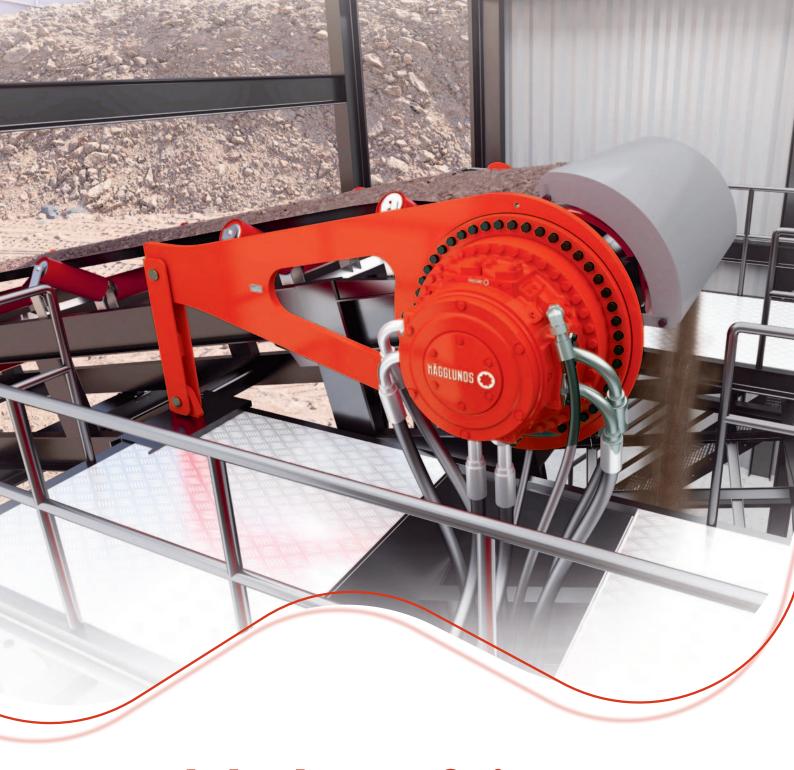
high-volume logistics operations. The event brought together senior leadership from both companies, including Antonio Marcegaglia, President and CEO of Marcegaglia, and Patricia Rüf, Member of the administrative board at Liebherr-International AG.

The crane's arrival reflects the continued growth of the Ravenna site, which handles over four million tonnes of steel annually and plays a central role in the Group's logistics strategy. With an

outreach of 61 metres and a lifting capacity of 154 tonnes, the LHM 600 is engineered for performance, safety and operator comfort. Its digital interface and ergonomic cabin enhance usability, while safety features such as standby-enabled fire protection ensure resilience in demanding port environments.

A PARTNERSHIP ROOTED IN SHARED VALUES AND INDUSTRIAL AMBITION

The relationship between the two



Bend the laws of size, strength and speed.

In mining and materials handling, the Hägglunds Quantum Power motor reshapes reality with shared DNA. Adding a slim new connection block to the proven Hägglunds Quantum, it opens up an unthinkable space – stretching to 170 rpm while retaining full torque capacity at high efficiency. Take your operations to a new dimension of productivity with Hägglunds. We drive what drives you.



companies spans more than two decades, beginning with the delivery of an LHM 400 in 2001. Since then, the fleet has expanded in step with Marcegaglia's operational needs.

"We are proud to receive this milestone crane," said Antonio Marcegaglia during the event. "It is not only a technical asset but a symbol of our shared journey with Liebherr — one built on reliability, innovation and mutual respect."

The event also acknowledged the role of Mac Port, Liebherr's long-standing sales and service partner in Italy. Their technical expertise and responsive support have

been instrumental in maintaining the performance and availability of the crane fleet across multiple sites.

MARKING A TECHNICAL MILESTONE THROUGH COLLABORATION AND PURPOSE

The Ravenna facility is central to Marcegaglia's industrial development strategy. With over four million tonnes of steel processed annually, the site is undergoing significant investment to expand capacity, improve process quality and enhance environmental performance. The LHM 600 will play a key role in supporting these ambitions, enabling faster,

safer and more efficient cargo handling.

Liebherr's regional service network, supported by our long term partner Mac Port Italy in Ravenna, ensures long-term reliability and tailored technical solutions. This foundation enables operators to meet growing demands with confidence and precision.

"To deliver our 2,000th mobile harbour crane to Marcegaglia is a proud moment," said Andreas Ritschel, General Manager Sales Mobile Harbour Cranes at Liebherr Rostock. "It speaks to the strength of our legacy and to the shared innovation with our customers that drives us forward."

Ardelt Kranbau - multi-density handling capabilities



Ardelt Kranbau manufactures slewing cranes and ship to shore cranes (STS). Its main product is a double-level-luffing (double-jib) slewing crane. It is available in various designs for bulk materials or purely for general cargo, containers — for all goods, i.e. multipurpose.

A special feature is the crane with integrated hopper — Kangaroo Type. A particularly powerful crane with significantly lower investment costs compared to classic rope ship unloaders with a trolley and very low operating costs. The second major advantage of this type of crane is that it can also unload containers or general cargo too. A 'classic' rope ship unloader cannot do this. Ardelt also has customers who use this crane for tandem operation with another crane when loading large parts (project cargo).

If a customer needs to unload bulk goods with different densities or properties, then Ardelt is the right partner for them. While many manufacturers of ship-unloaders focus on specialized materials, i.e. only one type of bulk, Ardelt



can unload different goods using different grabs. This is the case with its current crane, which is currently being assembled in Bremen, Germany for Weserport/Rhenus Logistics. The crane will be unloading fine iron ore and iron ore pellets, but also bauxite, gravel, coal etc—materials with different densities. This is not possible with most other ship unloaders, as the bulk materials have different flow properties. The new crane will have an outreach up to 55m and load capacity in grab operation of 63 tonnes for the unloading of Capesize ships.

Ardelt's customers value the reliability and quality of its cranes (robust operation and hardly any breakdowns) as well as their durability. This is very important in order to minimize the downtime of ships. Those who have experienced and appreciate these advantages remain the company's customers and place repeat orders. However, Ardelt is also gaining new customers.

Cranes with fully electric drives and a balanced system have the advantage of minimal power consumption. With the additional use of electrical energy recovery



OVER 45 YEARS EXPERIENCE

fully radio controlled!

just hook on and GRAB



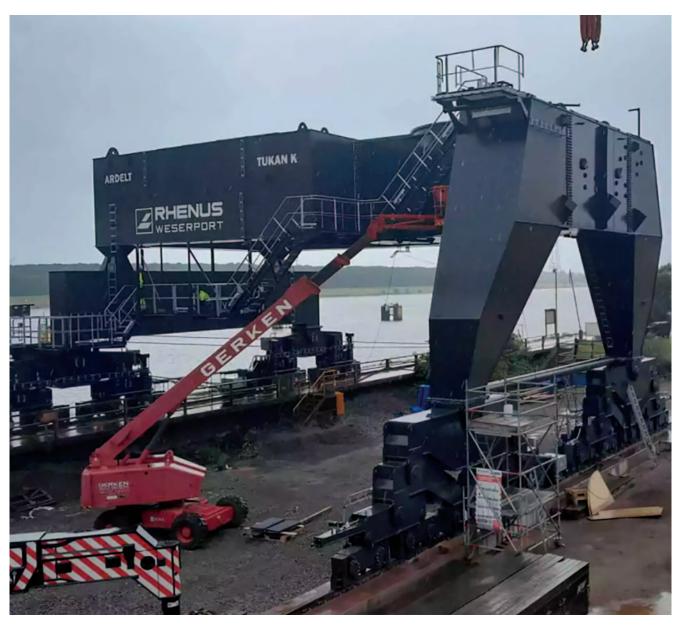
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made in Germany since 1972





during braking processes, the advantages of using Ardelt's cranes become even greater.

ABOUT ARDELT KRANBAU

Company "Ardelt" was founded in 1902 by engineer Mr Ardelt. In the 1930s, a hinged articulated jib system with a jib luffing gear was developed and patented by Ardelt. The company changed ownership from private to state-owned due to political changes and back to private ownership. However, the technical expert in slewing cranes remained and remains in the same location. Since 1950, when more detailed records of crane deliveries began, more than 4,800 cranes have been delivered

from Eberswalde, Germany, to customers around the world. The majority of these are cranes with articulated boom systems, which still make us the leader in this segment. Single jib cranes and container cranes (RMG) or STS for servicing feeder ship are also parts of the company's portfolio.

All-electric CBG 500 E transshipment cranes for Associated Terminals

With the deployment of two CBG 500 E cranes, Associated Terminals and Liebherr are pioneering a new chapter in river-based cargo handling in the US — one that is defined by electrification, innovation, and environmental responsibility. This milestone not only enhances operational capability but also signals a broader shift towards sustainable logistics on the Mississippi River.

Associated Terminals has taken a decisive step towards sustainable maritime operations with the acquisition of two

Liebherr CBG 500 E transshipment cranes. All crane movements on the CBG 500 E are powered exclusively by electric drives, eliminating the need for hydraulic fluids and ensuring a cleaner, more sustainable operation.

These all-electric cranes will operate on a hybrid-powered barge and mark a major milestone as Liebherr enters the US transshipment sector for the first time. While the crane operations are fully electric, the onboard energy supply is ensured by a modern diesel-electric power system, allowing for continuous,

autonomous operation on the river. This configuration balances the precision and efficiency of electric drives with the flexibility and reliability required for midstream logistics. It also enables optimized fuel usage through intelligent power management, significantly reducing emissions per tonne handled.

This strategic deployment not only introduces Liebherr's flagship electric crane to the inland waterways of North America but also underscores the exceptional adaptability of its crane technology to meet the evolving demands

of river-based logistics.

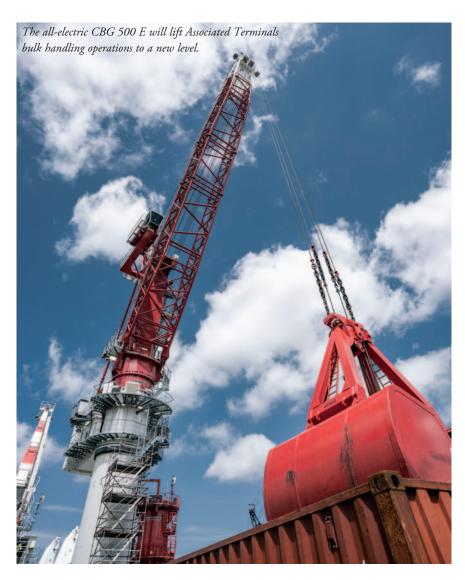
Each crane offers an exceptional 105 tonnes in hook mode with a remarkable 90-tonne load capacity in grab operation, surpassing the typical range found in most inland transshipment operations and being an impressive figure in the transshipment sector. Combined with a handling rate of up to 2,000 tonnes per hour and a 50metre boom, this performance represents a substantial leap in operational capability. In a market where efficiency and throughput are critical, these cranes set a new benchmark. The CBG 500 E enable faster vessel turnaround, reduced handling times, and increased cargo volumes. This deployment not only enhances operational efficiency and supports the company's extensive river-based cargo operations.

"These Liebherr cranes are more than just equipment," said Todd Fuller, President of Associated Terminals. "They represent our commitment to continuous improvement, environmental responsibility, and employing advanced technology in marine cargo handling. The level of innovation in these systems aligns perfectly with our long-term strategy for operational excellence."

A STRATEGIC SHIFT TOWARD CLEANER CARGO HANDLING

Operating one of the largest midstream cargo transfer fleets on the Mississippi, Associated Terminals handles millions of tonnes annually. This investment marks a pivotal upgrade to its operational capabilities and underscores Associated Terminals' commitment to modernizing its fleet while reducing environmental impact. By integrating the CBG 500 E into its fleet, the company is not only reducing its carbon footprint but also enhancing operational flexibility and throughput. The hybrid floating crane platforms allow for flexible cargo transfers across a broad geographic area, bypassing the limitations of fixed infrastructure.

"The CBG 500 E represent a new chapter in bulk cargo handling," said Tim Ladendorf, Global Application Manager for ship cranes, port and transshipment solutions for Liebherr Maritime Cranes. 'Delivering the CBG 500 E to Associated Terminals is not only a technological milestone but also marks Liebherr's first step into the US inland transshipment sector. This project demonstrates how our all-electric crane solutions can adapt to new markets and operational models, while supporting our partners in building a more sustainable and future-ready logistics network.'



Close technical coordination ensured the cranes were configured to meet specific performance and integration requirements. The electric drive system incorporates Liebherr's LiCaTronic energy recovery technology, which stores and reuses braking energy via supercapacitors. A closed-loop water cooling system ensures stable performance across a wide temperature range, from -20°C to +45°C.

The CBG 500 E's design and electric architecture make it ideally suited for barge-based operations, where space, stability, and energy efficiency are paramount. The collaboration between Liebherr and Associated Terminals has been marked by close technical coordination and a shared focus on long-term performance.

PIONEERING THE U.S. TRANSSHIPMENT MARKET WITH ELECTRIC INNOVATION

CBG 500 E, the first all-electric crane of its kind to be deployed in the inland waterway system of the United States, operates on a hybrid-powered barge, combining cuttingedge electric crane technology with flexible, mobile infrastructure. Its design

prioritizes lifting power, reliability, and environmental compatibility. SmartGrip technology automatically optimizes grab filling rates, while the LiCAS collision alert system enhances operational safety. The operator's cabin has been ergonomically redesigned with an elevated position, integrated touch panel, and climate control system to ensure comfort and visibility in all conditions.

Liebherr's global service network and US-based support teams will ensure seamless commissioning and long-term maintenance of the cranes, providing peace of mind and operational continuity for Associated Terminals.

As the industry moves towards electrification and automation, Liebherr's collaboration with Associated Terminals signals a broader shift in how inland logistics will evolve in the coming decade. With the Mississippi River now serving as a proving ground for next-generation cargo solutions, the CBG 500 E stands as a symbol of progress. With this unique transshipment crane solution, Associated Terminals will usher in a new era of clean, capable transshipment.

Christening the 'Creole King': a new era of bulk cargo innovation unveiled at the Port of Iberia



A landmark moment in Gulf Coast industry was celebrated on II July, with the christening of Creole King, a state-of-the-art barge-mounted stevedoring crane, at the Port of Iberia.

Operated by Cooper Consolidated and assembled by E-Crane's Gulf Coast Service team, the Creole King represents a technological and environmental leap forward for midstream cargo operations.

Standing 75 feet (23 metres) tall with a reach of 125 feet (38 metres), the Creole

King is powered by the largest E-Crane of its kind in North America — the EC30382 PD-E from the 4000C Series. Capable of lifting up to 52 tonnes and equipped with 39-cubic-yard and $(36/30m^3)$ interchangeable clamshell grabs, this electric crane is purpose-built for demanding, continuous-duty operations on inland and coastal waterways. "We studied the market for bulk material handling equipment that offered a combination of performance, ease of maintenance and

operation, and energy efficiency, and E-Crane checked all the boxes," remarked Scott Becnel, Director of Business Development for Cooper Consolidated.

E-Crane USA CEO Steve Osborne highlighted the machine's efficiency, noting that its advanced electric powertrain reduces fuel usage by up to 80% compared to traditional cranes. "It takes about the amount of diesel in a wineglass to move a tonne of cargo," said Osborne. "The result is a dramatically lower environmental



footprint that benefits us all."

The unveiling drew praise from Louisiana Economic Development Secretary Susan Bourgeois, emphasized the crane's potential to enhance logistics capacity throughout South Louisiana. "Today we're not just christening a crane — we're ushering in a new chapter of opportunity for our ports and people," Bourgeois said.

The Port of Iberia invested more than \$6 million to support the project through Louisiana's Port Priority Program, refurbishing infrastructure and upgrading facilities to accommodate this new wave of maritime technology. Executive Director Craig Romero called the Creole King a catalyst for economic growth:"We started with 12 new jobs. We expect that to grow to 50 as more cranes are built. This is an example of smart investment yielding longterm dividends."

As the sister crane to the Pelican, commissioned in December 2024, the Creole King joins Cooper Consolidated's growing fleet of high-efficiency cranes based out of Darrow, Louisiana. Both cranes are designed to work ships up to Panamax size in a direct configuration or operate in tandem with the LMO, a bargemounted grain handling system that enables exporters to weigh, grade, and sample commodities directly midstream.

The Creole King's presence, together with Pelican. reinforces Cooper Consolidated as a market leader in cargo

handling for the Mississippi River, a vital

conduit that serves more than 90% of America's agricultural exports. "This isn't just a machine — it's a milestone," said Osborne. "It shows what's possible when engineering excellence, environmental

responsibility, and regional collaboration come together."

Celebrating a successful champaign break. From left to right: Lance Rase (Senior Vice President at CGB Enterprises), Eric Slater (President and CEO of CGB Enterprises), Angus Cooper III, Angus Cooper IV (Manager at Cooper Group of Companies). Presentation of the ceremonial keys and gifts. Left to right: Lance Rase, Lieven Bauwens (Managing Director and CEO of E-Crane Worldwide), Angus Cooper III (President of Cooper Group of Companies), Steve Osborne (CEO of E-Crane USA). P@R1. IBERIA

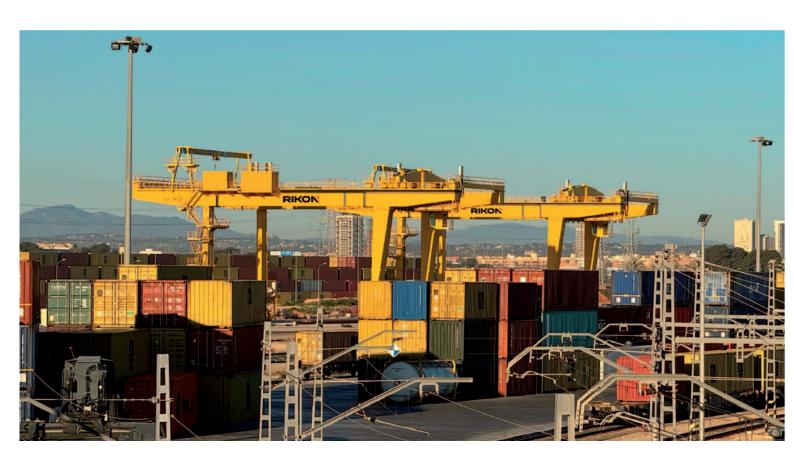


Attendees were offered an up-close look at the 47 cubic yard (40m³) clamshell grab attached to the 4000 Series E-Crane model EC30382.

47



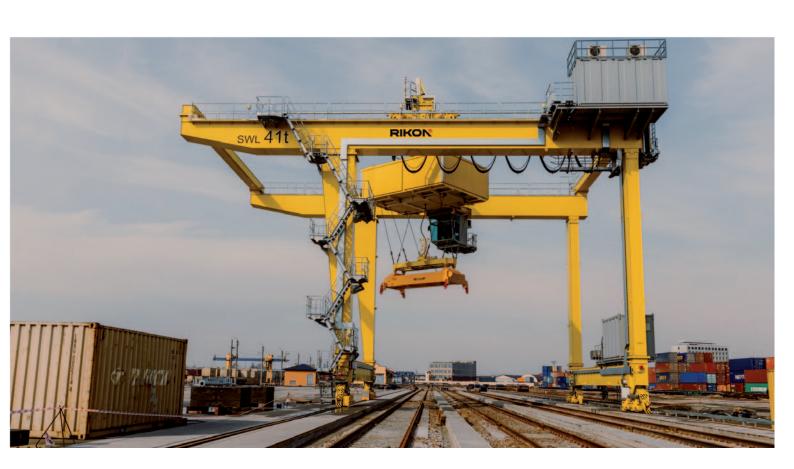
IT'S SIMPLE, WE BUILD CRANES SINCE 1991





RIKON

JSC RIKON is a European manufacturer of fully electric Double Jib Level Luffing cranes, Container Gantry Cranes - RMG with ROS (Remote Operating System), including fully automated RMG — "A-RMG", and Mobile Harbour Cranes.



DCi

E-Crane® introduces mobile crawler crane concept providing uninterrupted quay logistics





E-Crane® recently announced groundbreaking crawler crane concept that combines full machine mobility with uninterrupted logistical flow along the quay. Designed for E-Cranes with an operating weight between 400 and 750 tonnes, this innovative solution offers unique advantages for bulk terminals flexibility, where efficiency, infrastructure preservation are key.

KEY FEATURES OF THE CONCEPT:

- Stable tripod configuration: the crane is mounted on a triangular undercarriage (tripod), with the slewing ring positioned at the centre of gravity. This ensures maximum stability and optimal weight distribution during both operation and travel.
- High portal design with generous clearance: the tripod is combined with an elevated portal structure, offering approximately 9 metres of drive-through width and 6 metres of vertical clearance. This allows

- uninterrupted passage of quay traffic, including trucks, reach stackers, and other mobile equipment.
- Minimal impact on quay surface: thanks to the steering crawlers with two out of three tracks capable of pivoting around a vertical axis to determine the driving direction combined with flat track shoes, manoeuvring is smooth and efficient with minimal load and wear on the quay surface.
- Maximum deployment flexibility across the terminal: due to its exceptional mobility manoeuvrability, the crane can be deployed flexibly — not only along the quay, but also in various other areas across the terminal, depending on operational requirements.
- Pendulum-mounted crawlers for optimal load distribution: each crawler track is mounted on a pendulum suspension system, allowing continuous and automatic adaptation to surface irregularities. This ensures

even distribution of ground pressure, even on uneven terrain.

With this new crawler crane concept, E-Crane® responds to the growing demand for heavy-duty, mobile, and quay-friendly crane solutions in the bulk handling industry.

ABOUT E-CRANE®

E-Crane® offers tailor-made solutions to meet the needs for high productivity and reliable handling of scrap, grain, coal, cement clinker, or any other bulk material, while striving to optimize operations, increase efficiency, and lower costs. As a heavy equipment design and construction company based in Belgium, with subsidiary companies in the USA, Brazil, the Netherlands, Poland, Singapore, Indonesia and Bangladesh E-Crane has been providing reliable solutions for the past 35 years to the recycling and bulk handling. With a global network of agents, E-Crane offers local support from certified E-Crane® service engineers.

Eight Liebherr heavy-lift ship cranes equip the dship fleet



The LS series is regarded as an innovative solution for the demands of maritime cargo transport. Dship Carriers from Hamburg has chosen the LS 250 heavyduty ship crane and is equipping at least four ships with the reliable crane solution. Thanks to their design and low deadweight, the cranes can be easily integrated on any type of ship.

dship invests in eight state-of-the-art heavy-lift ship cranes for its newest vessels. The LS 250 is an efficient solution for heavy-lift handling and serves as the flagship of the LS crane series. The cranes are designed to comply with the requirements of the St. Lawrence Regulations. These regulations apply to ships navigating the St. Lawrence Seaway and connecting the Great Lakes in Canada with the Atlantic Ocean.

As a German crane manufacturer, Liebherr sets benchmarks in terms of quality and safety, applying its own standards that go beyond the maritime safety regulations. The cranes impress with their exceptional durability, even under the extreme environmental conditions they have to withstand. Manufactured at Liebherr's Rostock site at the German Baltic coast, the eight cranes will be delivered to a Chinese shipyard in 2026. There, they will be mounted on the four ships and will be in use worldwide from 2026.

The cooperation between Liebherr and dship has been in place since 2019. "Liebherr's expertise in the field of maritime crane technology is undisputed. The LS 250 cranes offer us the performance and reliability we need for our global operations. These criteria were decisive for dship to join forces with Liebherr to equip our fleet," explains Lars Feller, CEO of dship Carriers.

EFFICIENT CRANE SOLUTION FOR DSHIP

To date, four F 500 class vessels, each with two LS 250 cranes, are in operation for dship Carriers. The fact that a further eight ship cranes are now being added for the new ships of the D 500 type is a great success. "We are proud that we are strengthening dship's fleet with the LS 250. This is a joint success that is essentially based on mutual trust and appreciation. Thanks to our positive cooperation, we can continuously strive for the best solutions," emphasizes Robert Pitschmann, Global Application Manager Heavy Lift Offshore and Ship Cranes at Liebherr in Rostock.

