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ULCVs – too large to call?

A giant container ship that blocked the Suez Canal for almost a week is raising more questions about the integrity of global supply chains.

Since the start of COVID-19 pandemic, the potential frailty of supply chains has been brought into view, but the case of the Ever Given takes the issue further, according to the European Shippers Council (ESC).

The ESC is urging a reassessment of what it calls “the maritime industry’s obsession with size”.

On 23 March, the 20,000 TEU Ever Given was passing through the Suez Canal on its way to Rotterdam when it ran aground diagonally after losing the ability to steer amid high winds and a dust storm.

The ship had been running fifth in a northbound convoy, with 15 vessels behind it. Traffic in both directions was blocked for just over six days, leading to a queue of more than 200 vessels.

But beyond the short term logjam the ESC notes that container shipping lines which are deploying ultra large container vessels (ULCVs) have considerably reduced the number of ports for direct call services. As a consequence, the largest European ports are used even more intensively by an increasing share of the trade and have become easily congested. At the same time, oversea services have been limited or stopped in many secondary ports.

“At present, the attention is mainly devoted to container shortage

(but) it is important to recentre the discussion since bringing additional quantities of containers into maritime transport flows might not be the only solution,” the ESC said in a statement. “The containers have to wait to be collected or released because of diminished frequencies and port calls, a direct effect that ULCVs create to transport loops in combination with slow steaming.”

The council says this tendency contradicts the most efficient use of port capacity in Europe. Secondary ports are more frequently served only by short sea connections, as well as by other modes such as barge and rail. This, it says, is not desirable given the impact on terminal capacity and hinterland connections. Moreover, the total carbon footprint of supply chains could be negatively affected by the use of ULCVs because of the multiple transshipments needed.

“Overall efficiency across European territories should prevail over sea transport efficiency,” ESC said. The current situation requires more and longer transport movements by short sea shipping, truck, rail or barge. And with the low or zero carbon energy that the next generation of ships could be using, the shipping lines’ argument that ULCVs offer a lower carbon footprint per container moved in the maritime part of the chain would become “irrelevant”, ESC said.

The council wants to open a discussion on this and other issues, even asking whether the size of ships entering European ports should be limited.

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DHL pilots 3-flexi system in Mexico

Global forwarding giant DHL is piloting a new bulk liquid service using three flexitanks in a single reefer container.

DHL Reefertanks is a three-tank system developed in partnership with supplier Liquitank Solutions Inc, registered in British Columbia, Canada, to ship liquids like citrus juice that require temperature control while in transit. Currently the new system is being trialed in Mexico to transport any non-hazardous bulk liquid requiring temperature control to the United States, but can be used in any country that sees a need for this new product, DHL says.

The logistics firm claims that compared with ISO tank containers, reefers carrying 55 gallon drums and 40ft flexitanks, the reefer tank system allows for a greater yield of products.

Goetz Alebrand, head of ocean freight for DHL Global Forwarding, Americas, said: “This new solution coupled with the newest innovations and technology at DHL provides our customers with a more cost-effective service, helps them save money and represents a safe, streamlined, and more environmentally friendly way of transporting their non-hazardous liquids.”

The nature of the new three tank system leaves less residue, or heel. The yield achieved in the Reefertank during trial shipments from Mexico to Florida was 99.96 percent, DHL said, versus an average 97.5 percent yield in a tank container or a 40ft flexitank, equal to 157 gallons lower product loss.

In addition, the system increases temperature visibility while in transit with the ability to hold juice at a constant temperature between -3degC and +3degC, which DHL says virtually eliminates any possibility of juice spoiling or fermenting in transit, especially beneficial to organic juices.

The system also uses less packaging in total which allows for 2,100–4,200 lbs more actual payload.

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Tanks still on the march

According to the 2020 ITCO Global Tank Container Survey, the worldwide tank fleet grew by more than 5 percent over 2019.

The latest survey estimates that, at 1 January 2021, the global fleet stood at 686,650 units, compared with 652,350 on 1 January 2020. This represents a year-on-year growth of 5.26 percent, down from the 7.88 percent growth achieved in the previous year.