The cranes are supplied with a lifting capacity of up to 250 tonnes and a maximum outreach of 36 metres. Their low deadweight of 150 tonnes positively impacts the ship's stability and cargo handling without compromising safety and performance. Liebherr ship cranes also

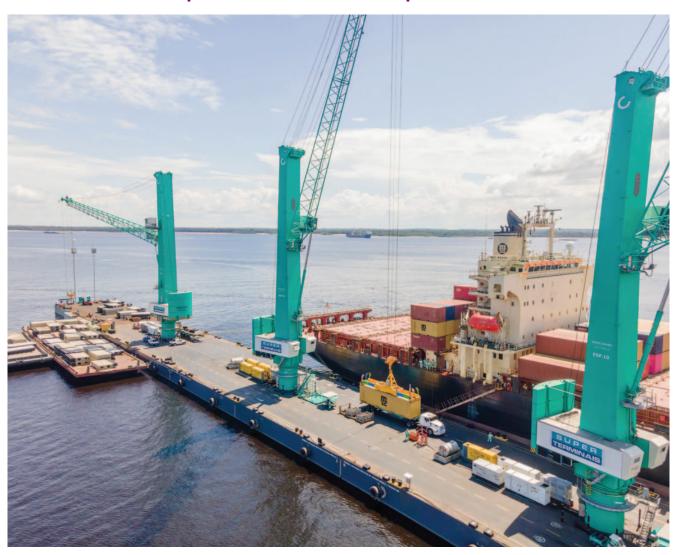
impress with their ease of maintenance: the complete piping of the hydraulics minimizes maintenance work and increases the longevity of the electro-hydraulic drive system. The fully enclosed crane column protects the components inside the crane even in harsh environments. This reduces downtime and maintenance costs due to premature ageing of the components.

The crane setup is completed by the Litronic system, developed by Liebherr, which ensures reliable crane control. It provides real-time operating data via various analysis applications. It acts as a direct interface between the crane and its operator. This guarantees optimal performance and precise control, enabling perfect interaction between maximum speed and the load being handled.

FIRST-CLASS CUSTOMER SERVICE - AROUND THE GLOBE

Liebherr offers its customers a wellorganized global network of highly qualified and experienced engineers and technical consultants. This enables very short response times and, in turn, maximum productivity for customers. Thanks to this unique network, Liebherr customers benefit from a service that sets standards throughout the industry. Once the cranes are in operation, Liebherr Hamburg takes over the maintenance and servicing of the cranes for the Hamburg-based company.

Super Terminais orders three more Konecranes Gottwald ESP.10 Mobile Harbor Cranes to expand its Amazon River operations



Port of Manaus operator Super Terminais Comercio e Industria Ltda (Super Terminais) has placed a repeat order for three Konecranes Gottwald ESP.10 pedestal-mounted cranes. The deal was booked in Q2 2025, with handover scheduled for Q3 2026.

Super Terminais is repeating its landmark 2021 purchase of the first three Konecranes Gottwald ESP.10 mobile harbor cranes ever produced. The cranes' exceptional handling performance and reliability over the past four years has laid the foundation of trust for this latest deal.

With a maximum reach of 64 metres and a strong lifting capacity curve, the pedestal-mounted cranes can handle containers and general cargo on vessels as large as super-post-Panamax class. These capabilities are needed as the terminal adapts to increasing volumes and the steady arrival of large ships. The cranes can be connected to an onshore electricity supply to minimize emissions.

"The Amazon region is now receiving

megaships carrying very heavy loads and the Manaus Free Trade zone economy is growing fast. This is why we've again chosen these powerful, reliable and eco-efficient machines from Konecranes – doubling our handling capacity while keeping emissions under control and also meeting the demands of our customers," says Marcello Di Gregorio, Director of Super Terminais.

Gateway to the upper Amazon basin, the Port of Manaus plays a vital role in northern Brazil's trade flows. Super Terminais has operated at the port for more than 25 years. The company's decision to invest in additional Konecranes equipment reflects long-term confidence in a partnership that supports regional growth and the sustainability of the operations inside Super Terminais.

"Repeat business is the strongest validation of trust. These cranes are engineered to perform in tough conditions, such as high humidity, extreme heat and on a floating pier. We're proud to support Super Terminais with a solution tailored to

their demanding operational needs in the Amazon region," says Alfredo Cañibano Ramos, Regional Sales Manager at Konecranes.

This contract is part of Ecolifting, Konecranes' vision to increase its handprint – meaning the beneficial environmental impact that can be achieved with our product and service portfolio – while reducing customers' carbon footprints. From eco-optimizing diesel drives, to hybridization and fully-electrified fleets, we will continue to do more with less.

A strong focus on customers and commitment to business growth and continuous improvement make Konecranes a material handling industry leader. This is underpinned by investments in digitalization and technology, plus our work to make material flows more efficient with solutions that decarbonize the economy and advance circularity and safety.



Technology to move the world



Recognized worldwide for our quality, we are committed to advancing the goals of ESG by providing durable, low-maintenance equipment that ensures unparalleled reliability, along with tangible environmental benefits such as reduced airborne dust, lower noise, and superior operating efficiency. Our mission extends beyond manufacturing - we actively strive to reduce waste, contain contaminants, and continually improve our manufacturing processes for greater efficiency and environmental responsibility.

Choose TMSA for technologically advanced, environmentally conscious bulk handling solutions that don't compromise performance.





Brazil Porto Alegre, RS Belo Horizonte, MG São Paulo, SP

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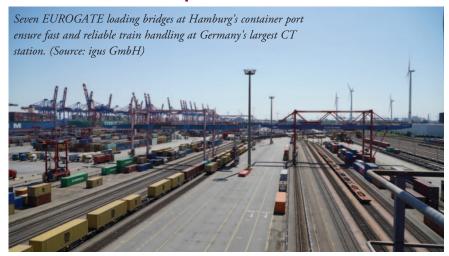
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Fail-safe and future-proof cranes - thanks to smart energy chains



Reliable 24/7 operation at the Port of Hamburg: EUROGATE relies on durable energy chain systems and intelligent sensor technology from igus for rail-loading cranes

Towering cranes and huge cargo ships: Hamburg's container port is one of the largest harbours in Europe. Several million containers are handled here every year. EUROGATE is one of Europe's leading container terminal groups, operating 21 modern gantry cranes and an additional seven loading bridges at the Port of Hamburg. These systems enable fast and smooth train handling at EUROKOMBI, Germany's largest railway station for combined freight transport, which is located directly at the terminal. EUROGATE uses smart energy chain systems from the Cologne-based plastics specialist igus to ensure that the railloading cranes run reliably despite continuous operation.

EUROGATE is Germany's largest container terminal group and operates twelve port terminals in Germany, Italy, Morocco and Cyprus. Container handling in the seaport, i.e. the loading and unloading of container ships for shipping companies, is EUROGATE's core business. This includes handling for combined transport (CT). At the Port of Hamburg, for example, seven rail-loading cranes deal with trains on a total of eleven tracks at the CT station, which EUROGATE and KOMBIVERKEHR have been operating since 2002. EUROGATE Container Terminal Hamburg is very lively. Ever longer distances, greater dynamics, extreme loads, zero downtime: The demands on crane systems are high. The almost 30m high rail-loading cranes move containers that weigh up to 40t - around the clock. EUROGATE Technical Services GmbH is responsible for the constant and

reliable availability of all harbour technology. "We procure, maintain, service and (after years) dispose of every piece of equipment," explains Torben Schröder, Project Planning Electrical Engineering, Operation Hamburg, EUROGATE Technical Services GmbH. "It is our aim to

the energy chains," continues Schröder. "It is our aim to replace an energy chain only once in a crane's service life." The chains not only have to withstand high loads over a travel of almost 70m, but also all weather conditions and UV radiation as they are located outside the crane. "To reduce maintenance costs and increase the productivity of the crane systems, we needed a reliable, low-maintenance and durable solution. This is why we have been using energy chains from igus for many years in the terminals for which we are responsible." The first energy chain was put into operation in 2002. Six of the railloading cranes are now equipped with energy chains from igus. Markus Böhm, Technical Sales Consultant for e-chains at igus, emphasizes: "We have since tried out various products and assembly concepts. From conversion to conversion, we have developed a new, optimized solution."



Robust, low-maintenance and durable: The P4.1 plastic rol e-chain from igus ensures a reliable power supply to the trolley. (Source: igus GmbH)

ensure that the terminals always have access to technically flawless equipment and that we increase their productivity." High productivity rates require efficient work processes. After all, time is money. The crane systems must therefore be powerful and fail-safe. The same applies to the energy chains that guide the energy and data cables of the trolley on the crane bridges. For precisely this reason, EUROGATE relies on durable and robust energy chain systems made of high-performance plastics from igus.

LONG SERVICE LIFE AND LOW MAINTENANCE EFFORT THANKS TO IGUS E-CHAINS

"In the past, we experienced long downtimes for two of our crane systems. A few years ago, we therefore looked for a new way to achieve longer service lives and prevent unplanned failures due to wear on

THE EVOLUTION OF THE ROL E-CHAIN

igus has developed the roller e-chain especially for heavy-duty applications with long travel distances such as crane applications. Wear is significantly lower than with a version without rollers and they also require less force for movement. The special feature of the igus e-chains: They are made of tribologically optimized i.e. regarding friction and wear - highperformance plastics and are therefore particularly durable. Thanks to the incorporated solid lubricants, they also require no external lubrication, which further reduces maintenance costs. For over 20 years, igus has been working on the continuous improvement of the rol e-chain and has refined the product range accordingly. "In the case of our loading bridges, we started with the 4040RHD rol e-chain, which is still used in two cranes; it would not pay off to turn an 'old' crane



Mobile Harbour Cranes ECO GREEN solution.

4 – 24030 AMBIVERE (BG) - ITALY Tel. +39 035 4932411 - Fax. +39 035 4932409 email: info@italgru.com into a new system," says Schröder. Böhm adds: "With the evolution of the rol echain, we have now switched to the P4.I on the other four cranes. Our P4.I is now also being installed on the seventh crane. This means that all rail-loading cranes at the Port of Hamburg are supplied with our energy chains."

The P4.1 is resistant to seawater as well as UV radiation and can handle long travels of over 1,000m and speeds of more than 5m/s. Due to the offset between the upper and lower run, the plastic rollers move past each other, which enables particularly smooth running and reduces both coefficient of friction and drive power. There is also a bearing point for a pivoting movement in every chain link connection. This is equipped with maintenance-free tribopolymer plain bearings, which significantly increases the service life even further. Like all igus products, the P4.1 proves its durability in numerous tests in the in-house test laboratory, which is the largest in the industry. "This is a development that we as a customer are naturally also pleased about," says Schröder."We want to make sure that our crane systems are always state of the art and run reliably for as long as possible."

READY TO USE QUICKLY

Highly flexible cables from the igus chainflex product range, which are designed for constant flexing cycles in the chain, complete the fail-safe solution for cranes. For this reason, e-chains and cables were used as a pre-fitted readychain system during the latest conversions of the EUROGATE loading bridges. The P4.1 enables particularly quick and easy installation. "The challenge with our crane systems is that the work has to be carried out during operation. Although the crane itself will not be running during this period, operations will continue terminal nonetheless. It is important that all people involved work closely together and can react quickly," emphasizes Schröder. "The projects were well-prepared in advance and our igus contacts are always ready to





Thanks to the i.Sense sensors, the condition of the energy chains and cables can be monitored in real time. The i.Cee module installed in the control cabinet collects the sensor data and allows for predictive maintenance. (Source: igus GmbH)

help us on site if required - that's very important to us."

SMART MONITORING SYSTEM FOR MORE PREDICTABILITY AND RELIABILITY

"To ensure the highest possible availability and reliability of the crane systems, we were also looking for a monitoring system that would give us early warning of faults and allow us to plan maintenance work better," reports Schröder. With smart plastics, igus offered the right solution for this as well. Here, intelligent sensor technology enables real-time condition monitoring (i.Sense) and predictive maintenance (i.Cee) of the energy chains. Various systems are used in the rail-loading cranes, which are connected directly to the plant control. Manuel Moussa, Technical Sales Consultant for smart plastics at igus, explains: "While i.Sense EC.P monitors the push/pull forces, i.Sense EC.B identifies chain breakages at an early stage. i.Sense CF.P monitors tensile forces on the cables. Two cranes are also already equipped with our i.Cee module." When a defined wear limit is reached, a signal is sent to the module, so that the maintenance of the rol e-chain can be planned in advance. The data is collated in a remote desktop, which displays an overview of all the chains and monitoring systems in use. "We and the customer both have access to it and can view all the information at any time - from sensor data and alarm messages to service life forecast and recommendation for the next maintenance appointment."

EVERYTHING FROM ONE SOURCE

"Smart solutions are becoming increasingly

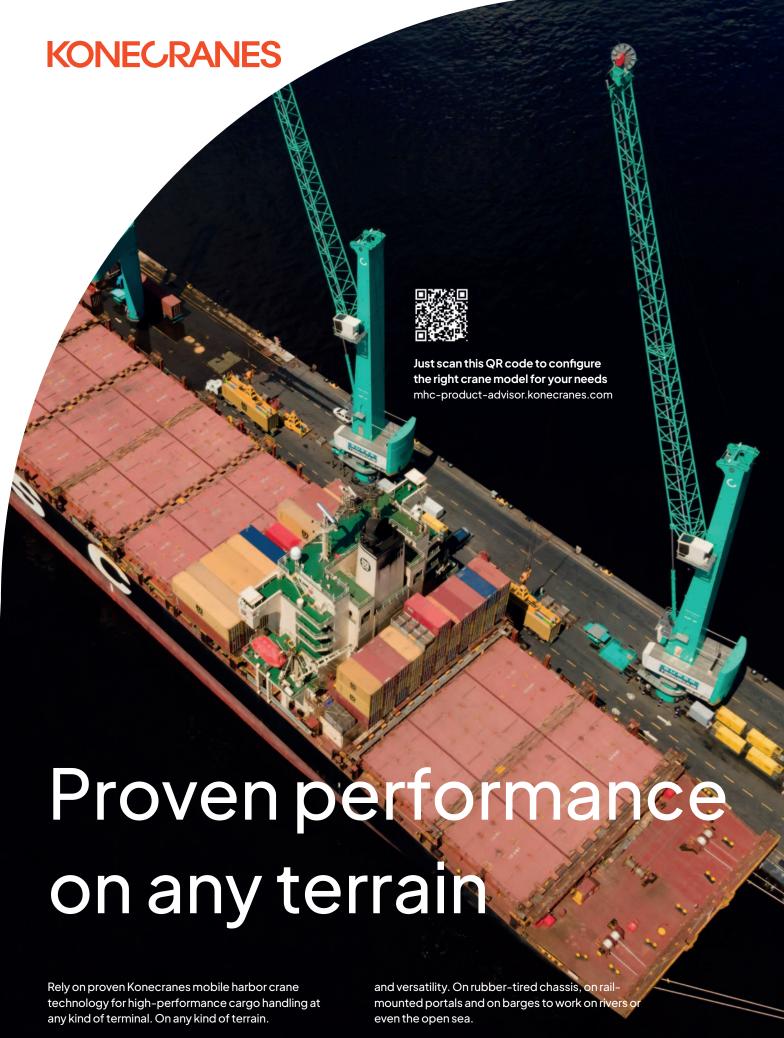


The right solution for every crane: "Both the consultation and service from igus are competent and targeted," reports Torben Schröder on the cooperation with Markus Böhm and Manuel Moussa (Picture 4a: from left to right; Picture 4b: from right to left). (Source: igus GmbH)

important in our business so as to remain competitive in the future," states Schröder. "The smart energy chains from igus offer us greater safety and predictability to prevent total damage and high follow-up costs. As the energy chains never let us down, we also decided in favour of the igus sensor technology - we also wanted to avoid mixing too many technologies. This way we can be sure that the components work well together. The implementation of the monitoring function in the crane control system was easy and quick to realize. We also carry out a brief visual inspection every month during our standardized maintenance. Fortunately, I can't report any malfunctions yet. For the maintenance colleagues responsible for the inspection, igus also organized a special echains and smart plastics training course. igus offers competent and targeted consultation and service. Everyday concerns are dealt with quickly and unbureaucratically. With igus, we get customized solutions - turnkey and from a single source. From various components to customization and harnessing to software."

A SECOND LIFE FOR WORN-OUT ENERGY CHAINS

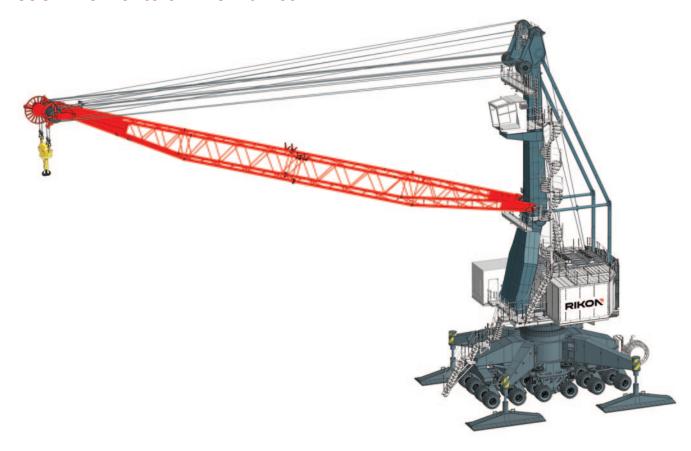
What to do with the energy chains when they reach the end of their service life? They usually end up as industrial waste because there are no options for sustainable reuse. A linear economy that igus wants to put an end to. As part of its own "chainge" program, igus has been collecting used energy chains from all manufacturers since 2019 so that they can be recycled and the material reused for new products. Since 2022, other components made from technical plastics can also be recycled via the "chainge" online platform. Says Schröder: "We think the approach of returning old energy chains for the extraction of raw materials to the manufacturer is very important. We have already had one chain recycled without any problems and are delighted to be able to continue to use this offer from igus in future in the interests of sustainability."



For nearly seven decades, Konecranes Gottwald mobile harbor cranes have been known for reliability

Discover our latest Generation 6 to find the right crane model for your application and terrain.

JSC RIKON enters MHC market



Latvian crane OEM JSC RIKON is expanding again, this time into the mobile harbour crane (MHC) market. The company has launched its RMH series of fully electric mobile harbour cranes, focusing initially on the midrange in the market by crane size and capacity.

RIKON is offering MHCs with a lifting capacity of up to 200t and a maximum outreach of 60m. The first base models in the series offer a maximum load lifting capacity with a grab load of 75t at an

outreach of 10–29m, and 42.9–24.5t at an outreach of 20–48m. In container mode with a single-lift spreader, lifting capacity is 41t at boom reach of 11–34m, and 42.9–24.5t at boom reach of 35–48m.

The base design is a 4-rope variation for container and grab operations. Crane operating classifications according to IOS 4301/1 are A3 for high load capacity mode, A6 for hook handling mode and A7-A8 in grab mode.

RIKON's design has no luffing cylinder,

which RIKON said "significantly reduces service requirements by eliminating hydraulic mechanisms. This ensures a more service-friendly approach while optimizing efficiency."

The crane is also fully electric. This means electrical drives for the lifting, luffing and slewing mechanisms, and also for the gantry travel on rubber tyres and the wheel steering system. The only hydraulics on the crane are the cylinders for extending and then raising the crane on the outrigger pads. RIKON says removing hydraulics enhances energy efficiency and protects the environment, and is a key part of its commitment to sustainability.

Along with the new MHC range, RIKON has developed new branding for its products and a new corporate style. These have been launched along with a new website and updated brochures for RIKON's port handling equipment. This brings together information on RIKON's approach to crane design and manufacturing, its production resources and products.

The RIKON port handling equipment range now spans double jib level luffing cranes, single jib level luffing cranes, yard gantries (RMGs and RTGS), remote operation and automation systems, mobile harbour cranes, the N-series vesselmounted cranes and grabs and other attachments.



RIKON completes installation of two remote-controlled gantry container cranes at València-Font de Sant Lluís Terminal (Spain)

JSC RIKON has successfully completed the installation of two 40-tonne-capacity RMG gantry container cranes equipped with the RROS (RIKON Remote Operation System) at the València-Font de Sant Lluís intermodal terminal in Spain. RIKON's in-house development of a remote-control system for gantry container cranes sets the company among the few manufacturers that design and implement such high-tech solutions.

The València-Font de Sant Lluís terminal is operated by ADIF, Spain's state railway infrastructure operator, and serves as a key logistics hub on Europe's Mediterranean coast. The terminal specializes in container cargo handling (up to 150,000 intermodal units annually) and multimodal transport, providing efficient connectivity between the Port of Valencia — Spain's largest container port with a throughput of 5.4 million TEU in 2022 — and inland rail routes, including the strategically important Mediterranean Corridor.

The installation of the two new RIKON gantry cranes featuring the RROS remote control system represents a significant technological advancement for the



terminal. Each crane is equipped with its own remote desktop, allowing operators to monitor and control the equipment with maximum precision and comfort. This solution not only substantially improves operational efficiency and safety but also enhances working conditions by reliably protecting personnel from adverse environmental factors.

Furthermore, RIKON continues its active operations in Spain's capital, currently executing a project to supply three fully automated A-RMG gantry

cranes with a 40-tonne lifting capacity for the Madrid-Vicálvaro terminal. These projects demonstrate RIKON's strong commitment to — and successful implementation of — cutting-edge technological solutions in container handling and multimodal transportation.

The completion of crane installation in Valencia marks a new phase in the development of the València-Font de Sant Lluís terminal, enhancing its operational efficiency and strengthening its position as a strategic international transport hub.



Rope-, Motor- and Hydraulic Grabs Our experience - Your advantage

Customized Persistent Reliable

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Comprehensive



Zone 1, 21, 2, 22













Meccanica Center: Italian excellence in the production of components for overhead cranes



In the world of maritime transport and port operations, the efficiency, reliability, and quality of components are essential to ensure the proper functioning of infrastructure and safe operations. In this context, Meccanica Center stands out as a benchmark in the production of spare parts for quay and ship-loaders cranes, proudly maintaining over 45 years of experience, rooted in family tradition and fuelled by a constant spirit of innovation and quality.

A HISTORY OF EXPERTISE AND PASSION

Founded three generations ago, the company has evolved over time, maintaining its values of reliability, precision, and customer focus. Meccanica Center's long presence in the steel industry has allowed it to accumulate technical expertise and know-how that it now offers to the port sector, ensuring high-quality components, custom-designed and manufactured with obsessive attention to detail.

CORE BUSINESS: WHEELS AND WHEEL ASSEMBLIES

Meccanica Center's core business focuses on the production of wheels and wheel assemblies. These components must withstand extreme conditions of use, ensuring safety and durability. The company's ability to manufacture robust, certified products that comply with the most stringent regulations has allowed it to consolidate its position on the international market.

In addition to wheels and wheel assemblies, its production also includes pulleys and drums, and the overhaul of gearboxes, essential components for movement and power transmission in port operations. Meccanica Center's versatility and accumulated experience allow it to offer complete and customized solutions, meeting the specific needs of each client.

A 100% MADE IN ITALY PRODUCTION PROCESS

One of Meccanica Center's strengths is its entirely Italian production chain. From the





purchase of certified raw materials to final processing, everything takes place within our facilities. This allows the company to guarantee complete control over the quality of materials and production processes, reducing delivery times and optimizing costs.

To further speed up and improve production, Meccanica Center is equipped with a hacksaw for cutting round bars, allowing it to work independently and quickly adapt to market demands. In-house manufacturing gives the company the flexibility to produce custom components, meeting customer specifications and ensuring a top-quality final product.

QUALITY, CERTIFICATIONS, AND CONTROL

Quality is Meccanica Center's mantra. Every component leaving its facilities undergoes rigorous inspections, dimensional checks, and strength tests. The company's certification of conformity and international quality certifications demonstrate its commitment to providing reliable and durable products, capable of withstanding the most demanding conditions of the port industry.







Ticking all the right boxes

containerized bulk handling

Portside Solutions consults on reducing risk in bulk loading

ortside Solutions Pty Ltd has long provided consultancy services to leading bulk logistics companies, including Aurizon, Pacific National, and DPW Australia. The company's expertise has focused on re-engineering bulk operations to ensure risk-free, dust-free bulk loading processes for the future.