Not surprisingly market uncertainty during 2020 due to the global COVID-19 pandemic resulted in slower growth compared with previous years, although the fact that the industry kept growing when so many other sectors nosedived is a cause for celebration.

In 2020, a total of 35,800 tank containers were built, compared to 54,650 in 2019. By the end of 2020, the report says, there were clear signs of a recovery in orders for new equipment indicating a considerably improved situation in 2021. But it should be noted that since the report was written the emergence of the global economy from the pandemic looks like being much slower than hoped for at the start of this year.

Nevertheless, the benefits of the tank container as a 'just-in-time' mode of shipment are increasingly recognised, and operators are



Newport added more than 5,000 units to its fleet

succeeding in converting many cargoes previously shipped in drums or transported in chemical tankers to tank containers.

In addition, China continued to see significant growth in the use of tanks for domestic transport of bulk liquids, while inter-Asia – especially South-East Asia – tank operations continue to develop strongly.

Unlike in 2019, when much of the investment was undertaken by the leasing sector, 2020 saw moderate expansion of both operator-owned and leasing company fleets. The market remains strong – with attractive prices for new containers,

together with low interest rates and greater efficiencies by all sectors – contributing to a highly competitive industry.

The unexpected shortage of capacity on containerships from Asia to the main markets of North America and Europe led to significantly increased freight rates, which also impacted the industry.

Operators

The industry continues to be dominated on a global level by a relatively small number of major tank container operators and leasing companies. The top 10 operators account for over 246,630 tanks, 55 percent of the global operator fleet.

The largest global operator remains Stolt Tank Containers, followed by Hoyer Group. However, the biggest movement in terms of fleet growth was from third-placed Newport which added more than 5,000 units to its fleet bringing it to 37,500.

China Railway Logistics also invested significantly adding more than 2,300 tanks.

Lessors

The 10 biggest leasing companies account for over 250,000 tanks, about 79 percent of the leasing fleet. The top three companies, with nearly 159,000 tanks, control approximately half the total fleet.

Most of the largest leasing companies added to fleet numbers during 2020. However, most notable was the continued rise of new entrants to the market. CS Leasing, originally set up by dry box lessor Caru Container, has expanded now to 18,030 tanks, almost doubling in size from 2018. GEM Container renewed its investment



PCS Leasing has almost doubled its fleet since 2018

programme during the year, adding nearly 1,700 units to reach 11,500.

Manufacturers

Given the slower growth in the global fleet during 2020 it is not surprising that most of the major manufacturers reported lower volumes; the only exception being CRRC (China Railroad) which built 2,800 units against 1,510 in 2019.

Notably, recent entrant JJAP overtook two of the traditional manufacturing heavyweights – Welfit Oddy and Singamas – to become the third largest builder in 2020.

The full report can be downloaded from the ITCO website.

www.itco.org

MAJOR OPERATORS		2020	2019	2018
Stolt Tank Containers	UK	40,330	40,500	39,156
Hoyer Group	Germany	35,500	34,700	33,881
Newport	Netherlands	37,500	32,000	31,800
Bertschi Group	Switzerland	26,400	25,000	23,300
Bulkhaul	UK	24,000	23,000	22,500
China Railway Logistics	China	23,200	20,879	20,879
Den Hartogh Logistics	Netherlands	20,000	20,000	20,000
Intermodal Tank Transport	USA	17,000	17,000	13,500
Interflow (TCS)	UK	12,200	11,820	11,683
Eagletainer Logistics	Singapore	10,500	10,120	8,860
Suttons International	UK	9,500	9,000	8,500
VTG Tanktainer	Germany	9,494	9,250	9,150
Nichicon Tank	Japan	9,000	8,000	8,000
M&S Logistics	UK	8,443	8,400	8,050
Dana Liquid Bulk	USA	7,500	7,500	8,000

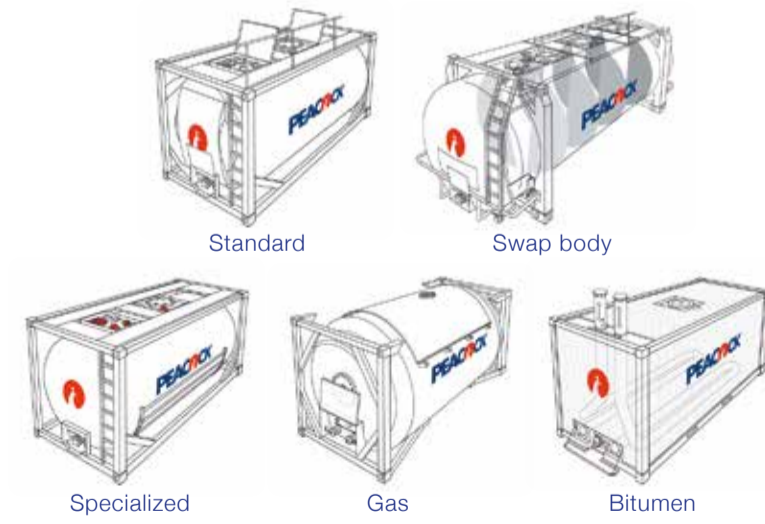
MAJOR LEASING COMPANIES		2020	2019	2018
EXSIF Worldwide	USA	66,476	64,000	58,500
Eurotainer	France	49,500	48,500	48,000
Seaco Global	Singapore	43,000	42,000	43,000
Trifleet Leasing	Netherlands	19,031	17,784	16,100
CS Leasing	USA	18,030	15,500	10,120
Raffles Lease	Singapore	16,000	15,100	13,240
Triton International	USA	13,000	12,500	13,500
GEM Containers	UK	11,500	9,800	9,200
Albatross Tank Leasing	China	7,500	9,500	9,500
Peacock Container	Netherlands	7,500	6,250	3,900
International Equipment	USA	7,100	6,000	6,000
NRS Group	Japan	7,000	7,000	7,000
TWS Tankcontainer	Germany	6,345	8,300	8,360
Multistar Leasing	South Africa	5,200	5,173	5,173
Tankspan Leasing	UK	3,119	3,406	3,502
Matlack Leasing	USA	2,500	2,500	2,500
MCM Management	Switzerland	2,000	1,700	1,390
GRP Multilogistics	Switzerland	1,600	1,600	1,600
Unitas Container Leasing	Bermuda	1,600	1,600	1,600
Combipass	France	1,500	1,500	1,500
Tristar Engineering	Switzerland	1,100	1,100	1,100
Noble Container Leasing	Hong Kong	1,300	1,300	1,000

MAJOR MANUFACTURERS		2020	2019	2018
CIMC Group	China	18,000	27,000	29,500
Nantong Tank Container	China	6,000	8,500	8,500
JJAP	China	3,000	3,310	1,500
CRRC (China Railroad)	China	2,800	1,510	3,600
Welfit Oddy	South Africa	2,200	5,150	4,850
Singamas	China	1,300	3,500	5,500
CXIC Group	China	500	2,000	2,500
Van Hool	Belgium	500	680	750



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With steady growth from one depot in 2017 to three today, Bayarea feels the market is responding to its efforts to make a difference



Tank containers can be cleaned on four static positions, while a fifth drive-through bay is dedicated for cleaning road tankers

Bayarea sets new standards in India

India's chemical and petrochemical industry has been riding a wave over the past decade.

Experiencing a steady compound annual growth rate of 10 percent for the past 10 years, the sector today accounts for 18 percent of manufacturing output and over 14 percent of total exports.

Covering more than 80,000 products, the chemical industry is currently worth around US\$178 billion and is projected to reach \$300 billion in the next five years, as part of the Indian Government's overarching vision of a \$5 trillion economy by 2025.

Not surprisingly, a robust logistics infrastructure has taken root across India to enable the efficient movement of raw materials and semi-finished product between production centres and final users. Tank containers play a vital role in this logistics network.

However, one part of this infrastructure could be said to lag behind. Tank depots are not always up to standards found in other regions, relying primarily on human operatives to clean tanks manually. Moreover, national and state government guidelines with regard to pollution and the treatment and disposal of waste materials are often not followed.

So, one depot services company, Bayarea Terminals LLP, has as its goal the setting of a new standard for the tank depot industry in India. With steady growth from one depot in 2017 to three today, the company feels the market is responding to its efforts to make a difference.