DUST-FREE BULK WITH AURIZON

Working with Aurizon, Australia's largest rail freight operator, Portside Solutions has provided advice with deployment of advanced bulk handling systems in key

RAM Revolver at
DPW Adelaide.

northern ports, including Darwin, Townsville and Gladstone. These systems incorporate a rotating spreader, sealed open-top containers and misting technologies to suppress dust emissions, ensuring compliance with environmental regulations and enhancing worker safety.

Aurizon's bulk business provides integrated supply chain services, including rail and road transportation, port services, and material handling for mineral resources, industrial, and agricultural customers.

MATERIAL LOSS

Due to spillage and dust dispersion, traditional bulk loading methods often result in significant material loss. The containerized bulk handling (CBH) system from RAM Spreaders has minimized these losses, leading to increased product recovery and reduced environmental impact.

DPW ADELAIDE

The journey for RAM began at DP World Adelaide, when DPW World first

approached RAM in 2008 to develop the first container tippler in Australia to allow the container terminal to handle bulk. The success of this project demonstrated the feasibility and benefits, paving the way for the broader adoption of RAM Revolver CBH across the country.

TREND FOLLOWED IN BROOME AND ESPERANCE

RAM's Revolver CBH expanded operations to ports in Broome and Esperance following the initial success. By customizing the system to meet the specific needs of these locations, significant improvements were achieved in loading efficiency and environmental compliance. Reinforcing the adaptability of the RAM CBH solution.

"Risk reduction is a primary factor driving the growing adoption of the CBH system," states Ray, Managing Director at Portside Solutions Pty Ltd. "By sealing the product throughout transfer and transportation, and implementing a misting system during loading, we substantially reduce health hazards and environmental risks linked to bulk material handling."



RAM Spreaders' solutions work all the angles in bulk transport



Containerized bulk handling (CBH) is increasing in popularity. Traditional bulk loading requires large amount of investment in engineering, design and construction, implementation and maintenance. Some bulk terminals cost more than \$100 million to set up.

RAM Spreaders is continuing to develop its popular Revolver® system, which makes it possible to transport bulk product easily using containers. The system works by loading bulk directly to a hopper by grab, and loading the cargo to a container, which is then sealed. (Another method of loading the container is to use a digger.). The container can then be transported and stored, with no need for undercover storage facilities. The Revolver® spreader is used to discharge the container — whether into a hopper, or vessel hold, or other.

The RAM Revolver® picks up and rotates the commodity through 360° using open-top containers with sealed lids as a form of loading, transportation, storage and unloading.

The Revolver® has been designed for flexibility to interchange with either a Reachstacker or a bridge crane, with other

Revolver® models available for mobile harbour cranes, ship-to-shore cranes and ship crane use.

The CBH process is simple and effective, efficient and most of all, clean and friendly to the environment at a very low cost. The Revolver® CBH can handle all dry bulk commodities such as grains, mineral sands, soya, wood chip, copper concentrate, iron ore, coal and scrap metal.

RAM Revolver® has a SWL of between 35t for ship, bridge and reachstack application. 38t SWL for ship-to-shore cranes and 45t for mobile harbour crane application. All equipment except the ship crane revolver, which has an on-board power unit, takes power from the crane supply.

Over the years, RAM has shown how the Revolver® can smoothly integrate into any port or logistics type at low costs — that being pit to ship, shed to ship, ship to hopper, etc.

There are a couple of challenges that must be overcome when handling bulk in containers. The first is the issue of working with ships' gear. Many of RAM Spreaders' customers want to use ships' gear, but the tare weight of equipment makes this

difficult. Another challenge is that the cost of fully containerizing cargo can be expensive.

However, these challenges are offset by the significant advantages of moving bulk in containers. These include:

- Clean & green: no dust is generated or exposed to the environment as containers are sealed shut. When unloading, the rotating spreader removes the lid semi-autonomously and then gently rotates at the bottom of the hatch.
- Multiple types of commodities can be stored in close proximity without the risk of cross-contamination or environmental impact.
- Product protection: as containers are sealed shut until unloading, the system prevents loss of commodity or product quality being degraded.
- Flexibility: over the years, RAM has shown how the Revolver® can smoothly integrate into any port or logistics type at low costs — that being pit to ship, shed to ship, ship to hopper, etc.
- Fast contingency: the bulk handling system has the ability to stockpile the



commodity for the arrival of the ship.

* Boxing clever: the traditional method of stockpiling bulk demands more consideration when planning — from storage facilities, environmental concerns to cross contamination. Containerizing bulk means using existing infrastructures. A containerized system uses up the storage capacity per square metre, as the commodity is stored in a cuboid formation rather than a conical or cone formation.

DUST CONTROL VITAL

As mentioned above, containerization of commodities, containerization of commodities results in a dust free environment as the commodity is transported in sealed containers and only sees the light of day immediately before being tipped into the ships hold (or hopper if it is bridge crane/reach stacker for handling facilities or exporting from shed to ship). To ensure maximum dust suppression, a dry fog system is placed around the ship's hold to suppress the dust plume when unloading the commodity into the ship's hold.

CUSTOMER BASE

Customers for the RAM Revolver® range from mining companies, bulk handling facilities, ports and terminals and inland terminals. The original concept for RAM CBH was aimed at the export market, but

in recent years, the RAM CBH has increased in popularity with inland terminals and bulk handling facilities. These customers require bulk to be moved between locations without the need for multiple handling and without environmental impact and loss of commodity from multiple handling points.

LID LIFTING SYSTEM

This is the mechanism on Revolver® that lifts the lid from the container immediately prior to Revolver® rotating the container through 360°, tipping the commodity.

LOW-DENSITY BULK SOLUTION

RAM Spreaders has also developed a highvolume Revolver® for low-density bulk, to add to its extensive range of container handling solutions. With a growth in biomass and other low density dry bulk materials, RAM has been investigating ways to maximize the efficiency of loading with its customers.

Essential to the investigation process and the feedback it received, was the need and ability to load large volumes (>100m³) per cycle. After consulting with customers RAM developed a solution with the 'Revolver® – Container' combination being able to handle this level of load rate, by introducing a high volume container capable of achieving a higher volume load capacity.

This new innovation allows the Revolver® to handle large volumes and

enable customers to get the very best load rates available. With a maximum volume of standard open top containers being limited, it ultimately restricts its efficiency. So you would think to increase the volume, you would have to introduce an out-of-gauge container, which would be expensive to build and to ship.

To solve this problem, RAM developed a two-tier container, which is an 'in-gauge' design solution for shipping but out-of-gauge for operations. So for the customer it will increase efficiency but still remain cost effective.

The design and construction of the high volume 'in-gauge' container is innovative and very easy to introduce into the containerized bulk handling process.

STAYING COMPETITIVE

RAM Spreaders retains a highly competitive position in the market by having different designs to suit the application of the customer's equipment

It also works closely with potential clients to show how the CBH system can flexibly integrate into their port infrastructure (in a small-time frame and without unnecessary costs) to boost productivity.

Moreover, to solidify its relationship with customers, RAM Spreaders aims to provide exceptional customer care before and after delivery. Its support services are there to provide help and guidance throughout the service life of the machine.







ABOUT RAM SMAG LIFTING TECHNOLOGIES

RAM SMAG Lifting Technologies has been manufacturing spreaders since 1972 for nearly 50 years. The head office is based in Germany and the company is an integral part of Group SMAG.

RAM & PEINER SMAG provide the full range of crane lifting attachments from, spreaders, tandem headblock, grabs, RAM

Revolver, tilting spreaders, pipe handling spreaders.

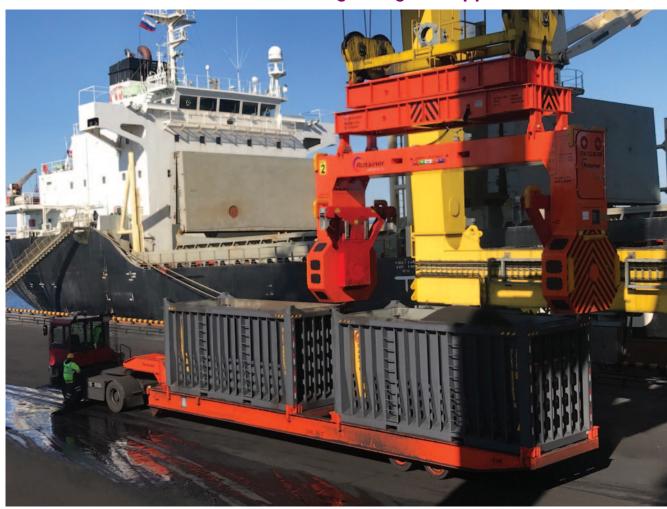
RAM SMAG Lifting Technologies is a global company with offices in Germany, Singapore, UK, India, China. It benefits from a global network of local sales & service representatives. RAM carries out all design/manufacturing in-house and does not subcontract. Quality systems in place include: ISO 9001, ISO14001, ISO18001, ISO 3834-2, EN1090-2.

The company is currently celebrating over ten years of RAM CBH success, with the very first commercially available Revolver still in operation today. This is testament to the hard work and determination of not only RAM, but also its customers, who believe in, and rely on, the product gaining great success and reducing their environmental impact using RAM CBH.



JULY 2025

CRS – Australian innovator has the right angle of approach



In 2010, CRS — Container Rotations Systems Australia (formerly AMMESA) — initiated the revolution in Containerized Bulk Handling (CBH) with the introduction of its Rotainer HD to the market.

This machine — a heavy duty, 360°, multidirectional container rotator — first entered service at the D.P. World Terminal in Adelaide, South Australia.

The CBH concept is gaining in popularity worldwide, and is also in use internationally handling cargoes of vastly different properties, from alumina to coal.

The company is now offering customized solutions for a range of specific commodities, optimizing operations for the use — each commodity has different properties and behaves in a slightly different way.

The commodities served include:

coal: for coal, CRS has developed its Rotainer® Eurospec 38, with rotating headframe. Each container carries a load of 32 tonnes, and the Rotainer® Eurospec 38 can achieve up to 38 cycles per hour, resulting in a capacity of 1,250tph (tonnes per hour). When you multiply this by two when using two STS cranes, very respectable (>1,250tph) loading rates can be achieved, at a minimal investment, using CRS's Rotainers®, Rotatable Spreader and its heavy duty, high cycle, Coaltainer®. To achieve efficient load rates, the most effective set-up is with the CRS Rotainer Eurospec 38 combined with its

fully automated, N.S.E.W. rotating spreader; this allows the perfect placement of each load in the ship's hold. This, in turn, dramatically reduces the need to long travel the cranes and reduces final trimming and ballast requirements. The 360°, longitudinal rotation of the rotation head frame is



controlled by pulse inputs by the operator's joy stick. The operator pushes the button once for 90° rotation, twice for 180° rotation and so on. Once the load is discharged and the Rotainer® is on the return leg of the cycle, the spreader is programmed to automatically return to zero. To maintain an efficient feed to the crane, generally six to eight containers per crane will be required if a tandem, Mafistyle tug and trailer combination is used.

- zinc: for zinc, the Rotainer® Eurospec 38, with the CRS low-profile headframe, is ideal. It can be set up for 1,450mm half heights, and 1,800 three-quarter heights. Both are available with automated lid lifting, and can be used in combination with a mobile harbour crane.
 - copper: for copper, CRS's Rotainer H.D. heavy duty 360 unit can be used. Each container carries a load of 32 tonnes, and the Rotainer HD can handle generic 2,200mm containers. The CRS automated lid lifting is helpful, and the unit can be operated using a Gottwald mobile harbour crane, or similar.

Also for copper, CRS can handle I,900mm heavy duty containers with flat lids and automated lid lifting. The unit



has a low-profile head frame, and direct connection.

The Rotainer HD can also handle heavier 2,200mm (38 tonnes gross weight) containers, also with automated lid lifting. This unit is diesel-powered, and can work with, for example, a Liebherr mobile harbour crane.

mineral sands: for mineral sands, the Rotainer HD is ideal in combination with a mobile harbour crane It can handle 2,200mm generic half-heights for 32 gross weight, and can be modified to include the CRS automated lid lifting system.

* aluminium: for aluminium, the Rotainer Eurospec 32 is perfect — for more challenging conditions, this can be equipped with CRS's arctic pack for ship's gear.



- ❖ iron ore: CRS's Rotainer® HD 360 comes into its own when handling iron ore. Container capacities of up to 32 tonnes can be handled, and the unit rotates at 35 cycles per hour, offering a capacity of 1,120tph using one ship-to-shore crane.
- sugar: for sugar, the Rotainer® HD 360 is again a good choice, With three shipto-shore cranes, handling containers of 38 tonnes, it can achieve 350 cycles per hour and a capacity of 2,700tph.
- grains: for grains, the Rotainer® Eurospec 38 with low-profile headframe is popular. It can handle 32 tonnes per container, with 35 cycles per hour in combination with a mobile harbour crane.

PUTTING A LID ON IT

The latest addition to the CRS stable is a stand-alone, electronically managed, static, lid removal and replacement system (see picture, below). CRS's lid lifting is an optional extra and can be mated to any brand of open top container currently on the global market. This unit is designed to be installed at the processing plant where containers have be loaded in a fully contained, environmentally safe manner.

A container is placed in the lid lifting station, its lid is removed, the container is filled and weighed to reach the design gross weight required, the lid is replaced



and the container is then moved to a marshalling area or direct to transport logistics

This static unit is a modulated system completely manufactured in CRS's Western Sydney, state-of-the-art facility. It is a pretested plug and play design — users should just fit it to its mount pads, power up and it is ready to work.

Having universal mounting points means that they are easily accommodated. Installation can be free-standing on support legs, or it is possible to mount the

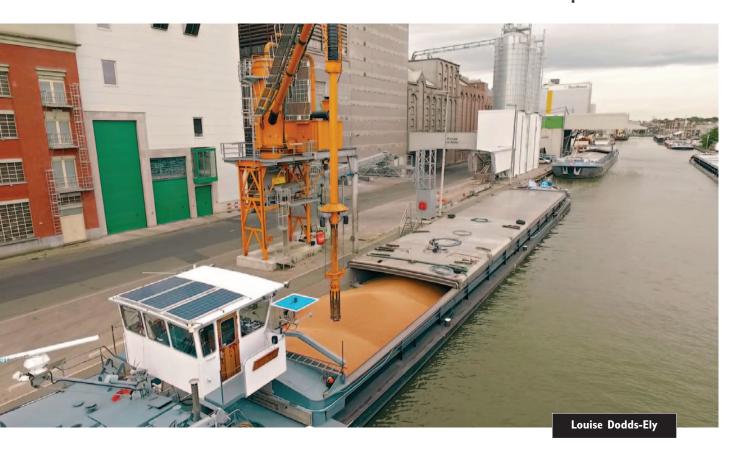
assembly on the surrounding building structure. Operationally, the CRS's 'Smarts' team can set up many variations of electronic management, data logging and it can include CRS's 'RRM' Rotainer remote monitoring software for 24/7 back-up and support services.

The system in the picture is a dual installation whereby two containers can be worked at the same time. This innovative system will be heading to project in Western Australia and is expected to be operation in Q3, 2024.



Riding the gravy (and barge) train

the right equipment clears the way for efficient inland transportation



VIGAN pneumatic barge unloader: serving the industry for 30+ years

VIGAN, headquartered in Nivelles, Belgium, is a world-renowned manufacturer of shiploaders and unloaders for bulk materials. Since its founding in 1968, the company has built a solid reputation for delivering innovative, efficient, and reliable solutions tailored to the handling of agricultural products — such as grains, seeds, and animal feed — as well as industrial materials like alumina and soda ash.

With decades of engineering expertise, VIGAN designs and manufactures a full range of customized equipment for port and terminal operations, including:

Grain pumps: compact, mobile units ideal for rapid deployment, with capacities of up to 250tph (tonnes per hour).

- Pneumatic and mechanical shipunloaders: fixed or mobile, with capacities up to 1,000tph (pneumatic) or 1,500tph (mechanical).
- Shiploaders: adaptable to various vessel sizes, with mechanical loading rates up to 2,000tph.
- Turnkey terminals: integrated systems for unloading/loading, storage, and bagging operations.

Thanks to their customizable design and seamless integration, VIGAN systems are used across the globe, helping clients optimize throughput while reducing

environmental impact.

PNEUMATIC BARGE UNLOADING

In order to promote inland waterway transport and simplify the unloading of typical barge sizes ranging from 500 to 4,000 tonnes, VIGAN pioneered its pneumatic barge unloader (BU) nearly 30 years ago — a concept it has continuously refined to meet the evolving technical, logistical, and environmental needs of port operators.

In the field of pneumatic unloading of agricultural bulk products from barges, VIGAN stands out as the only manufacturer offering purpose-built solutions specifically designed for barge



operations. While competitors often rely on generic or hybrid systems — such as oversized, poorly adapted pneumatic unloaders with cumbersome counterweight mechanisms, or small grain pumps pushed to their limits — VIGAN delivers a complete range of equipment engineered from the ground up, integrated with the latest technologies, to meet the unique requirements of inland waterway logistics.

VIGAN's pneumatic unloaders are not retrofits nor compromises. Each unit is designed to minimize footprint, maximize manoeuvrability, and integrate seamlessly into port infrastructure, even in confined or complex environments. The gantries are tailored to match site-specific constraints, offering unmatched flexibility. In addition, fully integrated solutions are available, with

turbo units that can be installed directly within factories or processing workshops, enabling efficient transfer from the barge to the industrial facilities.

PERFORMANCE ENGINEERED TO OPTIMIZE BARGE OPERATIONS

The VIGAN BU is a high-efficiency, pneumatic unloading system generally installed on a fixed gantry, though mobile configurations are also available. It offers unloading capacities from 100 to 600 metric tonnes per hour, depending on the cargo and operational layout. It is a compact equipment embarking all state of the art technologies used on larger unloaders.

At the heart of the machine is a VIGAN-designed multistage turbine, directly driven by a high-speed electric motor controlled by a frequency inverter. This modern configuration ensures low energy consumption — with some systems achieving as little as 0.65kWh per tonne of grain handled.

Cargo is drawn into the system by a powerful vacuum, entering through an innovative coaxial suction nozzle mounted on a vertical telescopic tube. The air enters around the cargo and channels it upward through the inner tube, which connects to a horizontal telescopic boom for seamless material transfer.

The elbow joint — made of highly wearresistant Ni-Hard alloy — links the vertical and horizontal tubes. Its durability has been field-proven, with some customers reporting over ten million tonnes of grain handled without needing replacement. The entire suction tube system is controlled by electric hoists and mounted on a receiving hopper that includes a self-regenerating filter, preventing dust emissions entirely.

To maximize hatch reach, the hopper itself is mounted on a slewing ring, while the boom elevation is handled by a safe, hydraulic lifting system. Once the material passes through the airlock system, it is fed by gravity onto the customer's conveyor system for storage or direct processing.

The VIGAN BU offers multiple configuration options, ensuring it can meet the unique demands of each site:

- adjustable operating height via fixed or mobile gantries;
- boom lengths up to 17.5 metres for optimal reach;
- wireless radio controls for single operator use;
- optional hoist on the boom to assist with bobcat loading for final hold cleaning;
- and so forth.

BUILT FOR A CLEANER FUTURE

As barge traffic increasingly reaches urban and suburban terminals, VIGAN puts strong emphasis on the environmental impact of its equipment. Low noise emissions, compliance with environmental standards, and compact, discrete integration into the port landscape have become essential features of modern bulk unloading systems.

To reduce energy usage, VIGAN employs multi-stage turbo blowers combined with inverter-controlled motors, enabling automatic adjustment of power output to actual demand. This smart energy management significantly improves efficiency and lowers consumption.

Noise control is another critical design consideration. VIGAN has developed extensive expertise in noise mitigation, conducting in-depth acoustic simulations, field studies, and equipment optimization. The result is a suite of tailored noise-reduction solutions, including:

- acoustically insulated machine rooms;
- silenced turbine housings; and
- sound-dampened suction lines and pipework.

Dust emission control is equally prioritized. Thanks to its closed-circuit pneumatic system and high-efficiency self-regenerating filters, VIGAN technology contains airborne dust particles, keeping emissions under 3mg/m³ — well below most regulatory thresholds. This makes VIGAN's equipment especially suitable for handling agricultural products and other dry bulk that are materials sensitive to contamination and environmental dispersion.



PROVEN WORLDWIDE, ALIGNED WITH SUSTAINABLE TRANSPORT GOALS

As the European Union and other governing bodies increasingly push for a modal shift from road to waterway transport to reduce carbon emissions, inland waterway logistics are more relevant than ever.

With a large number of VIGAN barge unloaders (BU) in operation worldwide,

the company reaffirms its leadership in this specialized segment, combining technical excellence, adaptability, and a firm commitment to sustainable and efficient bulk handling.

VIGAN's barge unloaders offer a cleaner, quieter, and more economical alternative to traditional transport methods — perfectly aligned with the future of sustainable logistics.



AGI offers robust portfolio of systems for inland transportation of agribulk



As global demand for agricultural commodities continues to rise, the infrastructure supporting their movement becomes increasingly critical, AGI (Ag Growth International), a global expert in grain handling and storage solutions, plays a pivotal role in ensuring the smooth, efficient, and safe transport of dry bulk commodities - particularly through rail and barge terminals. Mike Hand, AGI, Vice President, Americas Commercial, spoke to Dry Cargo International about the company's expertise inland transportation systems.

MATERIAL HANDLING AT THE CORE

AGI's primary contribution to the dry cargo sector lies in its robust portfolio of material handling equipment. For rail and barge terminals, this includes belt conveyors, chain conveyors (including high-incline and bulk flow variants), and heavyduty bucket elevators. These systems are designed to move grain efficiently from railcars to storage and then onto barges — or vice versa — with minimal downtime.

The company's well-known brands such as AGI Tramco, AGI Hi Roller™, and the AGI Bucket Elevator, are staples in the industry, recognized for their quality, reliability and durability. These systems are engineered to meet the high throughput demands of terminal operators, many of whom handle hundreds of trucks or railcars daily.

SPEED, THROUGHPUT AND RELIABILITY

Efficiency is paramount in terminal

operations. AGI's equipment is designed to support rapid loading and unloading — often achieving turnaround times of approximately six minutes or less per railcar. This speed is crucial, as delays can result in significant penalties for terminal operators. AGI's systems are built to minimize unplanned downtime, ensuring that operations continue smoothly even during peak periods.

To further support reliability, AGI works closely with clients to develop critical spares programmes. These programmes identify high-wear components — such as chain sections with pre-attached flights — and ensure they are stocked on-site. This proactive approach allows operators to quickly replace parts without waiting for shipments, significantly reducing potential downtime.

SERVING THE AGRICULTURAL SUPPLY CHAIN

AGI's equipment is tailored for agricultural

commodities, including cereal grains, pulse crops, and fertilizer products and its systems are optimized for the high-turnover, high-volume nature of grain and fertilizer terminals.

Storage solutions provided by AGI in these settings are typically surge bins rather than long-term storage silos. These bins are designed for rapid turnover, enabling operators to move product through their facilities as quickly as possible — a key factor in profitability for grain traders and cooperatives.

A BROAD CLIENT BASE

AGI serves a wide spectrum of clients, from the major global grain traders (the 'ABCDs') to local co-operatives and inland grain elevators. This diverse customer base reflects the flexibility and scalability of AGI's solutions, which can be tailored to meet the needs of both large multinational operations and smaller regional facilities.





STAYING COMPETITIVE THROUGH INNOVATION

To maintain its strong position in the market, AGI invests heavily in new product development. The company's innovation pipeline includes projects aimed at enhancing performance, reducing costs, and introducing new technologies across its product lines. This includes not only improvements in mechanical design but also the integration of advanced manufacturing techniques.

AGI also leverages its global footprint to

transfer successful technologies across regions. For example, a conveyor system developed for North American terminals may be adapted for use in South America or Asia, with modifications to meet local standards and environmental conditions. This approach allows AGI to offer a consistent level of quality and performance worldwide while remaining responsive to regional market needs.