Established by senior partner Captain Navjit Singh Grewal with four decades of experience in the fields of shipping and logistics, Bayarea's senior management also includes junior partners Inderneil Grewal and Sharukh B Katrak.

The firm's depots are all situated near major ports along the country's west coast – Hazira, Kandla (both Gujarat) and Nhava Sheva (near Mumbai).

The company became the first to install an automated cleaning system supplied by Netherlands-based Gröninger. The cleaning facility is located in the city of Surat, near Hazira port. Tank containers can be

cleaned on four static positions, while a fifth drive-through bay is dedicated for cleaning road tankers. Two tanks can be cleaned at the same time, while multiple rotor jets per bay ensure a fast turnaround time for containers and tankers. After cleaning, a Gröninger Drypack makes sure there is no moisture left over so the container can be shipped and loaded immediately.

The cleaning equipment was prefabricated in a 20ft equipment container, which allowed Gröninger to reduce local installation time. Apart from the actual installation, the Gröninger engineer also put in a lot of effort to train the cleaners on how to operate and maintain the system.

Standard cleaning procedures for various residuals are stored in the PLC. By selecting the required program, the tank is cleaned automatically. The system allows for customised wash cycles to fit the needs of specialised food grade cargoes, such as kosher and halal.

Steam cleaning is one of Bayarea's specialisations. A multi-purpose appliance is used that is mess-free and environmentally friendly.

In addition to cleaning Bayarea offers a number of other services,



Container handling machines allow for storage of laden tanks of various types

such as a dedicated coating facility for tank containers, road tankers and bulk chemical storage tanks. The depots can supply food grade epoxy as well as anti-corrosion coatings as per client requirements.

Bayarea's team has been trained by AkzoNobel and has successfully coated a number of tanks under the chemicals firm's technical guidance. The facility is equipped with state-of-the-art Graco Blasters and sprayers to handle the coating procedure.

A repair and testing shed, allows for round the clock in-service inspections and repair work. Certified and skilled employees provide quality in conducting tank inspections, periodic inspections, in-service repairs, frame repairs, tank refurbishments and the replacement of cooling/heating systems. Welding work on steel, stainless steel and aluminium is carried out the company's certified welders.

Computer controlled heating installations means technicians can heat with steam, electricity or hot water, depending on physical and hazard properties of the product and the client's wishes.

The temperature is continuously logged and monitored so that the client's product is heated in a safe, efficient, controlled manner. The heating installation stops automatically when the desired temperature is reached and that temperature is then maintained until transport. The product can be heated continuously (24 hours per day) if desired.

Eco-friendly biofuel boilers give off the lowest emissions to generate steam for heating tank containers, and all effluent is sent to government-run treatment plants for responsible waste disposal.

Container handling machines allow for storage of laden tanks of various types, such as T6, T11, T14, T19, T50 and T75. And as Customs Notified facilities, Bayarea's depots do not need customs clearance.

In essence, Bayarea is doing its part to bring India's tank container services sector up to standards found elsewhere which will undoubtedly help to foster greater use of ISO tanks in the country's bulk liquids supply chain.

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Arcus takes majority stake in Peacock

The tank merger and acquisition wave continues. Hot on the heels of GATX's acquisition of Trifleet Leasing, in late February Arcus Infrastructure Partners announced that its Arcus European Infrastructure Fund 2 SCSp (AEIF2) had taken a majority stake in Peacock Container Holding.

Owning and operating a fleet of more than 7,500 tanks containers with capacities between 13,000 and 35,000 litres, Peacock is a medium-sized, though fast-growing tank lessor. Peacock's client base, contracted into short and medium term leases, predominantly serves European and Asian operators and chemical producers out of Singapore and Rotterdam. The company operates in an attractive specialised market, offering various types of tank container for lease as well as value add services, such as GPS tracking.

Arcus closed AEIF2, its second fund, in April 2020 making some €1.22 billion available for investment. Peacock is the fifth investment in this fund.

Most of Arcus's investments are largely focused on fixed European infrastructure assets. The fund manager injects capital into businesses, often selling the stake later on.

Two port groups have gone through this process. In 2011, Arcus bought UK-based Forth Ports for £751 million, then sold the operator in 2018 to Canadian pension fund manager Public Sector Pension Investment Board. In 2019 Arcus offloaded its stake in Belgium-headquartered Euroports to a consortium of other investors.

So Peacock represents something of a departure from the fund manager's previous strategy. Nicola Palmer, Arcus partner and transaction lead, said the investment house has been evaluating the ISO tank container leasing market, actively considering targets for a number of years.

"Specifically, we view the sector's resilience, growth prospects and strong infrastructure-like characteristics to be highly favourable," she said. "Peacock has a young, diversified fleet, a strong commercial and technical platform and an experienced management team."

Ian Harding, Arcus co-managing partner and head of origination, pointed out that while tank leasing is largely a new area of investment for infrastructure investors, Arcus investors will recognise that this deal has similarities to its previous investments in two rolling stock lessors – Alpha Trains and Angel Trains.

"These businesses all operate with similar fundamentals, predictable cash flows from robust medium-term contracts and plenty of opportunity for both organic and targeted fleet expansion," Harding said. "In addition, Peacock has a strong environmental, social, and governance (ESG) profile including favourable environmental credentials, sustainability benefits and a proven track record of safety making it an ideal investment for AEIF2."

In August 2015, Arcus sold its entire stake in UK-based Angel to existing shareholders, at a return "well above the entry investment case". During the Arcus ownership period, Angel expanded its rolling stock portfolio and invested £690 million in new build opportunities, procuring 336 additional vehicles.

Angel achieved 12 percent EBITDA growth during this time.

Luxembourg-based Alpha remains part of AEIF2, and Arcus says that since the acquisition, the company's fleet and EBITDA have more than tripled.

Therefore Peacock can look forward to a period of significant investment in its fleet, as well as value-added services, like telematics, fleet management solutions, and supply chain optimisation. The tank lessor's current fleet consists of standard tanks and more specialised units. Standard tanks can hold various product categories such as chemicals, foodstuffs and liquid pharmaceuticals, while specialised tanks hold products such as bitumen and liquefied gases.

The company operates primarily out of Singapore and Rotterdam and via agents in the US and Middle East.

Peacock CEO Jesse Vermeijden stated: "I have personally seen our company grow from a small Benelux-focused lessor to what it is today, and I am extremely proud of our loyal and hard-working team for reaching this milestone. Arcus' experience with managing transport assets and its appreciation for the heritage of our business makes it a strong fit for Peacock. Just as importantly we are fully aligned with Arcus' forward-thinking, quality focused strategy, sustainability principles, and ambition for growth in the market."



Peacock's client base predominantly serves European and Asian operators and chemical producers out of Singapore and Rotterdam

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Rootselaar back building tank trailers

Tankbouw Rootselaar is rejoining the business of tank trailer manufacturing.

The acquisition of tank builder Hobur-Twente means that the company's production effectively came under the charge of Rootselaar in January, and the agreement includes work in process to finalise the current order portfolio.

The first aerosol tank trailers were destined for the UK. The factory will also continue to carry out high-quality maintenance under the responsibility of Rootselaar.

Rootselaar built tank trailers in the past, but the acquisition breathes new life into the activity. The emphasis will be on lightweight, high volume tanks. Trailers with larger volumes and less maintenance can be offered because of Tankbouw Rootselaar's

knowledge of high strength duplex materials. Such capabilities will significantly reduce the total cost of ownership of gas trailers, for example.

Rootselaar is a sister company of Cryovat, both members of the Rootselaar Group, and was founded in 1957 with a focus on the Dutch market. Over time Rootselaar has grown into a multinational specialist in high-pressure vessels, with subsidiaries in Asia and the Middle East, while the company's headquarters are in Nijkerk, the Netherlands.

According to group CEO Wim van Rootselaar, the acquired activities are a great addition to the current portfolio. "Hobur's high-



Hobur-Twente's production effectively came under the charge of Rootselaar in January

quality tank trailers have a reputation that is consistent with our company's philosophy. Every transporter of liquid gases, as well as every car owner, is familiar with the impressive trailers with the well-known Hobur logo. It is an honour to have the opportunity to continue its production," he said.

www.tankbouwrootselaar.com

Bertschi investing for the future despite pandemic

As with just about every business worldwide, the pandemic made 2020 a challenging year for Bertschi Group.