SAFETY AND HAZARD MONITORING

Safety is a top priority in dry bulk handling,



particularly in grain terminals where dust accumulation can pose serious risks. AGI integrates hazard monitoring systems into its equipment, including sensors that detect heat buildup — a potential indicator of mechanical wear or fire risk. These systems, developed under the AGI CMC brand, help operators maintain safe working environments.

STRATEGIC SUPPORT AND LOCAL PRESENCE

AGI supports customers through a network of distribution centres and warehouses. These facilities ensure that spare parts are available within a day's delivery for most clients. Additionally, AGI's manufacturing sites maintain inventories of custom components, allowing for rapid assembly and shipment of replacement parts.

LOOKING AHEAD

As the dry cargo industry continues to evolve, AGI remains committed to supporting its clients with reliable, efficient, and innovative solutions. Whether it's moving grain from inland terminals to barges or ensuring fertilizer reaches the field on time, AGI's equipment and expertise are integral to the global agricultural supply chain.

With a focus on efficiency, safety, and innovation, AGI is well-positioned to meet the challenges of today's dry bulk transport market — and to help shape its future.

The Great and Powerful Wizard of Coal Dust

Wind and coal dust and railcars, oh my! When most of us think about coal dust we imagine ominous clouds blowing off stockpiles, or the copious amount of dust generated in coal mining operations. Railcar coal offloading for use in power generation isn't usually top of the mind. Toss in a windy environment during offloading and you've got a great big mess on your hands. Sounds like someone let the flying monkeys out. It's off to see the wizard!

Fortunately, the wizard in our story isn't a fictional magician from Nebraska named 'The Wizard of Oz' who uses illusions to solve problems, but rather a real-life proven dust control wizard known as "The Great and Powerful Wind Fence".

THE EMERALD CITY IS COVERED IN DUST!

The USA relies heavily on railways to transport coal from mines to market with well over 60% of coal being distributed by this modality¹. In the western United States, this number is estimated to be even higher at a whopping 95%2. Trains, also referred to as unit trains, used to haul coal typically consist of 100-120 railcars carrying 100-110 tonnes of coal per car2. In 2019, over four million carloads of coal were moved on USA railroads3. That's a whole lot of coal on the yellow brick road!

These trains can extend for over a mile, and once they arrive at the Emerald City, they need to be offloaded. Dependent on the set-up, offloading takes anywhere between two to four hours per train². For a large power generating plant seeing as many as three to five of these trains per day² this equates to 6-20 hours dedicated solely to offloading. The is quite an undertaking, to say the least.

It goes without saying that offloading generates a significant amount of point dust (dust that originates from a single identifiable source). During offloading, a cloud of dust is generated, concentrations

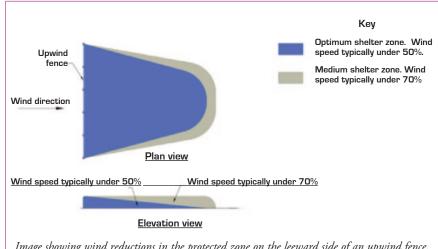


Image showing wind reductions in the protected zone on the leeward side of an upwind fence.

of particulate matter spike, and then dissipate. This wouldn't be a huge environmental concern if we were talking about just one car, but we are talking about hundreds of cars per day offloading virtually non-stop. The dust can easily be picked up by the wind and transported anywhere from a few metres to thousands of kilometres depending on particle size. The environment in and around the Emerald City and its surrounding communities will end up being contaminated by coal dust and residents will be exposed to all manner of health and safety risks. The land of Oz could be in peril!

Solving the dust related issues from rail car dumping isn't as simple as clicking your heels three times while saying "There's no place for dust" and POOF! the dust is gone. It requires a well-thought-out dust management plan that may involve more than one strategy to achieve an optimal

OVER THE RAINBOW

Over the rainbow the skies are blue again and our wind fence wizard makes that possible. Wind fences are engineered porous barriers that are typically erected

relatively perpendicular to incoming prevailing winds (referred to as an upwind fence) to modify wind behaviour an create a wind-protected zone on the leeward side of the fence that usually extends for multiple fence heights. In these sheltered zones, wind speed is reduced by around

Since the fence is porous, it allows some of the air to pass through thereby equalizing pressure on either side and minimizing the occurrence of eddies and turbulence which are commonly seen with the erection of a solid windbreak. Alternatively, fences that are positioned perpendicular to outgoing winds are referred to as downwind or 'catch' fences to capture pesky dust that is still in motion. As wind directions change, an upwind fence may function as a downwind fence and vice versa.





I. Ekmann, J., Le, P., "Coal Storage and Transportation" US Department of Energy, Pittsburgh, Pennsylvania, United States

^{2.} Speight, I., "Coal-Fired Power Generation Handbook 2nd Edition." 2021 Scrivener Publishing LLC. Pp 106:413

^{3.}Association of American Railroads "What Railroads Haul: Coal" Newsletter October 2020.





FROM INLAND DISTRIBUTION TO SEASIDE EXPORTS



FACTORY-DIRECT SALES & SERVICE

WE GOT YOUR BACK.

Martin's factory-trained technicians bring specialized bulk handling knowledge and experience directly to your terminal or port operation. Our experts understand the unique challenges of conveying raw bulk, grain, recycled materials, and other commodities through any transport system.

These factory-direct service providers transform costly reactive maintenance into strategic prevention — delivering measurable improvements to operational efficiency and enhanced facility safety.

Martin's comprehensive inspections, expert installations, precise adjusments, along with state-of-the-art remote monitoring, keep your belt conveyors performing at their peak.







A large electrical power plant in the USA generating up to 400MW yearly and powering nearly 150,000 homes was in need of a solution for their dust challenge. During peak times, the plant was bringing in upwards of one million tonnes of bituminous coal per year. Situated beside a rail system for offloading coal, the plant was experiencing a point source of dust from offloading operations.

The experts at WeatherSolve Structures were tasked with formulating a solution that would prevent the dust from being picked up and carried away by the wind every time a railcar was dumped. A thorough assessment was conducted and the resulting solution was two-fold:

I. Installing a wind fence upwind of the dump infrastructure to slow the wind from transporting the dust; and

2. Collaborate with fogging system experts to install a fogging system to expedite the agglomeration of dust particles. The wind fence system sufficiently slows the wind to increase the 'hang time' with the fog so the dust particles will stick together and quickly settle. In other words, the wind fence increases the effectiveness of the fogging system.

The installed wind fence was 134m long and 7.3m high erected with multiple porosities of WeatherSolve proprietary polypropylene fabric. The lower panel was 47% aerodynamic porosity while the upper panel was 70%. This variability in porosity was intentional as it provided sufficient wind reduction to increase effectiveness of the fogging system while reducing wind loads on fence structural supports to provide cost savings on steel and foundations. The very porous upper panel also created an intermediate level of shelter to smooth the flow over the fence and thereby minimize turbulence shedding off the top of the fence. The result was a success with dust levels controlled to meet strict regulatory requirements.

THERE'S NO DUST LIKE CONTROLLED DUST

And just like that, with a little engineering and design magic, the wicked dust was put to rest, saving Oz from harmful pollution. Wind fences may not sparkle like Dorothy's shoes, but they're the real wizard of this story — tailored for site requirements, slowing the wind, and keeping coal dust from becoming a cyclone of chaos. In the land of rail and power, there's no place like a dust-controlled site. So, the next time the skies darken with swirling dust, and you need a solution, remember the "The Great and Powerful Wind Fence" wizard.

Keeping railcars flowing: how industrial vibrators make unloading faster, safer, and smarter

Unloading bulk solids from railcars sounds simple — but in practice, it's often anything but. Materials like grain, cement, fertilizer, and sand can bridge, compact, or stick inside hopper cars, slowing operations and increasing costs. Global Manufacturing, Inc. designs and builds industrial vibrators to keep material moving — efficiently, safely, and reliably.

WHY VIBRATION MATTERS

Railcars depend on gravity to discharge material through hopper gates. But realco-operate: world materials rarely moisture, temperature, particle shape, and long transit times can cause the load to settle into a rigid mass inside the car that can be hard to move efficiently or remove completely.

That's where vibration helps. A properly mounted vibrator transfers energy from the unit through the car's walls and into the material itself - shaking it apart so gravity can do the rest. The vibration breaks





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- + Easy to clean
- + Mobile and flexible in use
- + Steel or stainless steel version
- + Low maintenance
- + ATEX versions available
- + Modular expandable

The Dino is the world's best bulk truck loader for loading powders efficiently using a screw conveyor. For more info visit www.dino.nl









material bonds, allowing the product to flow cleanly out the discharge gate.

THE CRITICAL ROLE OF A RIGID MOUNT

For vibration to work, the mount is essential. Any vibrator should appear close

to motionless when running: all the energy should travel through the railcar structure, to the material; not get lost in a bouncing bracket.

There are two common bracket systems for railcars:

- ❖ Wedge brackets: these use a male and female bracket with matching angled wedges. As vibration starts, the male bracket may slide slightly deeper into the female pocket before locking into a rigid connection. If the vibrator and male bracket keep bouncing around, they'll still vibrate the load but at the cost of reduced vibrator life, especially for units with externally mounted pneumatic or hydraulic motors.
- Clamp-on mounts: often built directly into the vibrator housing, these clamp to structural parts of the railcar, like an angle iron. Some vibrators can also use separate clamp-on brackets to convert a bolt-on design into a clamp-on unit.

INNOVATION IN LIGHTER, SAFER RAILCAR VIBRATORS

Many traditional railcar vibrators are so heavy they require special equipment to handle — posing ergonomic risks to workers. Global Manufacturing's Yellow JacketTM Railcar (YJR) models have designed around this conventional approach. They deliver powerful vibration but weigh much less than conventional units, so operators can install and remove them more easily and safely.







KIEPE - Quick Clamp System

Simple, Safe and Fast Pull-Rope-Installation on Pull Rope E-Stop Switches

Optimized Installation-Components

Save procurement time and reduce inventory

Main Components from Stainless

Sustainable, durable and re-usable

Spring-Indicator

Helps to set the right pull rope tensioning for a safe use

1-Person-Installation

Reduces the efforts and optimize the installation processes

50% Time Savings

Compared to conventional assembly methods



Kiepe.Industry



The YJR combines Global Manufacturing's awesome YJ design with a standard wedge bracket drastically reducing the weight — helping to protect worker safety while still keeping material flowing.

PISTON OR ROTARY: THE RIGHT TOOL FOR THE JOB

Global Manufacturing designs different vibrators for different needs:

- ❖ Piston vibrators, like the Yellow Jacket™, produce strong impacts basically knocking the material away from the railcar wall similar to hitting it with a hammer. Pistons and railcar walls are limited to the amount of forceful impacts it can sustain.
- * Rotary vibrators, some with adjustable weights, let operators fine-tune the vibration's frequency and force on site useful when unloading different materials with different flow properties. Global Manufacturing's rotary vibrator line provides a vast range of frequency and force for all the different materials moved by railcars.

For materials that don't respond well to vibration — like large wood chips — Global Manufacturing's air blasters can deliver a sudden pulse of compressed air to break stubborn bridges.

EDUCATION IS KEY

Even the best vibrator won't help if it's mounted wrong or mismatched to the material. That's why Global Manufacturing invests heavily in providing customer education:

- Free tools like the company's Rotary Vibrator Calculator help users pick the right unit and settings. If used in railcars, required dimensions only involve the sloped portion of the railcar (hopper).
- 'How To' guides and in-depth operations manuals explain everything from choosing a vibrator to proper





mounting and maintenance.

Distributor and OEM training helps them identify when and where a vibrator will make the biggest impact.

Global Manufacturing teaches customers that vibration isn't just about adding more force: it's about matching the vibrator's output to the material's natural frequency, then ensuring that vibration transfers effectively through a rigid mount. Testing is the best way to figure out what works.

DURABILITY BACKED BY A LIFETIME WARRANTY

Railcar vibrators face tough conditions: moisture, temperature changes, and daily handling. That's why Global Manufacturing's units are built to last — and why it backs them with a lifetime warranty against manufacturing defects.

By focusing on durability and smart design, Global Manufacturing helps keep both railcars and unloading crews working safely, day after day.

THE BOTTOM LINE

Unloading a railcar efficiently isn't about brute force alone. It's about delivering the right vibration, through the right mount, with the right tool — and doing it safely and reliably every time.

Global Manufacturing, Inc. combines lightweight, high-performance vibrators with education and support — helping customers unload faster, safer, and smarter.



Bauxite export infrastructure in Guinea - the Bon Ami Project

The Republic of Guinea in West Africa is a critical global supplier of bauxite, the primary ore used in aluminum production. Efficiently mining and exporting this valuable resource is paramount to the nation's economy and the global aluminum supply chain. This white paper examines the Bon Ami Project by Dynamic Mining in Guinea, focusing on the implementation of a high-capacity, robust barge-loading system designed to handle the challenging characteristics bauxite. Telestack, a company known for its high-performance barge loading solutions, provided key equipment for this project.

PROJECT OVERVIEW: DYNAMIC MINING - BON AMI

The Bon Ami Project, undertaken by Dynamic Mining in Guinea, required a sophisticated and reliable system for loading bauxite onto barges for onward transshipment.

MATERIAL CHARACTERISTICS AND HANDLING CHALLENGES

Bauxite presents unique handling challenges due to its material properties. For the Bon Ami Project, the key material and application parameters were identified as follows:

- * Type of material: bauxite
- Material bulk density: 1.5 tonne/ cubic metre.
- Lump size (mm % breakdown): max 150mm.
- Nominal handling rate: 2,700tph (tonnes per hour).
- Design handling rates 3,000tph.
- Handling characteristic: sticky/free flowing.
- Relative humidity (if known): high humidity.
- **♦ Ambient temperature range:** 21-37°C.

The sticky nature of bauxite, especially in high humidity "environments, demands specialized handling equipment to prevent blockages and ensure consistent flow rates. Telestack is recognized for its experience in managing such difficult materials, often described as having "Bauxite under our fingernails."









THE TELESTACK SOLUTION: TB 58 X 3,000TPH BARGE LOADER

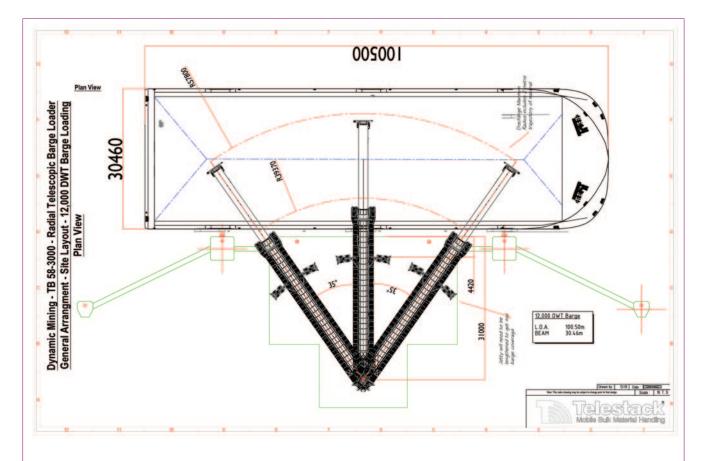
To meet the project's demands, a Telestack TB $58 \times 3,000$ tph barge loader was installed. This unit is specifically designed for loading bauxite and has a capacity of 3,000tph at 1.5 tonne/m³.

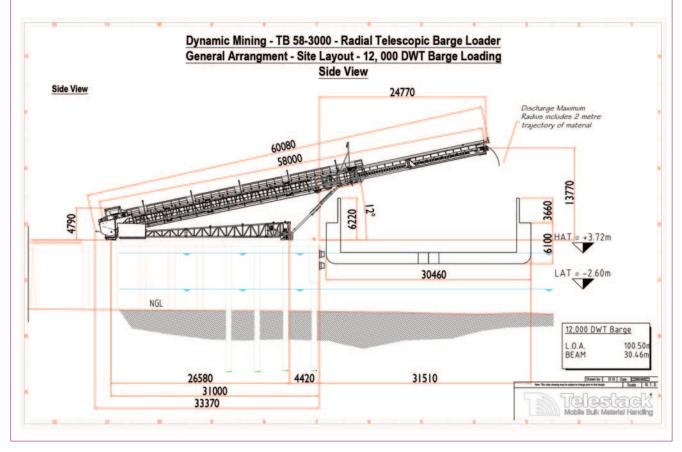
The operational set-up involves the barge loader being fed by two Buffalo reclaim feeders via dozers, which move the bauxite onto a 1km jetty conveyor. This system is engineered to load vessels up to 12,000dwt with a 30-metre beam and 105-metre LOA (length overall), providing

complete barge coverage without the need for warping the barge.

KEY FEATURES OF THE BARGE-LOADING SYSTEM

The installed Telestack barge loader incorporates numerous features designed for performance, durability, and operational



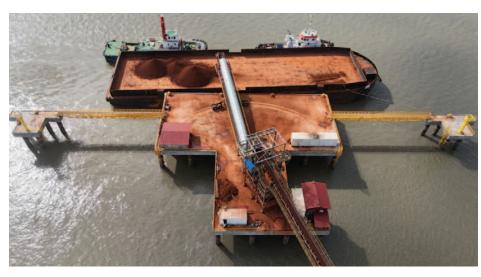


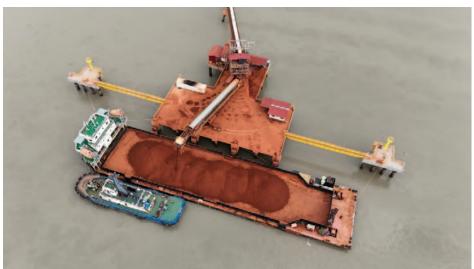
efficiency in a challenging marine environment:

- Structural integrity: a 115tonne static weight unit designed to rigorous structural engineering standards.
- Controlled material flow: variable speed drive (VSD) to control belt speed and material flow.
- Operator environment and control: an air-conditioned local control panel manufactured from stainless steel, featuring a Siemens S7 PLC with Profibus communications to the Central Control Room (CCR).
- Safety and maintenance: equipped with belt drift/rip switches, Flexco Mineline primary and secondary belt scrapers, and top and return side tracking rollers.
- Durability in harsh conditions: a marine specification paint system, galvanized dust covers on the outer conveyor, and canvas telescopic dust covers on the inner section. Dual access galvanized walkways are also included.
- Heavy-duty components: 1,400mm wide X grade belting and 152mm (6in) trough rollers. Wear resistance is enhanced with 12mm Hardox 400 liners in the feedboot and transfer point.
- Environmental considerations: dust suppression spray bars are fitted at transfer points.

CONCLUSION

The Dynamic Mining Bon Ami Project in Guinea successfully implements a robust and highcapacity Telestack barge loading system tailored for the demanding conditions of bauxite export. The thoughtful design, incorporating features to handle sticky material, ensure operator safety and comfort, and withstand a corrosive marine environment, positions the project for efficient and reliable operations. This installation underscores Telestack's expertise in providing advanced solutions for the global mining industry, particularly in handling challenging bulk materials like bauxite.









Driving industrial rail solutions in the MENA Region: BEMO Locomotives Manufacturing LLC (Bemo LM)



In the dynamic landscape of industrial transportation across the Middle East and North Africa (MENA) region, efficient, reliable, and environmentally conscious solutions for bulk cargo movement have become more critical than ever. Responding to this demand, BEMO Locomotives Manufacturing LLC, a joint initiative between Quarry Mining LLC (UAE) and BEMO RAIL Netherlands, has emerged as a pioneering manufacturer of state-of-the-art shunting locomotives from its facility in Ras Al Khaimah, United Arab Emirates.

Established to serve the growing

logistics and industrial sectors of the MENA region, BEMO Locomotives Manufacturing LLC leverages decades of European engineering expertise with the strategic geographic and economic advantages offered by the UAE.

The company's mission is clear: to design and build robust, modern shunting locomotives tailored to the unique requirements of industries that rely on rail and barge transport for bulk materials such as aggregates, minerals, cement, and raw materials for steel and energy production.

SPECIALIZED SOLUTIONS FOR BULK MATERIAL HANDLING

BEMO's locomotives are engineered for the demanding operations typical of ports, steel plants, cement factories, power generation stations, and logistics terminals — industries where heavy cargo must be moved, over rail, with precision and safety in highly dynamic environments. These diesel-hydraulic, diesel-electric and hybrid shunting locomotives or even battery electric are designed for optimal performance in short-distance shunting yard rail operations, offering high tractive effort, low emissions, and advanced safety features.

The locomotives are manufactured to withstand harsh working conditions, including desert temperatures, dust, and intensive use, ensuring maximum uptime and low maintenance costs. Each unit is customized to suit client requirements — whether that means adjusting weight and speed, couplers, fuel systems, or implementing digital monitoring systems for real-time diagnostics and fleet management.



The decision to establish production in Ras



Al Khaimah was both strategic and practical. As one of the UAE's rapidly growing industrial hubs with excellent connectivity to ports and rail infrastructure, Ras Al Khaimah provides BEMO with the logistical advantage of serving clients across the GCC, wider MENA region, and even parts of Africa and Asia. A further advantage is the benefit of Emiratization and "Made in UAE".

BEMO Locomotives Manufacturing LLC operates within the same industrial complex as its parent company, Quarry Mining LLC — a well-established engineering firm known for its fabrication of mining, conveyor, and material handling systems. This synergy allows for shared engineering knowledge, quality assurance processes, and streamlined supply chain operations.

TECHNOLOGICAL INNOVATION AND ENVIRONMENTAL RESPONSIBILITY

In alignment with global efforts to decarbonize the transportation sector, BEMO is investing in hybrid and battery electric propulsion technologies. The new generation of locomotives includes battery-diesel hybrid configurations, reducing fuel consumption and emissions while maintaining the reliability of diesel engines.

Additionally, modular locomotive designs make future upgrades — such as full electrification or automation — feasible and cost-effective. The company also places strong emphasis on safety and operator comfort. Ergonomically designed cabins, intuitive control interfaces, and safety-enhancing features such as automatic couplers, fire suppression systems, and multi-camera visibility tools ensure smooth and secure operations.

RECENT DEVELOPMENTS AND CONTRACT HIGHLIGHTS

Over the past year, BEMO has successfully





delivered locomotives and provided rail solutions to major clients and has secured several contracts in Indonesia, Singapore, Morocco, Argentina, Netherland. The recent success was the converting of a GE diesel shunter to Hybrid Locomotives 335 till 345 and delivering it for TATA STEEL in Ilmuiden.

This is the third addition to its fleet. Another heavy-duty shunter with a capacity of 100 tonnes was delivered to Argentina in late 2024 and commissioned in 2025. There are ongoing orders for new shunter locomotive in Qatar & Malaysia as part of the international activities.

BUILDING FOR THE FUTURE

BEMO Locomotives manufacturing's vision extends beyond just supplying locomotives, there's also the solution with loco or railcar traverser where the locomotive or railcars can be shifted perpendicular to the adjacent rail track. The company aims to foster a rail-based culture within industrial transportation in the MENA region, where currently truck based logistics dominate. With increased awareness around sustainability, efficiency, emissions and safety, BEMO LM is working with government entities, port operators, and large industrial conglomerates to promote the use of short-distance industrial rail networks. BEMO always tries to explore new opportunities in order to bring in new innovations & technologies for the future.

CONCLUSION

With a clear focus on quality, reliability, and innovation, BEMO Locomotives Manufacturing LLC is positioning itself as the go-to partner for industrial rail shunting solutions across the region. By combining European rail expertise with UAE-based agility and manufacturing strength, the company is not just producing locomotives — it is reshaping the way industries think about bulk transport.



All aboard: rail and barge loading solutions with Vortex Global

Efficient, sustainable bulk transportation is essential across industries like agriculture, manufacturing, and plastics. Among the most cost-effective and eco-friendly solutions are rail and barge loading, which excel in moving large volumes with minimal environmental impact. This article delves the importance of transportation methods, their advantages, and the critical role material handling equipment — such as those provided by Vortex Global — plays in ensuring seamless operations.

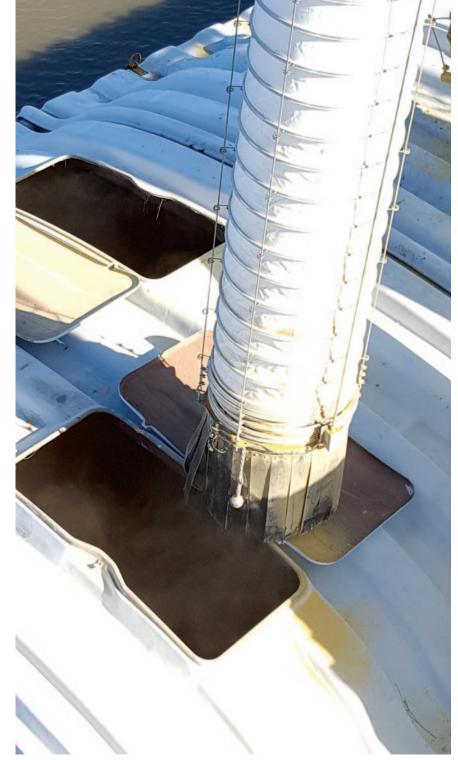
WHY RAIL AND BARGE LOADING MATTERS

Rail and barge loading play a pivotal role in global supply chains due to their unparalleled capacity for transporting bulk materials economically and with minimal environmental impact. Railroads and waterways already carry millions of tonnes of materials annually, making them a backbone for industries that rely on consistent, high-volume material movement.

These transportation methods combine efficiency with sustainability. Rail transport can handle large quantities of goods over long distances with reduced carbon emissions compared to road transport, while barge shipping offers an even lower carbon footprint for materials shipped via waterways.

KEY BENEFITS OF RAIL AND BARGE

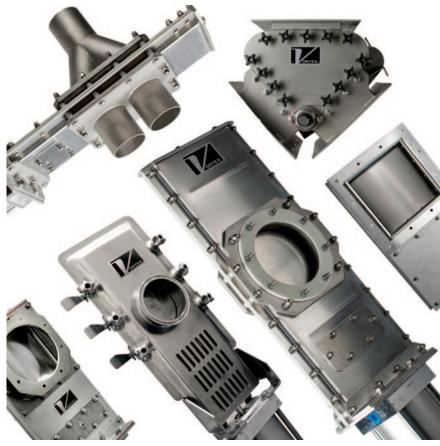
Cost efficiency: rail and barge





transport are among the most costeffective solutions for moving large volumes of materials. Their economies of scale allow businesses to save significantly on transportation costs compared to trucking. Over long distances, rail and barge solutions deliver substantial cost savings by lowering per-ton shipping costs.

- High capacity: railcars and barges can handle heavier loads compared to trucks, enabling businesses to move larger quantities of bulk materials in fewer trips. A single barge, for example, has the capacity of roughly 15 railcars or 60–70 trucks, making it an evident choice for sizable shipments.
- Environmental advantages: rail and barges are inherently more sustainable modes of transportation. Rail transport emits 75% less greenhouse gas per tonne-mile than trucks, while barge freight produces the lowest carbon output of any surface mode of transport.
- Enhanced safety: with fewer shipments required compared to trucking, rail and barge options also reduce the risk of accidents, traffic congestion, and wear on public infrastructure, contributing to overall

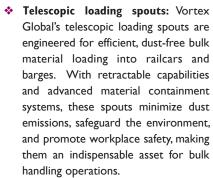


safety and cost-efficiency in logistics.

ESSENTIAL EQUIPMENT FOR EFFICIENT RAIL AND BARGE LOADING

When it comes to successful rail and barge loading, reliable equipment is essential.

Vortex Global designs and manufactures components that seamlessly integrate into loading operations, ensuring efficiency, safety, and environmental compliance. Here's a closer look at some of the key equipment and systems that the company offers to optimize loading processes:



- ❖ Precision diverter valves & slide gates: Vortex Global's precision-engineered diverter valves and slide gates streamline material handling within loading systems, ensuring smooth transitions and controlled flow without bottlenecks. While diverter valves efficiently redirect materials, slide gates provide reliable flow regulation, enhancing operational control. Together, they reduce downtime, optimize transport efficiency, and play a critical role in maximizing productivity.
- Advanced dust control systems: dust management is crucial for maintaining air quality and meeting stringent environmental standards. Vortex Global's inline dust control









technologies are designed to minimize emissions, reduce environmental impact, and ensure full compliance with regulatory requirements, creating a cleaner, safer workspace.

Solidex spin loaders: specifically designed for loading plastic pellets into railcars, Solidex spin loaders combine precision and reliability with cuttingedge innovation. Their 360° rotational design ensures even material distribution, increasing fill capacity while minimizing spillage. Built to withstand extreme operating conditions, these loaders deliver durability and consistent performance, streamlining the loading process and reducing material loss. Solidex Spin Loaders are a game-changing solution for demanding rail loading applications, enhancing both efficiency and costeffectiveness.

ENVIRONMENTAL CONSIDERATIONS IN RAIL AND BARGE LOADING

Today, organizations are under growing pressure to reduce their environmental impact. Rail and barge shipping already offer environmental benefits, but integrating eco-friendly loading equipment takes sustainability efforts to the next level.

Vortex Global leads, by example, by designing equipment that enhances efficiency and minimizes spillage. These solutions ensure cleaner operations, reduced emissions, and alignment with environmental policies across the world. By reducing particulate matter emissions/ material spillage during loading, businesses

can meet stringent compliance regulations and demonstrate corporate responsibility.

BARGE LOADING CASE STUDY: OPTIMIZING EFFICIENCY AND SUSTAINABILITY

A major agricultural export company encountered significant challenges in its barge loading operations due to excessive material spillage and dust emissions. These issues not only caused product loss and increased operational inefficiencies but also led to higher maintenance costs and noncompliance with strict environmental regulations.

The spillage posed safety hazards for workers and required frequent cleanups, further escalating labour expenses, while the dust emissions raised concerns about air quality and environmental impact, threatening the company's reputation in the industry.

To overcome these challenges, the company partnered with Vortex Global to implement a fully customized barge loading solution tailored to its unique operational needs. The solution featured an energyefficient loading spout designed with advanced dust-collection technology, which effectively captured airborne particulates during material transfer. This cutting-edge system significantly reduced particulate emissions, creating a cleaner, safer, and healthier working environment for employees while meeting regulatory requirements. The design also included adjustable loading heights to minimize spillage and ensure compatibility with barges of varying sizes, delivering enhanced flexibility for their diverse shipping operations.

After the system was implemented, the results were transformative. The company achieved a remarkable 95% reduction in dust emissions, drastically improving air quality around the loading site. This also led to substantial savings in labor and material costs, as the reduced spillage meant less wastage and fewer resources spent on cleanup. The project not only ensured compliance with environmental regulations but also reinforced the company's commitment to sustainability, operational excellence, and worker safety.

This success underscores the value of adopting forward-thinking engineering solutions in the bulk material handling industry. By leveraging innovative technologies and customized systems, companies can overcome operational obstacles, align with environmental standards, and enhance overall efficiency while demonstrating leadership in sustainable business practices.

In today's competitive and environmentally conscious market, the bulk material handling industry must embrace advanced engineering practices and sustainable strategies as essential rather than options. By focusing on innovation, regulatory compliance, and operational efficiency, companies can not only overcome current challenges but also establish themselves as leaders in sustainable industrial operations. The future of the industry depends on its ability to adapt and implement forward-thinking solutions, setting a new standard for responsible and effective practices that ensure long-term success. DCi

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ensuring bulk facilities are at the top of their game



Planning a port or terminal conveyor system shutdown

Scheduled shutdowns ensure optimum productivity but are also necessary from both a maintenance and safety standpoint, write R. Todd Swinderman, President Emeritus / Martin Engineering and Daniel Marshall, Process Engineer / Martin Engineering. Some unwritten truths about shutdowns include:

- there is never a "convenient" time;
- it is impossible to be totally prepared; and
- completing a shutdown with zero injuries equals success, regardless of how much was accomplished.

Shutdowns are busy times, with in-house and contractor personnel working on tight timescales to complete an array of projects before the scheduled restart date.[1] Budgets, timelines and production quotas all complicate plant shutdowns. Despite the best planning, pushing to stay under budget and ahead of time can put suboptimal equipment back into service, resulting in early failure. The rush to get

back into production can also quickly cascade into a workplace hazard causing 'turnaround injuries', or incidents that result from working too quickly under stringent — sometimes unrealistic — timelines.

ELEMENTS OF A PLANT SHUTDOWN

The planning should start directly following the previous shutdown, as it can take months to complete all the required steps. Scheduled shutdowns have five general — often complicated — steps:

- I. Scope
- 2. Plan
- 3. Schedule
- 4. Execute
- 5. Evaluate

Identify the main areas of concern and prioritize the list by adding task labels to checklist items according to need: testing, repairing, replacing, deferring or doing nothing.

CHOOSING SERVICERS AND CONTRACTORS

For safety and efficiency purposes, it is wise to choose trusted providers who are familiar with the site and involve them early in the process to gather bids, discuss details and obtain their expert input.

The terms 'servicer' and 'contractor' are sometimes used interchangeably, since servicers are contracted, but their roles can be very specific. Servicers are technicians who perform specialized scheduled tasks such as belt cleaner replacement or other conveyor maintenance. Contractors are often generalists supplying outside labour or specialists used for major equipment installation and construction, such as crane operators or structural engineers. However, during a shutdown, these may be the same person or company. In most cases, factory-trained technicians will have greater experience and expertise than in-house personnel or third-party workers, because they don't need to be trained on the nuances of

Task Labels for Shutdown Checklist Items

Test	Inspect the equipment operation and note the findings for possible addition to the checklist for the next shutdown.
Repair	Calculate the long term ROI comparing the cost / time of repair with the cost & improved efficiency of new equipment.
Replace	Replacements should cost-effectively improve safety and production efficiency with a measurable ROI.
Defer	Safety should never be deferred. These are "nice to haves" such as beautification or upgrades to dated equipment.
Do Nothing	If, for example, a faulty idler or clogged chute will be addressed in a larger project, then nothing needs to be done.

Task labels help prioritize equipment upgrades.

products and installation techniques while on the job.

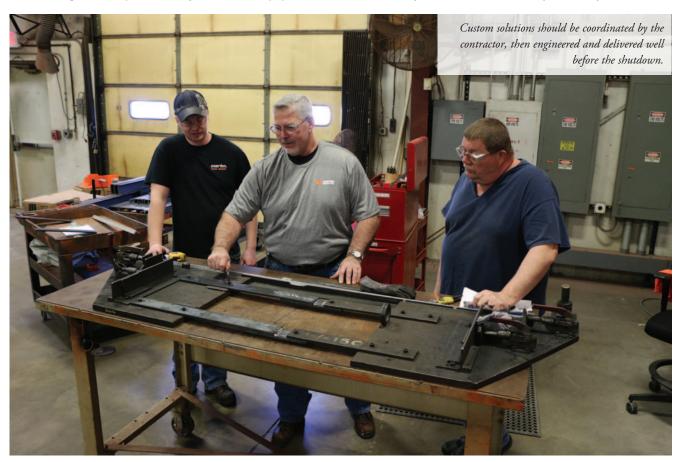
The goal should always be a project completed safely within the allotted time and budget. But that's often not the case. An unexpected obstacle that requires a pivot in the plan, a logistical issue with receiving the proper equipment or a serious workplace injury can derail a timeline, resulting in extended downtime and increased costs.

The benefits of using the right specialized servicers during a shutdown are:

* Training and expertise: they can

- quickly get the job done, identify potential issues and troubleshoot if necessary.
- Faster access to the supplier: they often have maintenance and installation documentation on hand and quick access to support from the supplier.
- Safety and certification: certifications are required for some specified tasks for safety purposes. Using an uncertified individual can increase the risk of injury and could be a liability issue
- Equipment considerations: special-

- ized contractors generally have the proper tools on hand to overcome obstacles.
- Engineering solutions: when unforeseen problems arise midproject, experienced contractors can devise a safe workaround either onsite or by communicating with the equipment manufacturer's engineering staff.
- Logistical considerations: servicers often work for or have a parts agreement with the equipment manufacturer, providing them quick access to replacement parts.







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Insurance: specialty contractors typically carry specialized liability and workers compensation insurance, which provides better protection for the customer than general insurance coverage.

GATHERING BIDS

Detailed proposals are among the reasons why contractors and servicers are so valuable. Identify outside resources who can help complete items on the checklist and then solicit plans and bids, i.e., a Request for Quote (RFQ). These bids — delivered as a proposal or statement of work (SOW) — will offer a detailed account for materials, purchased components, contract services and inhouse labour.[2]

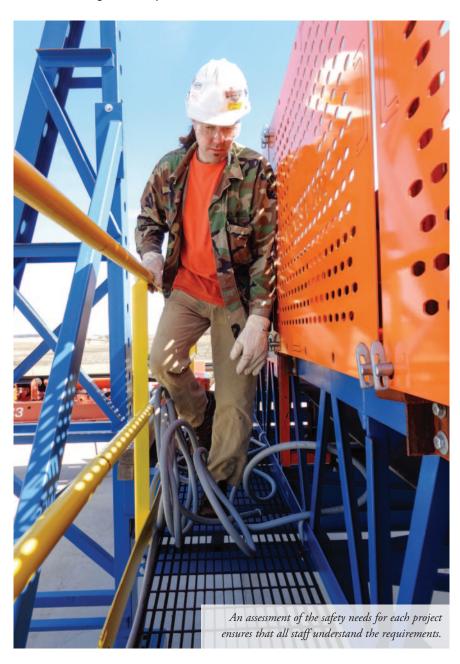
Quotes for materials should consider lead time not only for the delivery, but also for the secondary operations such as preparatory engineering, electrical installation or component fabrication. When the RFQ is issued, ensure that all necessary specifications for purchased components are provided. Of the four areas requiring hard quotes, contracted labor can be the most difficult for which to obtain accurate estimates.

PLANNING A PLANT SHUTDOWN

Here is where the budget comes in. Once the scope, specifications and timeline have been established, operators find that a large portion of planning has already been accomplished. However, sign-off is needed on the bids, which can take time. Be aware that each SOW may have a purchase order (PO) and once that's signed, the plant has committed to the provisions on the SOW.

A PO generally contains a payment

schedule with an upfront payment before the shutdown begins to complete material orders, confirm commitments to subcontractors to secure their schedule, etc.





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Comprehensive Planning | Precision Manufacturing | Streamlined Delivery | Dedicated Service





When planning, be aware of weather, holidays, pending labor contracts and compliance (permitting) issues during the closure period. All of these can bring a project to a grinding halt.

This is also the phase when key performance indicators (KPIs) are set for each project. These are metrics that indicate the performance and measures of success of each project involved in the shutdown.

SCHEDULING A PLANT SHUTDOWN

When designs are finalized for components and subassemblies, the handoff between design and manufacturing must take place. The schedule, scope and specifications should be reviewed by the project manager with all of those involved in the supply of the project components and subassemblies. After a project is under way is not the time to experiment with new vendors.

As materials, components and subassemblies are delivered, they need to be inventoried and inspected. To avoid project delays, vendors need to be informed immediately of any shortages or nonconforming items and the intended resolution determined. Material shrinkage — through damage or pilferage — is a concern in many sites the world over and can affect both project cost and schedule.

SCHEDULING AND SAFETY

The scheduling process is a good time to ensure all the required safety protocols and equipment are clearly understood by everyone involved in the shutdown. Ensure that proper certifications are up to date and that any specialized equipment is available, lockout/tagout procedures are explicit and followed religiously, and all

contractors certified with the appropriate health and safety authorities.

Underestimating timelines for projects can rush the work and drastically erode Several different projects overlapping in the same area can also become a major safety concern and must be avoided.

EXECUTION

The project manager (PM) is responsible for controlling all work produced within the project scope. The PM must watch for — and carefully control — any changes in scope, commonly called scope creep. Changes for any reason must be documented by a change order.

Sometimes internal employees ('direct labour') will overlook safety needs when planning shutdowns, because they work at the plant every day and are familiar with the hazards that are present during operations. Most projects that are undertaken during a plant shutdown are considered 'nonroutine tasks' with 'non-routine safety hazards'. These are projects that are out of the normal operations for the plant.

EVALUATION OF A PLANT SHUTDOWN

This phase of the project will utilize the pre-defined KPIs to measure the success of the solution. Evaluation regarding the performance of the system should be ongoing to ensure that it meets or exceeds expectations measured against the initial requirements in the scope specifications phase of the project.

An important part of the evaluation phase is also measuring the ROI for each project. This will often inform budgets moving forward and could serve to raise budgets in future shutdowns to deliver greater improvements.

CONCLUSION

By thoroughly following the steps described, maintenance managers will have a good starting point from which to deliver a successful shutdown. Skipping any steps may result in more unanticipated complications that could extend downtime and reduce overall efficiency. Allowing the time for projects to be completed in a safe, systematic and compliant manner results in fewer injuries and better performance of installed equipment over the long term.

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ABOUT THE AUTHORS

R. TODD SWINDERMAN, PRESIDENT EMERITUS / MARTIN ENGINEERING

R. Todd Swinderman earned his B.S. from the University of Illinois, joining Martin Engineering's Conveyor Products division in 1979 and subsequently serving as V.P. and General Manager, President, CEO and Chief Technology Officer. Swinderman has authored dozens of articles and papers, presenting at conferences and customer facilities around the world and holding more than 140 active patents. He served as President of the Conveyor Equipment Manufacturers' Association (CEMA) was the editor of CEMA's 6th and 7th editions of Belt Conveyors for Bulk Materials, The Design Guide for Belt Conveyors.

He is active on several CEMA committees including Chair of the Bulk Safety Committee and is a member of the ASME B20 committee on conveyor safety which set US conveyor safety standards. Swinderman retired from Martin Engineering to establish his own engineering firm, currently serving the company as an independent consultant.

DANIEL MARSHALL, PROCESS ENGINEER, MARTIN ENGINEERING

Daniel Marshall received his Bachelor of Science degree in Mechanical Engineering from Northern Arizona University. With nearly 20 years at Martin Engineering, Marshall has been instrumental in the development and promotion of multiple belt conveyor products. He is widely known for his work in dust suppression and considered a leading expert in this area. A prolific writer, he has published over two dozen articles covering various topics for the belt conveyor industry; he has presented at more than fifteen conferences and is sought after for his expertise and advice. He was also one of the principal

authors of Martin's FOUNDATIONS™ The Practical Resource for Cleaner, Safer, and More Productive Dust & Material Control, Fourth Edition, widely used as one of the main learning textbooks for conveyor operation and maintenance.

and maintenance.



Martin Engineering has been a global innovator in the bulk material handling industry for more than 80 years, developing



new solutions to common problems and participating in industry organizations to improve safety and productivity. The company's series of *Foundations* books is an internationally-recognized resource for safety, maintenance and operations training — with more than 22,000 print copies in circulation around the world. The 500+ page reference books are available in several languages and have been downloaded thousands of times as free

PDFs from the Martin website. Martin Engineering products, sales, service and training are available from 18 factory-owned facilities worldwide, with wholly-owned business units in Australia, Brazil, China, Colombia, France, Germany, India, Indonesia, Italy, Kazakhstan, Malaysia, Mexico, Peru, Spain, South Africa, Turkey, the USA and UK. The firm employs more than 1,000 people, approximately 400 of whom hold advanced degrees.



offshore assets.

technical, crew and operational management of a diverse range of

₫ DCi

Studio Tecnico Malnati's high-tech systems include stockyard technologies

Italian company Studio Tecnico Malnati offers a wide range of services, including basic engineering and supplies for major civil works and industrial processes in the following sectors:

- bulk solid material handling;
- ports;
- tunnels:
- dams; and
- industrial processes.

The company's equipment is widely used in today's bulk handling stockyards, including:

- long conveyors;
- telescopic chute for loading vessels and lorries:
- shiploading and unloading systems;
- concrete cooling plants;
- conveyor belt scales;
- a range of safety devices to protect operators in the stockyard, such as runoff switches, anti-collision switches.



Studio Tecnico Malnati has supported the contractors during the tender, design and development of some of the biggest projects in the world. It cares about and respects all companies participating in the joint ventures in which it is involved, offering different sales solutions, such as buy back and rental.

ADDED VALUE

Studio Tecnico Malnati represents a wide range of companies: this allows it to be always up to date about the progress of the projects, due to a 360° overview of the jobsite activities. Its systems can be used to handle commodities including: alumina; potash; limestone; bentonite; dolomite; fly ash; petroleum coke; iron ore; cereals; cement clinker; gypsum; urea; polyhalite; kaoline; bauxite; copper concentrate; salt; perlite; phosphate; biomass; sulphur; grain; and coal.

EQUIPMENT FOR THE BULK HANDLING MARKET

Studio Tecnico Malnati equipment that is used in stockyards includes:

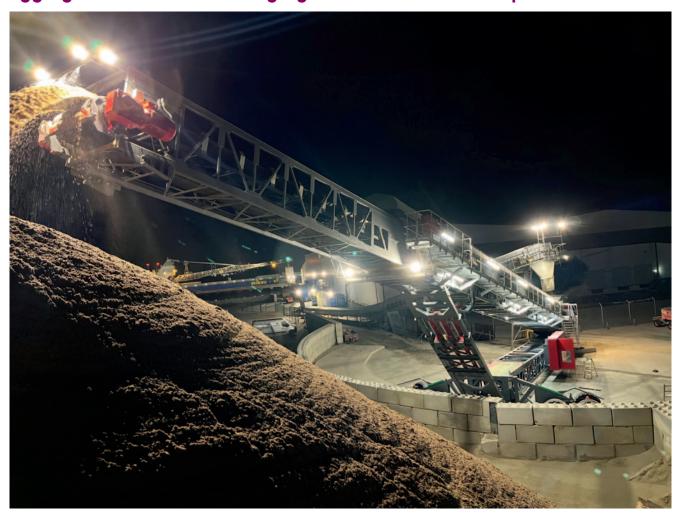
- belt conveyors on ropes;
- rubber conveyor belts;
- drum motors;
- heavy duty steel and HDPE rollers;
- belt scrapers;
- belt conveyor scales;
- pull rope emergency switches;
- belt misalignment switches;
- tramp metal detectors for magnetic and non-magnetic materials;
- magnetic and electromagnetic separators; and
- belt conveyor transfer chute level sensors.







Telestack installs stockpiling system for MIBAU Stema UK to handle aggregates from self-discharging vessels at over 2,500tph

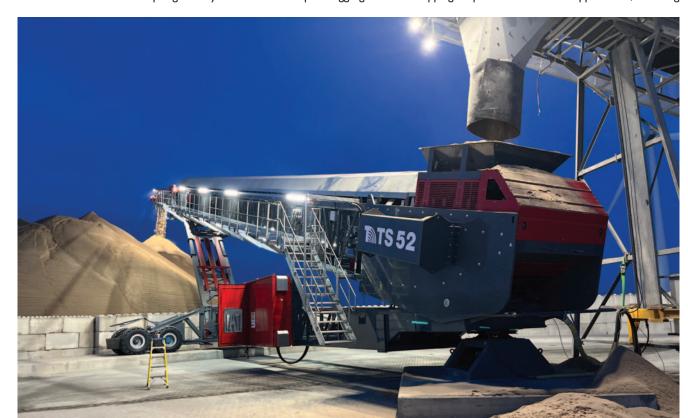


Telestack, a global expert in the manufacture of bulk material handling equipment, has announced the successful installation/commissioning supply of a Telestack TS52 radial stockpiling conveyor

to MIBAU Stema UK. This strategic collaboration, facilitated by Telestack's valued UK ports partner, Cooper Specialised Handling, provides a key player in the European aggregates and shipping

sector with an efficient and flexible material handling solution.

MIBAU Stema plays a crucial role in the supply of aggregates from Norwegian quarries for various applications, including





asphalt, construction, and concrete industries. With an impressive annual production exceeding 20 million tonnes of aggregate, MIBAU Stema efficiently delivers materials across terminals located around the North Sea and Baltic regions, utilizing a fleet of self-discharging vessels to ensure swift and seamless supply from quarry to customer.