The outbreak of the COVID-19 pandemic and its rapid spread across the globe had a significant effect on financial results. Imposed lockdowns resulted in a drop in global demand for durable consumer goods. This was particularly evident in the automotive industry, where demand collapsed. This led to a reduction in demand for primary chemical products, resulting in a substantial decline in sales in Bertschi's core business of chemical logistics. Demand picked up from the fall, driven by the end of the first lockdown and the rapid recovery seen in Asia.

At CHF 900 million, sales in 2020 were nine percent lower than the record sales of the previous year. In addition, the strengthening of the Swiss franc against the euro and the US dollar also had a significant impact, as Bertschi generates less than five percent of its sales in Switzerland. Adjusted for currency effects, sales were down five percent. Earnings were maintained thanks to cost discipline.

Group CEO Jan Arnet said that thanks to the group's advanced digitalisation of its work processes, which enabled home office for a large part of the 3,100-strong workforce, and the early



The dangerous goods container storage at Schwarzheide

implementation of protective measures at the workplaces, Bertschi was able to offer employees a safe working environment at all times.

The group also invested heavily in the company's future during 2020. The container fleet grew by 1,200 units to a total of 37,800. As a result of strong demand, the capacity of the dangerous goods container storage facility at the Schwarzheide site (eastern Germany) was doubled. COVID-19 accelerated the digital transformation, making business processes more efficient, secure and customer-friendly as a result. Much was invested to offer customers end-to-end visibility of complex supply chains that often involve a combination of rail, road and sea.

The construction of a logistics hub for dangerous liquid chemicals in Zhangjiagang in the greater Shanghai area was started shortly before the start of the year and is the biggest single investment in Bertschi's history. Three warehouses for different classes of dangerous goods, with a total capacity of 25,000 pallets, will be built on the 67,000 sqm plot.

To complement these, a dangerous goods containerised tank farm will be constructed with a capacity of about 1,000 tank containers for storing bulk liquid loads. The addition of automatic drum- and

IBC-filling systems and tank container heating stations will create a complete logistics hub for the handling, filling and storage of liquid chemical products in China.

Bertschi is also investing heavily in Europe. It operates its own transshipment terminal at Port of Rotterdam for transferring loads from road to rail, combined with a hazmat container storage area. This facility will be more than doubled in size in 2021 to offer a total capacity of 2,000 storage locations.

Brexit will also lead to growing demand for storage in the UK. Bertschi operates a central warehouse for bulk and packed import-plastics from overseas in Middlesbrough (northern England). The capacity of this facility will be significantly increased by an extension on an adjacent property. Bertschi is also planning to switch more shipments from road to rail in the growing market for transport to south-east Europe. To this end, capacity is being added at the Ploiesti rail terminal near Bucharest, Romania, acquired in 2019. Bertschi is also continuing to invest in its specialised container fleet in order to accommodate growth in the number of shipments.

Along with the investment in assets and processes, a number of promotions and appointments are designed to strengthen Bertschi's management team.

Marc Houtermans has joined the company assuming responsibility for the business unit solutions. Houtermans brings many years of experience in the global chemicals industry, where he has worked in a number of management roles.

Houtermans' predecessor Christian Bart is moving to the business unit liquids, Bertschi's largest unit, where he will be responsible for management of the entire operational business.

As part of a long-term succession plan, Christoph Wälchli, who has been head of operations for liquids, takes over the management of the group's 30-plus subsidiaries across Europe.

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Visualisation of the Zhangjiagang logistics hub



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Titanium tanks for Hoyer

Under contract to a major chemical industry customer, Hoyer Group engineers pooled their specialist knowledge and developed a new generation of titanium tank containers for highly corrosive dangerous goods.

After two years of development work and construction time, two units were brought into operation in January this year. The project team made a successful breakthrough by attaching the steel frame to the titanium tank; the ingenious heating system is another achievement.

Developing tank containers for particular dangerous goods requires the highest degree of quality, safety, reliability and sustainability, and construction materials compatibility is always given top priority. The two new titanium tank containers were developed and built specifically to transport molten MCA (monochloroacetic acid).