The Telestack TS52 radial telescopic conveyor is deployed at MIBAU Stema's Sheerness Port terminal in UK. This high specification unit will significantly enhance the efficient stockpiling and transfer of the high-volume aggregate directly from the self-discharge vessel, seamlessly integrating

with their discharge process and operation.

ELIMINATING DOUBLE/TRIPLE HANDLING USING MOBILE CONVEYOR SYSTEMS — REDUCED COST PER TONNE

The TS52 radial telescopic conveyor offers a versatile and cost-effective alternative to handling material from self-discharge vessels, which is typically done via wheel loaders, excavators/material handlers which simply cannot match the high tonnes per hour of this system. It takes many of these types of units (wheel loaders/excavators/material handlers) working simultaneously to be able to handle this tonnage via traditional methods,

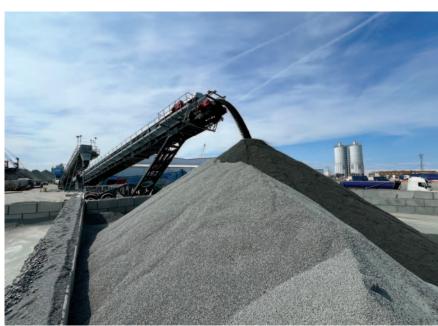
which adds significant costs to the process and also increased safety concerns with traffic and multiple movements in the discharge area.

The TS52 stacker boasts a 52-metre (170ft)-long unit achieving an impressive output of over 2,500tph+ (tonnes per hour) with its 1,400mm (55in)-wide belt. The unit can discharge material up to 18m (60ft) and ensures over 100,000 tonnes of aggregates can be stacked from a single position. The unit's radial and telescopic features also allow for the separation of materials into individual storage bays, depending on the differing grades of materials.

The system also includes variable speed control (VSD) for flexibility in the operation, along with dual access walkways for maintenance, lights for night time operation, radio remote control for all functions and specialized 250µm marine grade paint finish for operation in the corrosive Port environment.

COMMENT FROM CARL DONNELLY, TELESTACK INTERNATIONAL SALES MANAGER

"We are incredibly proud to see the Telestack TS52 radial telescopic conveyor successfully commissioned at MIBAU Stema Sheerness terminal. This project truly exemplifies the power of collaboration, working closely with our esteemed UK Ports partner, Cooper Specialised Handling, to deliver a highly



effective solution for a key player in the UK/European aggregates sector.

"The TS52 is a perfect fit for MIBAU Stema's high-volume operations, offering the flexibility and efficiency they need to seamlessly integrate with their self-discharging vessels. The ability of our units to handle 2,500tph+ on a consistent basis is a testament to our design, manufacturing, quality and installation/commissioning teams at Telestack. It's fantastic to witness our conveyor technology providing such a significant impact on their productivity and operational flow. We look forward to seeing MIBAU Stema reap the benefits of this investment for years to come."

PARTNER TESTIMONIAL

Chris Barnes, Sales Director of Cooper Specialised Handling, commented on this significant delivery: "This is a landmark supply for our business, both in scale and in customer significance. MIBAU Stema is a highly respected name in the industry, known for operational excellence and high-volume throughput. Being selected to support their UK operations with a Telestack solution is a strong endorsement of our technical capability and our ongoing commitment to delivering engineered solutions for the bulk handling sector."

CUSTOMER TESTIMONIAL

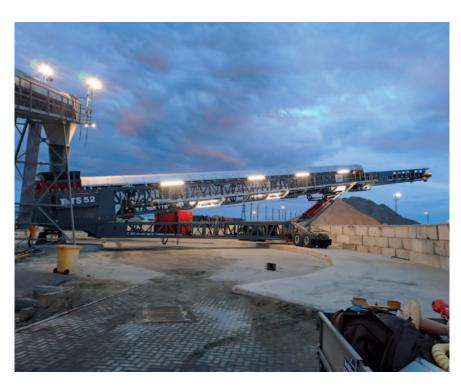
Managing Director of Mibau Stema UK, Martin Johansen stated: "We are very happy to have worked with Telestack and Cooper Specialised handling on this highcapacity system from our self-discharge vessels.

"The reliable operation of this system is critical to our business, so we had to ensure we had a proven/robust design which we have received from Telestack/ Cooper.

"This is the second high-capacity system we have received from Telestack and are happy to work with professional and customer-focused companies such as Telestack and Cooper Specialised handling"

CONCLUSION

This installation further reinforces Telestack's commitment to providing innovative, reliable, and high-performance dry bulk material handling solutions to our global customers with the aim to improve their material handling process by reducing their costs per tonne, ensuring flexibility for the entire operation and future proofing the system for changing trends moving forward. DC:



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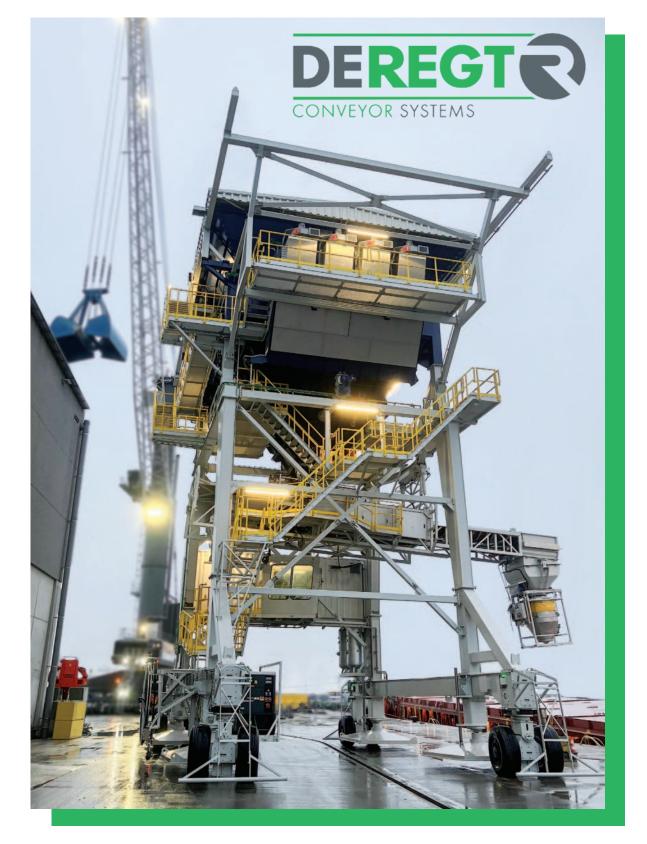
2025





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W: https://abcepc.com/

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W: www.bergu.se Design and manufacture bag emptying equipment as well as pneumatic conveyors, silos and silo discharge systems, diverter valves,

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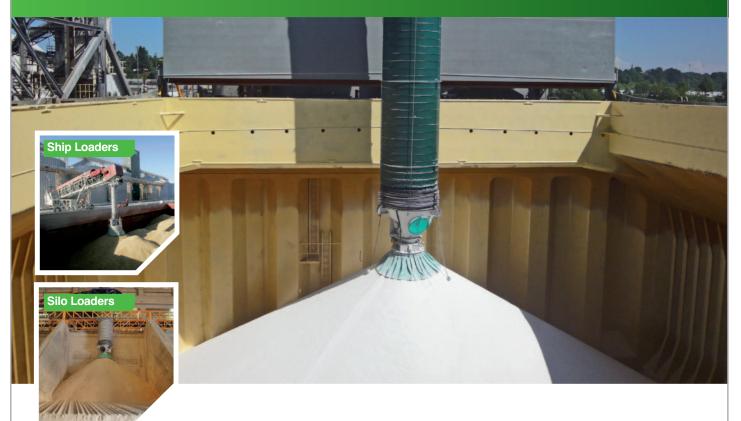
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Greyville Durban 4023 South Africa
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Other Equipment: DSI Adder
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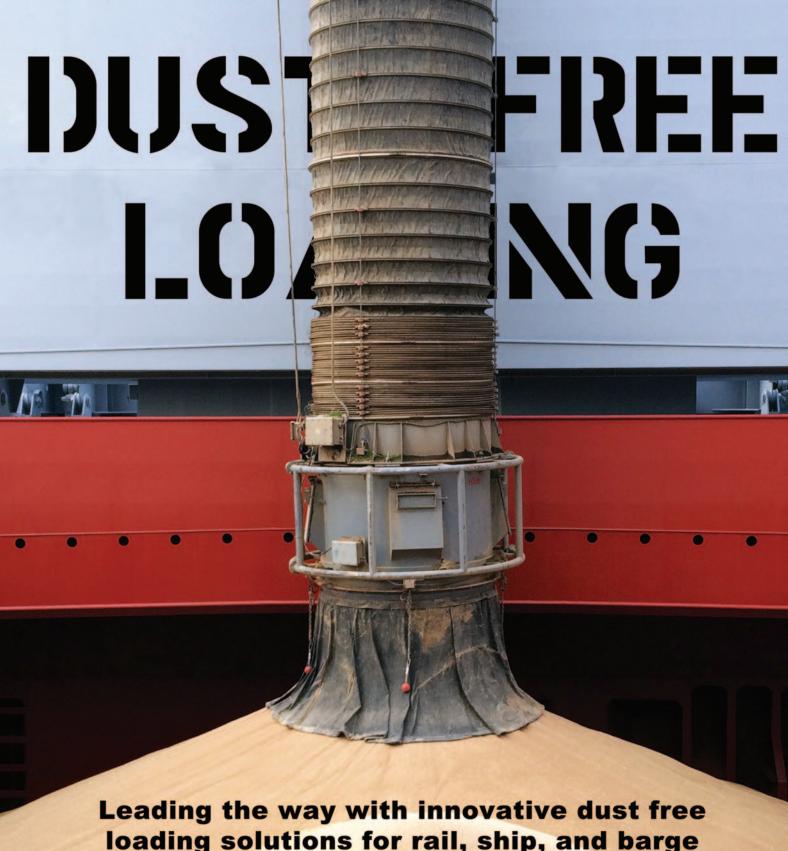
Via Giulio Natta 1 Reggio Emilia 42124 Italy

conveyors, hoppers.

Contact: Ms Monica Messori Job Title: Global Product Marketing Manager T: + 49 6172 102 450 F: + 49 6172 102 8807 E: monica.messori@dana.com W: www.dana-industrial.com

Dry-Bag A/SDalagarde 1 Aarhus C

DK 8000 Denmark Contact: Mr Soren Job Title: Marketing T: + 45 86 19 0500 F: + 45 86 19 0577 E: production@dry-bag.dk
W: www.desiccant.com



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Contact: Mr Jason Whaanga
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W: www.dshsystems.com DSH hoppers are specifically developed to reduce and control dust when bulk loading dry, granular free-flowing products. Requires no electricity, pneumatics or hydraulics and contains no internal moving parts. Mitigate dust issues and achieve health, safety, environmental and business

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Parque Científico y Tecnológico de Gijón c/ Ada Byron, 90 Gijón Asturias Snain Contact: Mr Angel Pelegry Job Title: Sales Director DF Mining & Handling T: + 34 985 199 202

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103 Industrial Village Road Beaufort 29906 USA Contact: Mr Richard Posner Job Title: President T: + 1 843 846 3700 F: + 1 843 846 3701

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Dungannon County Tyrone BT71 4DT Northern Ireland Contact: Mr Lee Williamson Job Title: Global Sales Manager T: + 44 2887 740525 F: + 44 2887 747244 E: info@edgeinnovate.com W: https://edgeinnovate.com/ Edge Innovate are a blue sky thinking, imaginative and creative equipment manufacturing company. With our ethos of "Innovation at Work" EDGE persist in pushing the boundaries of design and manufacturing to produce hard working, quality machinery to fit any materials handling requirement from recycling, material handling to quarrying.

EMS-Tech Inc 699 Dundas Street West

Ontario Canada Contact: Mr Kyle Sorensen Job Title: Director, Business Development, Marine System Sales

T: + 1 613 966 6611 F: + 1 613 966 6710

E: sales@ems-tech.net

W: www.ems-tech.net A multi-task, multi-discipline company specialising in design and supply of dry bulk material handling equipment, including custom designed conveyors, shiploaders, stackers and reclaimers, self-unloading ships, transhippers, belt elevators, receiving hoppers, storage/loadout systems, environmental controls.

Endress + Hauser

Inc 2350 Endress Place Greenwood IN 46143

USA Contact: Mr Victor Wolowec

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P.O.Box: 64624 DEIRA Dubai 64624 UAE

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E: sales@equipo.ae W: http://www.equipollc.com/

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Ership Grupo

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Euro-Tech Corporation

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E: sales@eurotechcorporation. com
W: www.eurotechcorp.com

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Spacelab 47 D Amersfoort 3824MR The Netherlands Contact: Mr Hans Plekkenpol Job Title: T: + 31 33 4567033 F: + 31 33 4558149 E: sales@tramco-europe.com W: www.tramcoinc.com Manufactures chain, screw and bucket conveyors and 'Aerobelt' air-supported belt conveyor systems.

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PO Box 61015 Jebel Ali Freezone Duhai Contact: Mr Murali Ganesan Job Title: VP PROJECTS T: + 971 4 883 8833 F: + 971 4 883 5126 E: info@fabtech.ae W: https://www.fabtechint.com/

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FAM Minerals & Mining GmbH

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Ferrmix Kesk-Kaare tee 59

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Job Title: Public Relations

Specialist T: + 1 630 971 0150 F: + 1 630 971 1180

E: kclancy@flexco.com W: www.flexco.com Flexco provides the world's belt conveyors with efficient, safe products, services, and solutions for splicing, belt cleaning, belt tracking, spillage, and slippage. The company is based in Downers

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Flexco Europe **GmbH**

Maybachstraße 9 Rosenfeld D-72348 Germany Contact: Mr Joerg Schairer Job Title: Managing Director T: + 49 7428 94060 F: + 49 7428 9406260 E: europe@flexco.com W: www.flexco.com

Manufacturer and distributor of mechanical belt fastening systems, installation tools, ceramic lagging, cleats and cleaners.

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W: https://www.flexicon.com/ Fogco Systems,

E: sales@flexicon.com

600 South 56th Street Chandler

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275 Commerce Winnipeg Manitoba R3P1B3 Canada Contact: Mr Martin Bima Job Title: Engineer T: + 1 204 223 8542 E: mbima@fwsgroup.com W: fwsgroup.com

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12300 Dundee Court Suite 200 Cypress Texas 77429 USA Contact: Mr Aleiandro (Alex) Algara Job Title: Sales and Marketing Manager T: + 1 832 220 1200 sales@geometrica.com

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W: www.guttridge.com Guttridge - A Mitchells Group Company, manufacture a range of bespoke bulk conveying and elevating equipment solutions capable of moving between 1 and 2000tph for a wide range of applications and complete deployable modular mill systems.

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Kocaeli 41420 Turkey Contact: Mr Engin Demir Job Title: Sales Director T: + 90 262 743 8858 F: + 90 262 743 1141 E: guven@guvenkepce.com W: www.guvengrab.com Established in 1984, Guven Grab & Machine (Guven Kepce Makine) has its own manufacturing facilities. Its product range includes radio remote control grabs, electro hydraulic clamshell/orange peel grabs, mechanical clamshell orange peel touch down grabs and mechanical double wired grabs. It has supplied its units to countries all over the world.

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IHI is Japan's leading company of bulk material handling system. IHI's products and service cover various equipment for coal, iron ore, grain and biomass pellet etc. and has been contributing to different industries all over the world.

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Intercomp Scales

3839 County Road 116 Medina MN 55340 Contact: Mr Chris Zins Job Title: Sales Manager T: + 1 763 476 2531 F: + 1 763 476 2613

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Contact: Mr Gustavo Delgado Job Title: Brazil, Ecuador & Colombia Country Manager T: + 593 981944957

F: + 61 2 8883 5195 E: gdelgado@isgpts.com W: www.pittoship.com

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Job Title: Managing Director
T: +61 400 035 548
E: gpinder@isgpts.com
W: www.pittoship.com/
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70056 Italy
Contact: Mr Vito Totorizzo
Job Title: General Manager T: + 39 080 397 4444 F: + 39 080 397 4474 E: totorizzo@spamat.it
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b.v. Rijksstraatweg 32 Utrecht Utrecht 3545 NA The Netherlands Contact: Mr Edgar Joustra Job Title: Director T: + 31 3066 21616 E: info@jb-grijpers.nl W: https://jb-grijpers.nl/ Designs, engineers and manufactures mechanical and hydraulic grabs for all kinds of bulk material

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W: http://www.zdpmchina.com/

Jimway Enterprise Co... Ltd

No.17 Chang Tai Street Hsiao Kang Dist. Kaohsiung 81266 Taiwan

Contact: Mr Guillermo Su Job Title: Int'l Sales Section

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Contact: Mr Thomas Serr Job Title: Head of Corporate Communication and Marketing T: + 49 26 45 18 201 F: + 49 26 45 18 112 E: info@kalenborn.com W: www.kalenborn.com

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King Bag & Manufacturing

1500 Spring Lawn Avenue Cincinnati 45223 Contact: Mr Mike Jennings

Job Title: Sales Manager T: + 1 513 541 5440 ext 306 F: + 1 513 541 6555 E: mike@kingbag.com
W: www.kingbag.com
Manufactures FIBCs with 100 years of experience in the speciality bag business producing custom sewn products for customers around the world.

KINSHOFER **GmbH**

Raiffeisenstrasse 12 Holzkirchen Bavaria D-83607 Germany Contact: Job Title: Sales T: + 49 8021 8899 0 F: + 49 8021 8899 37 E: info@kinshofer.com
W: https://www.kinshofer.com/
KINSHOFER GmbH produces
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Komatsu Mining Corp. Group Unit B2

Bridgewater Avenue Bolton Greater Manchester BL5 1EE IJK

Contact: Mr Matthew Forrest Job Title: Key Account Manager T: + 44 7866 197533 E: Matthew.forrest@ mining.komatsu

W: https://mining.komatsu/ Previously known as Joy Global and Continental Conveyor Ltd. Capabilities range from manufacturing of individual conveyor components to full project design and execution, with over 100 years' experience.

Konecranes Port Solutions -Konecranes **GmbH**

KONECRANES

Forststrasse 16 Düsseldorf D-40597 Germany Germany
Contact: Mr Giuseppe Di Lisa
Job Title: VP Sales & Marketing
T: + 49 211 7102 3771
F: + 49 211 7102 3651 E: ps.info@konecranes.com W: www.konecranes.com FOR GREATER BULK HANDLING PRODUCTIVITY Reach out and grab it with ecoefficient Konecranes Gottwald Mobile Harbor Crane technology. Depending on site and operating conditions, our four-rope grab cranes, also available as railmounted portal and cranes on barges, achieve handling capacities of up to 2,200 tph in continuous-duty bulk handling. Our broad range of products with their smart features is supported by dedicated

Kröger Greifertechnik GmbH & Co. KG

planning and consultancy services and backed by a global service

Steinheide 1-9 Sonsbeck D-47665

network.

Germany Contact: Mr Daniel Boos Job Title: Senior Engineer Gripper Technology T: + 49 2838 37 0 F: + 49 2838 37 39
E: daniel.boos@metzen.org
W: www.kroeger-greifertechnik.de
KRÖGER Greifertechnik is one of the worldwide leading grab systems manufacturers. KRÖGER grabs are successfully used at maritime and inland ports for bulk handling, in warehouses and at industrial or handling sites; as well as in cranes on ships or dredgers for gravel extraction, in excavation diggers, for demolition and waste incineration, in steel mills and in the timber industry.

Lachenmeier Monsun A/S

Coriolisvej 1 Sønderborg Denmark Contact: Mr Chrisitan Petersen Job Title: Sales Director T: + 45 74 42 24 64 F: + 45 74 43 04 04 E: mail@lachenmeier-monsun.com W: www.lachenmeier-monsun.com

Laidig Systems Inc

14535 Dragoon Trail Mishawaka Indiana IN 46544 USA

Contact: Mr Mike Schuster
Job Title: Vice President - Sales T: + 1 574 256 0204 E: sales@laidig.com

W: www.laidig.com
Laidia Systems Inc. manufactures custom engineered storage and reclaim systems for tough, hard to handle materials and whole grains. Such materials include soybean meal, other grain meals, whole grains, wood chips, sawdust, and recycled materials.

Langston Companies Inc.

Memphis Tennessee 38101-0060 USA

Contact: Mr Bob Langston Job Title: President T: + 1 901 774 4440 F: + 1 901 942 5402

E: blangston@langstonbag.com
W: www.langstonbag.com

Lawrence Industries, Inc.

108 Industrial Drive Suite A & B Saint Marys Georgia 31558 LISA

Contact: Mrs Alissa Gazze Job Title: Sales Engineer T: + 1 260 432 9693

E: sales@ lawrenceindustriesnow.com

W: www.lawrenceindustriesnow.com Lawrence Industries, Inc. is a supplier of industrial lining materials that improve bulk material flow in silos, bins, and bunkers. TIVAR 88 is a primary material that is used to eliminate bridging, arching and ratholing. Lawrence Industries designs and

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LDPL Ltd Pte 133 Cecil Street #06-01 Keck Seng Tower Singapore 069535

Singapore Contact: Mr Mathieu Muzeau Job Title: Managing Director T: + 33 6 73 99 85 06 E: Mathieu.muzeau@ldpl.com W: www.ldpl.com

LDPL Middle East Shipping LLC

IBN Battuta Gate Office Dubai UAF Contact: Mr Mathieu Muzeau Job Title: Managing Director T: + 33 6 73 99 85 06 E: Mathieu.muzeau@ldpl.com
W: www.ldpl.com

Legacy Building Solutions, Inc.

19500 County Road 142 South Haven Minnesota 55382-9240 Contact: Ms Ashley Welker Job Title: Marketing Manager T: + 1 320 258 0518

E: marketing@ legacybuildingsolutions.com

W: www.legacybuildingsolutions

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Vossenkamp 1 Braunschweig Lower Saxony D-38104 Germany
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Liebherrstr. 1 Rostock 18147 Germany Contact: Ms Monika Schedler Job Title: Head of Marketing T: + 43 50809 41725 F: + 43 50809 41447 E: maritime.cranes@liebherr.com
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Lion Bulk Handling b.v.

Global Headquarters Cypresbaan 14 Capelle aan den Ijssel Zuid-Holland 2908 LT The Netherlands Contact: Mr Marcel van Rangelrooij

Job Title: CEO T: + 31 180 440 720 F: + 31 180 516 064 E: info@lionbulkhandling.com W: www.lionbulkhandling.com

Listenow GmbH & Co. Dieselstrasse 21

Rutesheim

71277 Germany Contact: Mr Carsten Lohr Job Title: T: + 49 7152 50900 1: + 49 7152 50900 F: + 49 7152 509050 E: c.lohr@listenow.com W: www.listenow.com Loading equipment from 200-2000mm and length up to 24m, loading tubes - patented - PU flex, loading tubes of many materials, filter for loading equipment, electric rope winches, bellow expansion joints, collars, hoses, folding stairways, transport racks.

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TN 37801-3796 USA Contact: Mr Dean Wicks Job Title: VP Business Development T: + 1 800 433 2213 F: + 1 865 984 5286

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PO Box 1559 7205 Bellingrath Road Theodore Alabama 36582

Contact: Mr Matthew A. Davidson Job Title: Vice President -

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Ylämylly FIN-80400 Finland Contact: Mr Asko Kinnunen **Job Title:** Area Sales Director **T:** + 358 20 755 1230 E: asko.kinnunen@mantsinen.com
W: www.mantsinen.com
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Maguinas Condor SA Av Dos Estados 1383

Porto Alegre 90200-001 Brazil Contact: Mr André Meyer da Silva Job Title: Director

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USA Contact: Mr Greg Milroy Job Title: Customer Service

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training seminars, Remote Monitoring, Conveyor equipment, belt cleaners, belt tracking systems, impact cradles, sealing systems, dust containment and filtering systems, air cannons, silo cleaning services.