Hoyer leases the containers to a chemical industry customer with worldwide operations, for which it transports the highly corrosive product at elevated temperature. Because conventional rubberised or coated stainless steel tank containers do not withstand the product requirements and transport conditions, Hoyer developed a customised solution made of titanium.

Engineering director Hans Demarest explained: "Corrosive dangerous goods are among the most challenging products from the logistics point of view. Managing the supply chain on the manufacturer's side, maintaining optimum transport conditions and delivery to the end customers on the haulier's side require special know-how and experience."

Attaching the titanium tank to the stainless steel frame was a challenge for the project team, because normally the two construction materials cannot be bonded together due to their properties. Together with well-known manufacturers, Hoyer found a new way to combine the tank bodies successfully with the frame.



Hoyer's new titanium tank containers were developed and built specifically to transport molten MCA

Another key component is the specially-developed heating system with Ex approval, which ensures that the required cargo temperature is maintained until it is unloaded.

Like all of Hoyer's newly-built tank containers, the two new acquisitions are also equipped with Smart Technology.

Titanium is not only resistant to corrosive products. Its durability is another of the metal's positive aspects. "In Hoyer, we already included the first titanium tank containers into our fleet 30 years ago. The three units from the early days are still in use today." This also justifies their considerably higher procurement price.

For this project, Hoyer worked hand-in-hand with an external tank container manufacturer and a renowned producer of titanium vessels. Their experience and know-how contributed to the development of an optimum solution. Hoyer's project team prepared the tank container specifications, controlled the entire production operation from planning to delivery, and were responsible for continuous quality assurance. Its experts are also the first point of contact for technical advice.

www.hoyer-group.com



The 35,000 litre baffled swap bodies are the first of a batch of 225 ordered by Den Hartogh from Singamas

Swap bodies for DH

Twenty-nine new swap body tanks recently arrived at Den Hartogh's Logistics Service Center in Antwerp.

The 35,000 litre baffled swap bodies are the first of a batch of 225 ordered from Singamas. They are all fully ground operated (including handrail) and equipped with an IMT thermometer for remote connectivity.

Den Hartogh has also begun using LNG-powered trucks for new a Shell contract. The long-term logistics contract is with the Shell Rheinland Refinery in Cologne, Germany. The deployment of the Volvo FH LNG trucks marks a long-standing partnership between Den Hartogh and Shell and their mutual goal of sustainability.

The four trucks are deployed on a dedicated route for transport of dimethyl ether (DME) for Shell Deutschland Oil GmbH. Shell's intention is to help LNG reach an impactful scale in the heavy-duty road transport sector and thus contribute to lower emissions of CO2 and air pollutants despite the continuing increase in road freight transport.

www.denhartogh.com

Chemion opens new terminal

Chemion has expanded its storage capacity at the Dormagen Chempark, Germany.

Covering 15,000 sqm, space for 1,000 freight and tank containers has been created in the northwestern part of the Chempark. Construction began in September 2019 and following a trial operation, the new CT DOR II terminal has now started regular operation.

Chemion managing director Dr Hans Richter said the expansion is an important milestone for the company and its customers, primarily the chemicals manufacturers on the site, and an important investment in the future.

The terminal is required for the supply and disposal of production companies, which increasingly rely on the use of tank containers. With the commissioning of the new capacity, two Chemion terminals are now available at Dormagen to store raw materials as well as intermediate and end products.

"Safety is an essential core of our company's mission statement," emphasised Günther Schoofs, project manager. "With our partner Köster GmbH, we have implemented safety and quality standards

Space for 1,000 freight and tank containers has been created in the northwestern part of the Dormagen Chempark



that are far above the legally required requirements."

For example, the terminal has extensive collection and retention capacities as well as a state-of-the-art fire alarm and extinguishing system.

www.chemion.de



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Rinnen relies on Savvy solution



Savvy's web-based platform enables Rinnen to maintain an overview of all transport variables such as current location, temperature, pressure, and container fill level at all times

Shipping liquid goods that have to be maintained at a certain temperature are a logistics challenge.

To monitor temperature-controlled shipments, logistics companies use transport telematics. Sensors continuously measure the temperature of the cargo. If there is a critical deviation, drivers receive an alarm notification by radio and can respond accordingly. Bulk transport specialist Rinnen has now gained an even more precise overview of its liquid goods thanks to an innovative Savvy Telematic Systems solution.