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Grafenstraße 27 Brannenburg D-83098 Germany Contact: Mr Roland Muhr

Job Title: Managing Director T: + 49 8034 90720 F: + 49 8034 9072 526 E: roland.muhr@muhr.com

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Winkelfeld 3-7 Oer-Erkenschwick Germany Contact: Mr Andreas Renner Job Title: Executive Director

T: + 49 2368 98 89 0 F: + 49 2368 98 8927 E: info@maschinenbau-feld.de W: www.maschinenbau-feld.de

Matrix PDM

Engineering 5100 E Skelly Drive Suite 100 Tulsa OΚ 74135

USA Contact: Ms Lesley Windler Job Title: Marketing Manager T: + 1 918 838 8822 E: lwindler@ matrixservicecompany.com
W: www.matrixpdm.com Matrix PDM Engineering delivers complete design-build services to the grain industry for 35 years. From greenfield facilities, retrofits, and expansions our services include Owner's Engineer, multidiscipline engineering, fabrication, construction, marine and dock expertise, silo design and inspection and control systems integration.

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J0K 3L0 Canada Contact: Ms Noémie Harnois Job Title: Marketing Coordinator T: + 1 450 756 1041 F: + 1 450 756 8389 E: N.Harnois@harnois.com W: www.megadomebuildings.com MegaDome® Buildings, a division of Harnois Industries. Our mission is to be a leader in design and

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Contact: Mr Retief Kruger Job Title: Operations Manager T: + 27 12 111 7241 E: info@megaroller.africa
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10 Arthur Drive Lynn Haven FL 32444 USA Contact: Mr Erik Nolte Job Title: General Manager T: + 1 850 265 3611

F: + 1 850 265 9768 E: info@merrick-inc.com W: www.merrick-inc.com Invented dynamic weighing in 1908 and has been operating continuously ever since. Offer carbon and stainless steel belt scales, weigh belt feeders, loss-in-weight feeders, volumetric feeders, flow meters and microprocessor controls. The company is focused on the dynamic weighing of powders, granules, pellets and liquids while in motion. Products are supplied worldwide and can be used in batching, continuous weighing and continuous feedrate

control applications.

Metso Brasil Industria e Comercio Ltda.

Av. Independencia, 2,500 Eden Sorocaba São Paulo 18087-050 Brazil Contact: Mr John Cullen Job Title: Global Marketing (Global Publications) T: + 55 15 2102 1762 E: john.cullen@metso.com

Metso USA, Inc.

Bulk Materials Handling 2715 Pleasant Valley Road York PA 17402 Contact: Ms Beth Ann McCov Job Title: Marketing Communications T: + 1 412 370 0376 E: beth.mccoy@mogroup.com W: www.metso.com Products: Railcar and Barge Pullers, Railcar Dumpers and Positioners, Grab & Equilibrium Unloaders, En-Masse Conveyors, Ship Trimmers, Throwers, Railcar Indexers, Barge Haul Systems, Breasting Winches, Apron Feeders
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Job Title: Director, BMH Commercial Strategy & Bus. Dev. T: + 1 717 843 8671 E: brian.bookamyer@metso.com W: www.metso.com
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Meyland NV Vaartkant 3

Adegem 9991 Belgium Contact: Mr Tim van Parys Job Title: T: + 32 9 376 76 00 E: tim.vanparys@meyland.be
W: https://roel-co.be/

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Lustdorfska Road

MHM Ukraine Ltd

92/94, Office 510 Odesa 65088 Ukraine

Contact: Mr Yaroslav Savchenko Job Title: E: yaroslav.savchenko@mhm-

W: mhm-ukraine.com

ukraine.com

Mideco Jia Ptv Ltd

Factory 2/63-71 Bayfield Rd East Bayswater North Victoria 3153 Australia

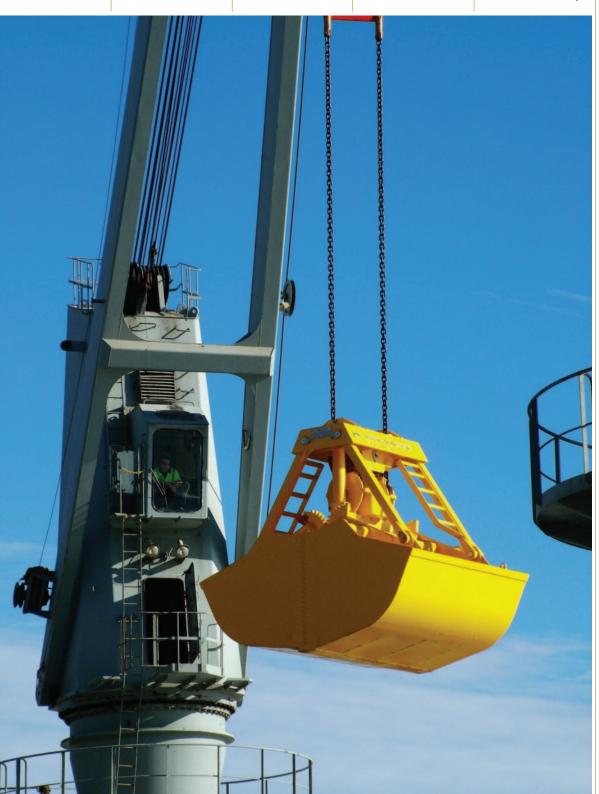
Contact: Mr Melton White Job Title: Director T: + 61 3 8873 0200 E: sales@midecohse.com
W: www.midecohse.com

Mideco is an Australian owned, designer and manufacturer of dust and air pollution control systems with headquarters in Melbourne, Victoria. Mideco have developed industry leading equipment for dust control including innovations -Burnley® Baffles and Bat Booth®.

Midwest International Standard

Products, Inc. 105 Stover Road/ PO Box 438 Charlevoix MI 49720-0438

Contact: Mr Walter Pair **Job Title:** President and CEO **T**: + 1 231 547 4000 F: + 1 231 547 9453



E: sales@ midwestinternational.com W: www.midwestmagic.com Midwest International's specialized Vacupac™ Bustle Filters, velocity reduction modules, and vented low velocity trimming spoons make loading of grains into barges and ocean going vessels simple and dust free. Available in multiple configurations and sized to handle up to 100,000 bushels per hour, these devices can be adapted to an existing telescoping spout, or supplied as a complete telescoping solution.

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T: + 1 740 374 6726
F: + 1 740 374 5908
E: mbailey@molemaster.com W: www.molemaster.com Silo, bin, bunker, transport and process vessel cleanout & unclogging services and equipment. Pipe cleaning, Vacuum services, Dry ice Blasting, Media Blasting, Silo structural inspection services and facility cleaning.

Monolithic Constructors, Inc. 177 Dome Park Place

Italy Texas 76651 IISA Contact: Mr Gary Clark

Job Title: Sales Manager T: + 1 972 483 7423 E: sales@monolithic.com W: www.monolithic.com

Motherwell **Automation**

10 Sangiorgio Court Osborne Park Perth WΑ Australia Contact: Mr Leon Groenewald Job Title: Business Development T: + 61 8 9212 4444

E: sales@motherwell.net.au W: www motherwell net au Motherwell Automation is a dynamic Perth-based company that has built an excellent reputation for providing, in partnership with world leading manufacturers, leading edge Industrial

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Helmstadt-Bargen D-74921 Germany
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Mühlen Sohn GmbH & Co. KG Lindenstrasse 16/1

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Contact: Ms Yvonne Marie Lanzinger
Job Title: Marketing Manager
T: + 49 7304 801 33
F: + 49 7304 801 23 F: + 49 7304 801 23 E: info@muehlen-sohn.de W: www.muehlen-sohn.de Mühlen Sohn GmbH & Co. KG is one of the leading suppliers of fluidising fabrics and looks back to a success story since 1880 which means over 140 years of weaving experience. Fluitex® air slide fabrics for

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Tochtweg 1 Pijnacker 2642 AP The Netherlands
Contact: Mr Lars Muller Job Title: T: + 31 15369 5444 F: + 31 15369 7864 E: info@mullerbeltex.com W: www.mullerbeltex.com Other Equipment: Elevators. Specialists in elevator components, buckets helts ATFX conform safety monitoring equipment. Design engineering and problem solving. Elevator belt bolt hole punching up to 2000 mm width Specialist in abrasion resistant polyurethane liners.

MWI Silo Systems Inc.

5001 Rd. 104 N. Easthope Perth Fast Wellesley Ontario NOB 2TO Canada Contact: Ms Jacqueline Gingerich T: + 1 519 656 2341

E: jacqueline@mwisilo.com

W: http://mwisilo.com

Nantong Rainbow Machineries Co..Ltd.

GENMA G

NO.88,Rongsheng Road(chenqiao), Nantong Marine Equipment Industrial Zone Nantong Jiangsu Contact: Mr Julien Zhu **Job Title:** Brand Promotion **T:** + 86 513 80108718 E: genma@rainbowco.com.cn
W: http://www.genmasolution.com Nantong Rainbow Heavy
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Natural Grabs

Toros Caddesi Fethi bey sokak no

Natural Business Center Maltepe Istanbul

Turkey
Contact: Cpt Hayrettin Yakut Job Title: T: + 90 216 380 60 03

F: + 90 216 380 65 59 E: sales@naturalgrab.com
W: www.naturalgrab.com/

NAVCO (National Air Vibrator Co) PO Box 40563

Houston 77240-0563 USA Contact: Mr Trey Gros Job Title: Technical Sales

Manager T: + 1 832 467 3636 F: + 1 832 467 3800 E: trey@navco.us W: www.navco.us Manufacturer of high quality, industrial grade air vibrators and

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Nectar Group Ltd

No 1 Ashton Gate Ashton Road Harold Hill Romford Essex RM3 8UF

Contact: Mr Guy Wilkes Job Title: Commercial &
Business Development Director T: + 44 1708 386 555 F: + 44 1708 386 665 E: commercialteam@nectar.co.uk W: www.nectargroup.co.uk Nectar is involved in handling bulk locations. Involvement ranges from

commodities such as cereals and fertilizers in ports and/or inland positioning of mobile bagging machines for spot cargoes to long term projects including terminal management and storage and logistics solutions.

NEDCRANES BV

Duikerweg 30-32 Portnumber: 1187-1189 Waalwijk 5145 NV The Netherlands Contact: Mr Arno Koolen
Job Title: Managing Director
T: + 31 6 120 80 446 E: ako@nedcranes.de W: https://nedcranes.com/

Negrini Srl



via E. Torricelli n.4 Castelfranco Emilia Modena 41013 Italy

Contact: Mr Massimo Negrini Job Title: Managing Director T: + 39 059 923110 F: + 39 059 920378 E: info@negrini.org W: www.negrini.org Negrini srl considers the attainment of client satisfaction our primary objective, through a continuous and effective process of study and collaboration with both clients and suppliers.
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Nemag BV Deltastraat 15 Zierikzee 4301 RC The Netherlands
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Neuerostrasse 1 Melle D-49324 Germany

Germany
Contact: Eng. Andreas Haeuser
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Manager
T: + 49 5422 9503 26
F: + 49 5422 9503 50

E: a.haeuser@neuero.de W: www.neuero.com NEUERO offers a wide range of pneumatic ship unloaders up to 1,000tph and ship loaders with

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NK Tehnologija SIA

120Z Dzelzavas Street Riga LV-1021 Latvia Contact: Mr Aleksejs Busils

Job Title: Sales Manager T: + 371 67271092 F: + 371 67271038

E: nkteh@nkteh.com W: www.nkteh.com
Industrial design, engineering and

assembly company specializing in dry bulk material handling projects and lifting equipment since 2001. In addition to shiploaders, weigh hoppers and container tilting spreaders we supply solutions for integrated bulk handling systems and equipment allocation.

NMH s.r.o

Priemyselná 4608/10 Sered 926 01 Slovakia Contact: Ms Veronika Kreml Job Title: Marketing Manager T: + 42 131 230 4441 E: v.kreml@nmh-sro.com W: www.nmh-sro.com

O. B. Wiik AS

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W: www.obwiik.com WiikHall Storage Tents are used for storage of food and non-food items within the construction segment, industry in general, Storage and logistics, Oil and gas. WiikHalls are installed in more than 100 countries. Size: in widths from 4 to 100 meter. Unlimited length in 5

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Via Domenico Scolari, 8 Codroipo 33033 Italy
Contact: Mr Roberto Baradello Job Title: T: + 39 0432909727 F: + 39 0432909728 E: info@optionsrl.eu

W: www.baggermachine.eu
We are active in the bagging sector of small bags and big-bags, vibrating and rotating screens as well as conveyor belts and hoppers.

Orthos Projects Ltd. Fernie Road

Market Harborough Leicestershire LE16 7PH Contact: Mr Nick Hall Job Title: Director T: + 44 1858 462806 F: + 44 1858 464403 E: Nick.Hall@orthosprojects.com W: www.orthosprojects.com Orthos Projects, specialists in bulk materials handling, have taken over the operation of E&F services. Their Dockside Mobile Loaders have gained a technological lead in eliminating spillage and controlling dusty products from Ports operations. Their range of Filters eliminate pollution

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Sereetz D-23611 Germany Contact: Herr Sigvard Orts

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Pakiet 82-103 Stegna Rybina 43

Gdansk Poland Contact: Mr Piotr Rzeszutek Job Title: Director T: + 48 55 247 17 70 ext.32 E: e.rybicka@pakiet.com W: https://pakiet.com Panford LTD

Parkway Building Whitestown Industrial Estate Tallaght Dublin D24 E8FV Ireland Contact: Mr Fergus O'Brien Job Title: Managing Director T: + 353 1 459 6756 **F**: + 353 1 461 0452

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E: sales@panford.ie
W: http://www.panford.ie/

Hundeicker Strasse 20 Gevelsberg 58285 Germany Contact: Mr Axel Berghaus Job Title: Managing Director T: + 49 2332 6371 F: + 49 2332 61167 E: hedfeld@hedfeld.com W: www.hedfeld.com

The company has produced complete installations for over 60 years for the transport of bulk goods such as bucket elevators, screw- and chain conveyors. The delivery of spare parts used in these conveyors was and is the basis of the current business.

PEBCO® Inc 225 N 4th Street

Paducah Kentucky 42001 USA Contact: Mr David Finke Job Title: President and COO T: + 1 270 442 1996 F: + 1 270 442 5214 E: sales@pebco.com

W: www.pebco.com PEBCO® is recognized world-wide as the leading manufacturer of powder and dry bulk solids handling equipment. Products range from truck, train, and ship loading equipment to gates, valves, diverters, mass flow feeders, Cascade® and dustless loading

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W: www.peinemann.nl

PEINER SMAG Lifting **Technologies GmbH**

PEINER SMAG Lifting Technologies

Windmühlenbergstraße 20-22 Salzgitter Germany Contact: Mr Günther Ribeiro-Job Title: Sales Director T: + 49 5341 302 647 F: + 49 5341 302 424 We offer a wide range of models and the optimum bulk handling solutions for every application. Mechanical four-rope grabs, electro-hydraulic motor grabs,

Penkert GmbH

radio-controlled single-rope grabs, hydraulic grabs, rotators as well as

special load handling devices of all

Xantener Str.12 Mülheim an der Ruhr NRW 45479

Germany
Contact: Mrs Marina Brunner Job Title: Marketing Manager
E: marina.brunner@penkert-

gmbh.de
W: www.penkert-gmbh.de
Since 1967, the company Penkert
GmbH has been one of the leading manufacturers of high-quality occupational safety products. In addition to the manufacture of body protection articles with a focus on FN standard-compliant protective gloves, the company offers protective sheathing for moving machine parts with a focus on bellows and loading hoses.

Peterson **Nederland BV**

Boompjes 270 Rotterdam 3011 XZ The Netherlands
Contact: Mr Arno Maehlmann Job Title: T: + 31 10 282 3333 F: + 31 10 282 3282 E: bulkoperations@ onepeterson.com

W: www.onepeterson.com Offers a wide range of logistic, inspection, laboratory and certification services in agribulk commodities, mineral bulk commodities, chemicals, biomass and biofuels. Complete supply chain covered from origin to destination

Pfister Waagen Bilanciai GmbH

Linker Kreuthweg 9 Affing-Mühlhausen D-86444 Germany Contact: Ms Susanne Geller-Dürr Job Title: Marketing and Sales

Job Title: Marketing and Sales Manager T: +49 82 07 9 58 99 28 F: +49 82 07 9 58 99 29 E: marketing@pfisterwaagen.de W: www.pfisterwaagen.de Truck weighbridges, railway scales, platform scales, crane scales, weighing data management software, load cells, load cell units, weighing indicators.

PHB Weserhütte,

Parque Científico y Tecnológico de Gijón C/Ada Byron, 220

Asturias 33203 Spain Contact: Dr Jose Ramón Prado Job Title: Technical & Commercial Director T: + 34 984 495 640 / + 34 984 49 55 00 **F**: + 34 985 134 222 E: jrprado@pwh.es W: http://www.grupotsk.com/ PHB Weserhütte, has over 60 years' experience and its own "know how" in the area of materials handling. The company has vast experience in the development of Turnkey Projects in the sectors of energy, cement, ports, iron and steel, fertilisers, mining and industrial plants.

PHOENIX Conveyor Belt Systems GmbH

Hannoversche Strasse 100 Hamburg 21079 Germany Contact: Job Title: T: + 49 40 7667 03 F: + 49 40 7667 2413 E: info@phoenix-cbs.com
W: www.phoenixconveyorbelts.com

PLM Cranes B.V. Sluisweg 21-25

Heijningen 4794 SW The Netherlands
Contact: Mr Pieter Pulleman Job Title: Managing Director T: + 31 167 528 510 F: + 31 167 524444 E: info@plmcranes.com W: www.plmcranes.com
We build hydraulic and electric cranes from 50 to 2000 tm with a transhipment capacity up to approx. 2000 ton/hour. We are specialized in shipboard cranes, mobile cranes and harbour cranes for dredging, transhipping, hoisting and pile-driving.

Pneumat Systems Inc

Mankato

56001 USA Contact: Mr Sam Cebula
Job Title: Sales and Marketing Manager T: + 1 507 345 4553 F: + 1 507 345 3639 E: info@pneumat.com
W: http://pneumat.com/
Pneumat Systems is the leading source for bin and silo cleanout equipemnt. The BinWhip and our patented "Dual Impact" Whiphead will clear the toughest problems. Pneumat also has equipment to empty hopper trucks and railcars quicker and our RailSpreader can load 5-10% product in your railcars.

Polymer Industries -Ultrapoly Division 2404 Center Street

Tacoma WA 98409-7638 USA Contact: Mr Bryan Olin Job Title: T: + 1 253 272 1217

F: + 1 253 272 1457 E: bryan.olin@ polymerindustries.com **W:** www.polymerindustries.com Other equipment: wear and liner

UHMWPE and other olefins for impact, wear and flow applications.

Portpack International

Limited Unit A2 Enterprise Business Park Wigwam Lane Hucknall Nottinghamshire NG15 7SZ Contact: Mr Philip Evans Job Title: General Manager T: + 44 1159 680130 E: portpack@portpack.biz W: www.portpack.biz Portpack design and manufacture containerised Mobile Bagging Systems for the direct discharge of bulk carriers in the port of arrival,

with materials weighed and

bagged at dockside, filled sealed

bags are loaded directly onto trucks

for onward distribution or delivery.

Port-Trade AS Karetmagervej 9 Fredericia DK 7000 Denmark Contact: Mr Peter J Muller Job Title: Managing Director T: + 45 7628 0102 F: + 45 7628 0103 E: peter.muller@port-trade.com
W: www.port-trade.com Sales and service in all Nordic countries of mobile harbour cranes, grabs, containerspreaders, shiploaders, reclaimers, material handling equipment etc.

Powertex Inc 1 Lincoln Boulevard

Rouses Point New York New York 12979 USA Contact: Mr Stephen Podd Job Title: President and CEO T: + 1 518 297 4000 ext 102 F: + 1 518 297 2634 E: stephenpodd@powertex.com W: www.powertex.com
Powertex is a market leader in the dry bulk container liner market, with its Sea Bulk container liner system for 20' and 40' ocean containers. Powertex assist clients through Project Management, with Logistics and with Loading and Discharge Equipment - supplying equipment specifically designed for the use of bulk container liners.

PRADO SILOS

Ribera de Axpe 6 Erandio Spain Contact: Mr Javier Resano Job Title: Commerical Director T: + 34 946 400 983 E: info@pradosilos.com W: https://pradosilos.com

Precia-Molen **Nederland BV**

Franse Akker 1 Breda 4824 AL The Netherlands Contact: Mrs Monique Kuijer-Heessels Job Title: Communication & Marketing
T: + 31 76 524 2513
F: + 31 76 522 8039 E: sales.nl@preciamolen.com W: www.preciamolen.nl For almost 150 years Precia Molen is specialized in industrial weighing equipment such as weighbridges, hopperscales, baggingscales, platformscales, truckdumpers etc.

PREMIER TECH

Premier Tech World Headquarters 1. avenue Premier Rivière-du-Loup (QC)

Quebec G5R 6C1 CA Canada Contact: Mr Chakim Belrhali Job Title: Marketing Director T: + 1 418 867-8883 E: belc3@premiertech.com W: www.ptsystemsautomation.com Among the largest packaging equipment manufacturers in the world, Premier Tech is committed to creating sustainable solutions that help improve the efficiency of manufacturing facilities in the nutrition, industrial, agricultural and organics market sectors.

Premier Tech Chronos b.v. Meerheide 40

Eersel Noord Brabant 5521 DZ The Netherlands Contact: Ms Marie-Pier Vallée
Job Title: Communications Coordinator T: + 31 497 514 988 E: valm2@premiertech.com W: www.ptchronos.com PREMIER TECH CHRONOS (PTC) is recognized worldwide for its innovative and customized packaging, material handling and bulk processing solutions. We are driven by innovation: we developed several state-of-the-art technologies which are still in the lead today. Our prime objective is to meet your packaging needs in the most creative and efficient way.

Premier Tech Chronos Ltd

Unit 1, Centurion Business Centre Blenheim Industrial Estate Nottingham Notts NG6 8WN UK Contact: Mr Peter Orm Job Title: General Manager T: + 44 115 935 1351 F: + 44 115 960 6941 E: info-eu@ptchronos.com **W**: www.ptchronos.com PREMIER TECH CHRONOS (PTC) is recognized worldwide for its innovative and customized packaging, material handling and bulk processing solutions. We are driven by innovation: we developed several state-of-the-art technologies which are still in the

lead today. Our prime objective is

to meet your packaging needs in the most creative and efficient way.

Procon Engineering Limited

Vestry Estate Otford Road

Sevenoaks

Kent TN14 5EL UK Contact: Mr Ian Hall Job Title: T: + 44 1732 781 300 F: + 44 1732 781 311 E: joe.naylor@proconeng.com W: www.proconeng.com Manufactures belt weighers for process control and trade use in the grain industries. Weighing systems for grain have been produced with capacities as low as 2t/h and as high as 2,000t/h. (In other materials the company has machines as high as 12,000t/h. Many single sites trade over GBP£100 million per annum over their Procon Inflo trade approved belt weighing systems.

ProStack
Terex Materials Processing 20 Keans Hill Road Campsie Industrial Estate

Campsie, Co. Derry Ulster BT47 3YT Northern Ireland Contact: Mr Declan McErlain Job Title: Marketing Manager T: + 44 7826 956955 E: declan.mcerlain@terex.com
W: https://www.terex.com/prostack ProStack offers a comprehensive portfolio of products to address the needs of the bulk material handling and product stockpiling markets. Key markets and applications include aggregate, mining, recycling, agriculture, ports & terminals and many other bulk material handling industries.

Protan International

PO Box 420 Brakerøya Drammer NO-3002 Norway
Contact: Mr Erik Øyno
Job Title: Direktor Protan International Roofing T: + 47 90 51 30 72 E: erik@solemait.no W: www.protan.no

PSB Inspection

George Stephensonweg 1 Vlaardingen South-Holland 3133KJ The Netherlands Contact: Mrs Peter Bagchus Job Title: Managing Director T: + 31 10 313 89 08 E: info@psbinspection.com W: http://psbinspection.com/nl

PT Armada Rock Karunia **Transshipment**

AIA Central Building 33rd Floor Jl. Jend. Sudirman Kav. 48 A Jakarta South Jakarta 12930 Indonesia Contact: Mr Frans Martin Hasiholan

Job Title: Manager T: + 62 817 609 8883 F: + 62 21 2525 928 E: enquiry@arktransshipment.com
W: www.ark-transshipment.com

PT. Bando Indonesia

Wisma Hayam Wuruk, 6th floor, Suite 600 Jln. Hayam Wuruk No. 8 Jakarta Indonesia Contact: Mr Wahyono Wardiman Job Title: Conveyor Belt Division T: + 62 21 3517590 F: + 62 21 3517591 E: conveyor.div@ bandoindonesia.com W: www.bandoindonesia.com PT. Bando, established in 1987, is one of the leading automotive and industrial power transmission belt manufacturers in Indonesia. It has one main plant located in

Tangerang and its marketing office located in Central Jakarta.

QCA Systems Ltd. 101-6951 72 St Delta BC V4G 0A2 Canada Contact: Mr Craig Pearce
Job Title: Director, Sales & Marketing T: + 1 604 908 5835 E: cpearce@qcasystems.com W: https://qcasystems.com/ QCA Systems is a specialty electrical engineering and integration firm focused on bulk

material handling. We partner with owners and OEMs to mitigate project risk by owning design and deployment of Automation, Electrical Power, and Information Systems including Data Analytics which lower project cost and risk.

Quality Handling Systems Pty Ltd (Part of Consep Pty Ltd) 46 Newton Road Wetherill Park

Sydney NSW 2164 Australia Contact: Mr Peter Skoljarev
Job Title: Project Engineer T: +61 2 9756 5299 E: pskoliarev@consep.com.au W: www.consep.com.au Design and manufacture of sampling equipment and sampling systems. Includes grain inspection conveyor tables, samplers, sample dividers, sample collectors, etc.

Quanergy 433 Lakeside Drive

Sunnyvale CA 94085 USA Contact: Ms Andy Steen Job Title: Marketing Executive T: + 1 408 245 9500 F: + 1 408 245 9503 E: info@quanergy.com W: https://quanergy.com/

R & S Srl / Roncuzzi - WAM Group

Via del Cmapo Sportiuo 40 Mezzana Italy Contact: Mr. Silvio Banzi Job Title: Communications Manager T: + 39 0535 61 81 11 E: info@wamgroup.com

W: www roncuzzi com Design and build wide range of equipment for bulk handling material. Pneumatic ship unloaders, mechanical ship loaders (bulk and bags), grab loading hoppers (dust free) conveyor belt, bucket elevators and chain conveyors. Rotary valves, Screw conveyors, diverters, telescopic

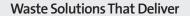
RAM Lifting **Technologies** SPREADERS

6 Selby Place Stanley Skelmersdale Lancashire WN8 8EF

UK Contact: Mr Patrick Draper Job Title: PR & Communication T: + 44 1695 556355

F: + 44 1695 556356 E: p.draper@ramspreaders.com W: www.ramspreaders.com/ Part of the SMAG Group, we are the world's leading lifting accessories suppliers in the bulk cargo industry; providing bulk handling solutions to ports, ships, crane manufacturers, waste-to-energy plants, recycling/scrap handling industries, as well as providing container lifting spreaders.





Unlock the full potential of your waste incineration facility with the PEINER Motor Orange Peel Grab (MMG/L) — a product born from decades of engineering excellence in waste management. Built to thrive in the toughest environments, the MMG/L ensures uninterrupted 24/7 operation, even under extreme loads. Its rugged, future-ready design makes it a smart investment for facilities aiming for maximum uptime and efficiency.

Engineered for Performance

Every detail of the MMG/L is crafted for high-throughput, low-effort operation:

- Rapid cycle times: Ultra-fast opening and closing for maximum material flow.
- Seamless integration: Fully controlled from the crane cab for smooth, intuitive operation.
- Compact and powerful:
 Optimized height and low center
 of gravity for stability and versatility.
- Custom-fit shells: Tailored to your project-specific needs for peak performance.

Built to Last

Constructed from high-grade steel and equipped with advanced mechanical components, the MMG/L is designed for longevity. Its innovative hydraulic system boosts reliability, while wear-resistant shell tips (HB 450 hardness) ensure durability in the most demanding conditions.

PEINER - Not Just Any Grab

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- ✓ Industry Specific Solutions
- ✓ All-In-One Product Lifecycle Support
- ✓ Worldwide Service Network
- ✓ Global After Sales Support

Rapat **Corporation**

919 O'Donnell Street Hawley 56549-4310 USA Contact: Mr Justin Koenig Job Title: Industrial Sales Manager T: + 1 218 483 3344 E: info@rapat.com
W: http://www.rapat.com/

Rapidpack Corporation Suite 207 Mazaya Tower AA1

Jameirah Lakes Towers Duhai Contact: Mr Peter Ascot Job Title: Sales Manager T: + 9714 445 8336 F: + 9714 445 8337 E: peter@rapidpack.ca W: www.rapidpack.ca Rapidpack designs, engineers and manufactures state of the art bulk cargo handling machinery for ports, trading houses and shipping companies around the world.

RBL REI

15 rue du Moulin des Landes CS 50159 – Saint Sylvain d'Anjou Cedex Verrieres en Anjou France Contact: Mr David Nirefois Job Title: Ports Terminals Sector Manager T: + 33 2 41 21 19 40

RBL-REI France 140 bis rue de Rennes

E: d.nirefois@rblrei-france.com W: http://www.rblrei-france.com

F: + 33 2 41 21 19 59

Paris Cedex 14 75006 France Contact: Mr David Nirefois Job Title: Handling Process Manager T: + 33 2 41 21 13 82 (dct) / + 33 2 41 21 19 40 **F**: + 33 2 41 21 19 59 E: d.nirefois@rblrei-france.com
W: www.rblrei-france.com
Designs, builds and supplies
continuous bulk handling belt conveyor systems and associated equipment, stackers up to 10,000 tph, reclaimers up to 15,000 tph and shiploaders up to 3,000 tph

RC Inspection B.V

Gustoweg 66 Rotterdam NL 3029 The Netherlands Contact: Ms Birgit Bender
Job Title: Sales and Marketing Manager T: + 31 610 742 140 / + 31 10 425 0237 E: Birgit.Bender@rcinspection.com

W: www.rc-inspection.com/

REEL Alesa AG

Max Hogger-Strasse 6 Zurich CH - 8048 Switzerland
Contact: Mr Jose Cantillo Job Title: General Manager T: + 41 44 435 33 33 E: Info-REEL-Alesa-ch@reelalesa com

W: www.reel-alesa.com/ REEL MOLLER design, develop and manufacture pneumatic conveying and storage solutions for the mining industry and for an expanding range of adjacent industries.

We have substantial know-how in the field of pneumatic conveying

engineering, and our R&D team has attained many protected patents and licences. This enables us to provide industry leading performance and reliability within the transportation and storage of fine-grained, mineral bulk materials across industries.

REEL Möller GmbH Haderslebener Straße 7

Pinneberg 25421 Germany
Contact: Mrs Martina Kauder Job Title: Business Support T: + 49 4101 788 312 E: martina.kauder@reelmoeller.com
W: www.reel-moeller.com
REEL is a global leader in delivering complex and robust lifting and handling equipment to sectors where safety and reliability are major concerns. As an integrated engineering company, we design, manufacture, commission and maintain high-performance solutions adapted to everevolving markets and client reauirements.

REMA TIP TOP AG

Gruberstraße 65 Poina Ravaria Germany Contact: Ms Claudia Pietsch **Job Title:** Marketing Manager **T:** + 49 8121 707 10133 E: Claudia.Pietsch@tiptop.de
W: www.rema-tiptop.com World leader in high-quality conveyor maintenance, wear protection and corrosion prevention. Provides products, accessories, technical consultancy and customized problem solving solutions in over 150 countries. Equipment range - rubber linings for wear protection; rubber repair material for conveyor belts; pulley laggings; corrosion protection linings; coating and bonding systems.

REPA Conveyor Equipment B.V.

Fluorietweg 28 Alkmaar Noord Holland 1812 RR The Netherlands

Contact: Mr Richard van der Laan
Job Title: Managing Director

T: + 31 251 70 02 52 E: sales@repa-ce.com W: http://www.repa-ce.com/ Conveyor Belts, Rollers, Pulleys, Frames, Trackin g systems

Representaciones Alfredo Brand v Cia. Ltda.

Casilla 16871 Santiago Región Metropolitana 7510147 Chile Contact: Mr Alfredo Brand Job Title: T: + 56 222 38968 F: + 56 234 40817

E: abrandp.gm@gmail.com W: www.abrandp.com

RHC Deutschland GmbH

Am Taennele 6 Senden-Aufheim Bayern D-89250 Germany
Contact: Mr Rolf Hofmann Job Title: CFO

T: + 49 174 2050 164 F: + 49 7307 9258065 E: rolf.hofmann@rhcdeutschland.de
W: http://www.rhcdeutschland.com/ RHC is a German company with engineering and manufacturing facilities in Europe and Asia.

RIKON A/S

RIKON

Tvaika Street 68b Riga LV-1034 I atvia Contact: Mr Inal Akhba Job Title: Council Chairman T: + 371 29 29 9992 F: + 371 67393828 E: rikon@rikon.lv W: www.rikon.lv A/S RIKON manufactures portal slewing and gantry cranes, parts of cranes, grabs, spreaders. A/S RIKON makes handling devices, overhead cranes and other steel structures, provides services for installation, commissioning and handling portal cranes, gantry cranes and various other port equipment.

Robson Handling Technology Ltd

Coleford Road Darnall Sheffield S9 5PA ÜK Contact: Mr Tris Young Job Title: Marketing Manager T: + 44 114 244 4221 F: + 44 114 243 3066 E: youngt@robson.co.uk W: www.robson.co.uk
Design and Manufacture and Install Bulk Handling Systems including Belt, Screw and Chain Conveyors, Elevators, Hoppers, Vibros and Feeders. Steelwork and Supports, Individual units or Turn Key Projects.

Ronin System Solutions

No. 1 Nobel Avenue Modderfontein Johannesburg Gauteng 1645 South Africa Contact: Mr Ferdinand Meyer Job Title: Sales and Marketing Executive, Ronin Group T: + 27 11 608 3666 F: + 27 11 608 4679 E: ferdi@thisisronin.com W: www.thisisronin.com Ronin System Solutions supplies Bulk Inventory management solutions, analytical grading equipment and services to the Southern African Grain Handling Industry. We provide Cargo Monitoring, Bulk Audits, Portside and Marine services on hard Commodities. We promote our laser Inventory Systems Worldwide.

Royal Haskoning DHV

PO Box 8520 Rotterdam 3009 AM The Netherlands
Contact: Mr Johan Pruisken Job Title: Senior Project Manager T: + 31 10 286 54 45 F: + 31 10 443 3688 E: j.pruisken@royalhaskoning.com W: www.royalhaskoningdhv.com/ With knowledge and experience in the development of modern ports and (un)loading, transport and storage systems, high quality advice and comprehensive project management is provided in the field of grain and other dry bulk

handling. Clients' objectives vary from increasing capacity, operational efficiency and handling speed to shifting from road to rail or inland water transport. From pre-investment studies and conceptual design to construction management, practical, sustainable and cost-effective engineering solutions are offered.

Rubb Buildings Ltd

Dukesway Team Valley Trading Estate Gateshead Tyne & Wear NF11 00F UK Contact: Ms Clare Wilson Job Title: Marketing Director T: + 44 191 482 2211 F: + 44 191 482 2516 E: info@rubbuk.com W: https://www.rubbuk.com/ Designs, manufactures and installs bulk storage and general storage buildings from 3m span to 100m span. Supply structures for storage of all types of cargo, from coal and grain to salt. The structures are totally prefabricated and relocatable, are maintenance free and the fabric has a life expectancy

Rud Chains

usage.

of up to 25 years depending on

12 Commerce Place Larapinta Brisbane QLD 4110 Australia Contact: Mr John Burroughs
Job Title: Mechanical Engineer T: + 61 419721115 E: john.burroughs@rud.com.au W: www.rud.com.au

RULMECA HOLDING S.P.A.



Via A Toscanini 1 Almè Bergamo 24011 Italy Contact: Mr Enrico Aledi Job Title: Marketing & Corporate Communications Manager T: + 39 035 430 0111 E: marketing@rulmeca.com W: www.rulmeca.com The RULMECA Group specializes in the production of rollers, motorized pulleys and other components (such as stations, suspended garland sets and covers) for bulk material handling applications. It is composed of 9 manufacturing units and 9 sales companies and employs 1300 people

SAMSON Materials Handling Ltd (AUMUND Group)

Gemini House Cambridgeshire Business Park 1 Bartholomew's Walk Cambridgeshire CB7 4EA IJK Contact: Ms Emily Bone Job Title: Sales & Marketing Coordinator T: + 44 1353 646352

E: emily.bone@samson-mh.com W: www.samson-mh.com Experts in mobile bulk materials handling equipment for surface installation: from truck unloaders. to ship loaders, rail and barge

loaders, ecological import hoppers and mobile stockpiling equipment. Also specialised in process optimisation and conversions. After Sales Services include spare parts, PREMAS®/PREMAS® 4.0 and Field

Saxlund **International Ltd**

11 Freemantle Business Centre Millbrook Road East Southampton Hampshire UK Contact: Mr Matt Drew Job Title: T: + 44 2380 636330 F: + 44 2380 636343 E: mattdrew@saxlund.co.uk W: www.saxlund.co.uk

Scorpio Engineering BMH Pvt. Ltd

Scorpio House 132 Wheeler Road Cox Town Bangalore 560 005 India Contact: Mr Jacob P. Job Title: VP - Marketing & Application T: + 91 99801 625 39/+ 91 77026 3779 **F**: + 91 80 2548119 E: info@scorpioengg.com W: www.scorpiobmh.com www.drybulklogistics.in www.optimumbulkhandling.com The company engineers and The company engineers and manufactures a complete range of powder, grain & flour handling equipment with turnkey engineering capability. Capacities of equipment range from a few tonnes per hour to about 300mt per hour. (ship unloaders) Key strengths are the ability to engineer, manufacture, install and commission complete systems for ports and plants.

Screw Conveyor Corporation

700 Hoffman Street Hammond Indiana 46327-1894 USA Contact: Mr Jim Calhoun Job Title: VP of Business Development & Marketing T: + 1 219 931 1450 F: + 1 219 931 0209 E: jcalhoun@screwconveyor.com W: https://screwconveyor.com Screw Conveyor Corporation engineers and manufactures Screw Conveyors, Screw Feeders, Drag Conveyors, Bucket Elevators and Hydraulic Truck Dumpers.

Seabulk Inc

10331 Mortfield Road Richmond British Columbia V7A 2W1 Canada Contact: Mr Sidney Sridhar Job Title: President T: + 1 604 273 1378 Ext 103 E: sbs@seabulk.com W: www.seabulk.com
Design and build contractors involved with ports, self-unloaders and transshippers for bulk cargo. The firm provides turn-key logistics solutions for the transportation, storage and handling of bulk materials, prototype new developments including material handling systems for ship and open-sea transshipment.

S-E-G Instrument

Sweden
Contact: Mr Hakan Lagergren

Florettgatan 33

Helsingborg SE-254 67

Job Title: Sales and Marketing Manager T: + 46 8 764 74 00 **F**: + 46 8 764 75 00 E: inform@s-e-g.com W: www.s-e-g.com S-E-G is one of few companies in the world specializing in industrial weighing. For over 50 years we have acquired a unique knowledge in our special fields such as Belt Scales, Mass Flow Meters, Batching Systems, and Level Measuring.

Sempertrans **Conveyor Belt Solutions GmbH** Am Belvedere 10

Austria Contact: Job Title: E: sempertrans@ semperitgroup.com W: www.semperitgroup.com SEMPERTRANS has been developing, manufacturing and installing conveyor belts for more than 50 years. Its knowhow, its experience and the quality of its products make SEMPERTRANS one of the world's leading companies in its field.

Sempertrans France Belting **Technology** Rue Collange

CS30002 Levallois-Perret Cedex 92593 France Contact: Ms Paulina Sakowitz Job Title: Head of Marketing Conveyors T: +43 1 797 77 306 E: Sempertrans.westerneurope@ semperitaroup.com W: www.sempertrans.com

SENNEBOGEN Maschinenfabrik **GmbH**

SENJEBOGEN Hebbelstrasse 30 Straubing

D-94315 Germany Contact: Mr Robert Aumüller Job Title: Head of Business Unit Port Application T: + 49 9421 540155 F: + 49 9421 43882 E: marketing@sennebogen.de W: www.sennebogen.com
SENNEBOGEN offers a wide range of all kinds of materials handling machines, HD rope excavators/cranes, crawler cranes, telescopic cranes and base carriers. SENNEBOGEN has a specific strength in realizing solutions

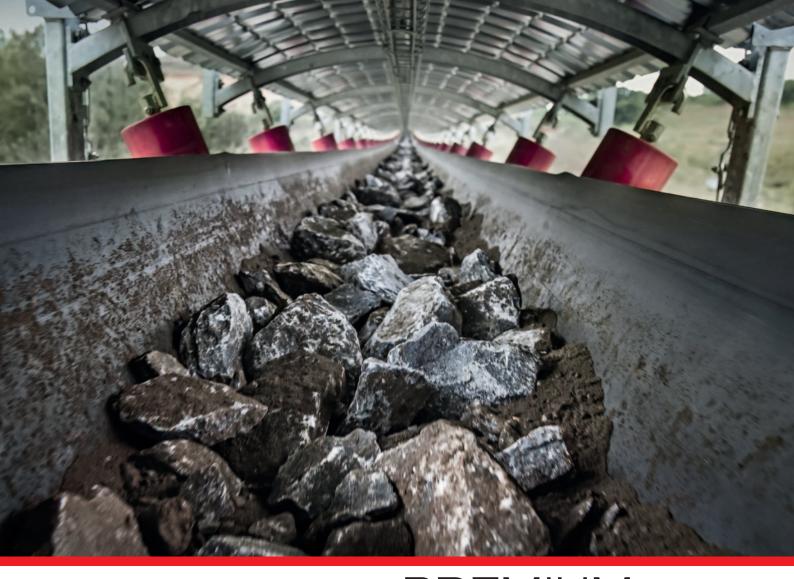
Servo Berkel Prior B.V.

Meer en Duin 70

specifications

based on individual customer

Lisse The Netherlands Contact: Mr Erwin van Diest Job Title: Managing Director T: + 31 252 250350 F: + 31 252 421424 E: info@servoberkelprior.eu



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Rulmeca offers a wide range of quality Rollers/Idlers, Motorized Pulleys, Pulleys and components used in the most demanding applications in belt conveyors material handling. We are close to you, whenever you need us, with a global network of sales and service centers.









W: https://servoberkelprior.nl/ Servo Berkel Prior B.V. is the biggest manufacturer and supplier of weighing equipment in the Netherlands.

SESCOTRANS For Developed Logistics (SAE)

1, Elshahied Sayed Zakarya St. (Behind Sheraton Airport) Cairo 11361 Egypt

Egypt
Contact: Mr Kareem Abd El Latif
Job Title: Assistant General
Manager

Manager
T: +2 057 229 00 95
F: +2 057 229 08 49
E: kareem.abdelatif@
sescotrans.net
W: www.sescotrans.com
Other Equipment: Mobile Harbour
Cranes - CMA, SMA.
SESCOTRANS has 50 years

Other Equipment: Mobile Harbour Cranes - CMA, SMA.
SESCOTRANS has 50 years experience of integrated logistics solutions for your business, serving main Egyptian ports including transportation, customs clearance, warehousing, loading and discharging of different cargo and vessel sizes, supported with full setup of facilities and fullyemploved resources.

SGH Equipment Limited

Unit 32
King Street Trading Estate
Middlewich
Cheshire
CW10 9LF
UK
Contact: Mr Stuart Henderson
Job Title: Director
T: + 44 1606 536 955
F: + 44 1606 536 956
E: sales@sghequipment.co.uk
W: www.sghequipment.co.uk
W: www.sghequipment.co.uk
SGH Equipment provide process & materials handling engineering
solutions, specialising in bulk
powder & granular materials
Equipment: Storage Silos &
Vessels, Conveying, Weighing,
Mixing & Blending, FIBC
Fill-Discharge, Dust Collection,
Filtration, & Suppression, Bagging,
Weighing & Packing Machines
Services: Design, Manufacturing,
Fabrication, Electrical - Control &

SGS (Nederland) BV

Instrumentation, Installation (Mechanical & Electrical),

Commissioning

Malledijk 18 Spijkenisse AE 3200 The Netherlands Contact: Mr Richard van de Wetering Job Title: Global Energy Minerals Trade Inspection Manager T: + 31 181 69 3260 E: Richard.vandeWetering@ sgs.com W: www.sgs.nl

SGS Canada Inc

185 Concession Street
PO Box 4300
Lakefield
ON
K0L 2H0
Canada
Contact: Mr Stephen Mackie
Job Title: Director Business
Development
T: + 1 705 652 2058
F: + 1 705 652 6365
E: steve.mackie@sgs.com
W: www.sgs.com/coal

SGS Minerals Services

1 Place Des Alpes PO Box 2152 Geneva CH 1211
Switzerland
Contact: Mr Richard Lihou
Job Title: General Manager
T: +41 22 739 9111
F: + 41 22 739 9886
E: daniel.rufenacht@sgs.com
W: www.sgs.com
The SGS Group is the global leader
and innovator in verification,
inspection, testing and certification
services. Founded in 1878, SGS is
recognised as the global
benchmark for the highest
standards of expertise and
integrity. With over 30,000
employees, the Company operates
a network of offices and
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E: sales@weightroncb.co.uk
W: www.weightron.com

Wolf Point Engineers & Contractors

One North LaSalle Street Suite 4000 Chicago 60602 USA

Contact: Mr Robert Williams Job Title: Vice President of Sales and Marketing T: + 1 312 508 5550 E: bwilliams@wpengrs.com

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Wölfer by **WICHMANN E GmbH**

Industriestraße 14 Osnabrück Germany Contact: Mr Hans-Gerd Beck Job Title: Key-Account Manager T: + 49 541 990 220 F: + 49 541 990 2222 E: hg.beck@woelfer-motoren.com
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World Domes

4355 N Haroldsen Drive Idaho Falls Idaho 83401 USA Contact: Mr Ted Parkinson Job Title: T: + 1 208 522 5520 E: ted@domes.com W: www.domes.com Serving the bulk storage industry for many years, constructing concrete domes to store a multitude of products. The company designs and constructs high quality concrete domes, delivering projects on time and within budget. They have broad experience with a variety of reclaim systems, both mechanical and

pneumatic, pending on clients'

needs.

ZAO SMM (CJSC SMM) Grivtsov Lane, 1/64

Saint-Petersburg 190000 Russia Contact: Mr Anton Rishnyak Job Title: Executive director CJSC "SMM"
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ZPMC - Shanghai Zhenhua Heavy Industries Company Limited 3261 DongFang Rd Shanghai

200125 China

Contact: Mr Jinsheng Lei Job Title: Marketing & Senior Engineer
E: leijinsheng@zpmc.com

W: www.zpmc.com
A world-famous manufacturer of bulk materials handling equipment. Its main products include ship loaders and unloaders, bucket wheel stackers and reclaimers. With proven design, manufacturing and fullyerect shipment capabilities to ensure on time delivery.

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Handle bulk with efficiency and reliability

Pneumatic and mechanical ship (un)loaders
Up to 2500 tph for loaders and up to 1200 tph for unloaders.

Low noise & no dust emission

Turnkey solutions for cereals, soy flour, fertilizer, pellets and more...





GRAIN HANDLING EQUIPMENT SUPPLIED

KEY		
S&BL	=	ship and barge loaders
PS&BL	=	pneumatic ship and barge
		loaders
MS&BU	=	mechanical ship and barge
		unloaders
C	=	conveyors
FB	=	FIBCs, bags & bag handling
Н	=	hoppers
G	=	grabs
DS	=	dust suppression
S&I	=	sampling & inspection
W&M	=	weighing & measuring
G&S	=	grading & sifting
TL&U	=	truck loaders & unloaders
RL&U	=	railcar loaders & unloaders
SS	=	storage systems
EC	=	engineering consultants
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AGI TRAMCO

MORE UPTIME. LOWER TOTAL COST OF OWNERSHIP.