A family-owned company, Rinnen was established in 1943 in Duisburg, Germany. Since the 1970s, the company has been focused on the shipment of liquid bulk goods in tank containers, employing about 750 people and has a network of locations across Europe. Rinnen strives to optimise its services for its customers, which include global players in the chemical sector. This is why the company wanted a better solution for temperature control. Previously, it used sensors installed on the outside of its tanks. However, these measurements were imprecise because of transmission losses due to the casing. In particular, it was impossible to obtain exact measurement results for products whose temperature deviates only slightly from outside temperatures.

Measuring inside the tank

Each liquid has a temperature range that it must not fall below or exceed, for example from 18 to 40 degsC. Rinnen wants to provide the highest possible degree of shipment safety to its customers even for products with a narrow temperature range. So, Savvy has provided a solution that does exactly that.

"We have developed a device that measures the temperature inside the tank," explains Bernhard Weiland, key account manager for the Swiss telematics provider. "A replaceable thermowell with a PT 1000 sensor is inserted into the tank from the top. The sensor is only separated from the liquid by the tube fitting, thereby providing exact measurements."

The sensor is connected to the Savvy Sense Gateway-ExR, an ATEX-certified telematics unit installed on the top of the container. The Gateway device communicates via radio with the CargoTrac base

unit. The unit sends data to the Savvy Synergy Enterprise Portal, and this web-based platform enables the Rinnen fleet management team to maintain an overview of all transport variables such as current location, temperature, pressure, and container fill level at all times.

Realistic ETAs

Savvy also provides Rinnen with a seamless track & trace solution. This makes it possible to determine the estimated time of arrival (ETA). Up to now, ETA was calculated and displayed using a telematics system in its own vehicles. But the downside was that it was not possible to maintain an overview in the case of combined shipments.

"We were able to provide a realistic ETA for the initial and final legs by truck but not during the main leg via rail, inland waterway or sea," explains Oliver Brucks, head of vehicle fleet management at Rinnen. "Savvy has enabled us to close this gap. Every 15 minutes, the Cargo-Trac units on the tank containers send out their GPS position to the Synergy Portal, which then calculates the current ETA. This way we can provide our customers with current data when they need to plan their delivery, regardless of whether the containers are located on our trucks or are being shipped with one of our freight partners."

In the chemical industry, ETA is a key variable. Just-in-time systems are used for a lot of production processes, which is why seamless supply chain co-ordination is essential.

Exact measurement values

In a mutual pilot project, Rinnen and Savvy are also working to determine fill levels even more reliably. To determine if a tank container is full or empty, the logistics company currently relies on on-site data. The ERP system assigns the status 'full' or 'empty' to a container when it passes through or arrives at certain geographical positions, such as a transshipment point, a border crossing or a final destination.

For example, the status changes to 'empty' as soon as a tank container leaves the point of interest (POI) such as 'Factory Customer XY'. However, imprecise information concerning fill levels cannot be

completely ruled out with this method because the rules cannot cover all possible POIs.

An innovative solution would ensure a higher degree of precision. Instead of deriving the fill levels indirectly from the position data, sensors detect even the smallest deformations in the container reinforcement struts – a reliable indicator of the container's fill level. In addition, other influencing factors are included that could otherwise distort the results if they are not considered.

The two companies are developing an algorithm which generates a robust value under consideration of different factors in order to calculate fill levels reliably. With this method Rinnen wants to increase transport safety further. Thanks to the telematic data, the forwarding company has transport statuses constantly under control. If the data deviates from the target values, the software automatically sends alarm notifications to enable drivers and fleet managers to respond immediately. Drivers are connected per tablet with the Synergy Portal, while the managing clerks have access per web-browser on their desktop PC. The alarms can be configured so that designated persons receive email notifications and that others are notified when the first group of people cannot be reached.

Transparency

"Our customers need a comprehensive and precise overview of the status of their shipments at all times," says Oliver Brucks. "We can now meet these expectations even better. Both with regard to temperature as well as ETA we have been able to improve precision and data accessibility significantly thanks to Savvy." In this context, the Synergy Portal serves as a collaboration platform.

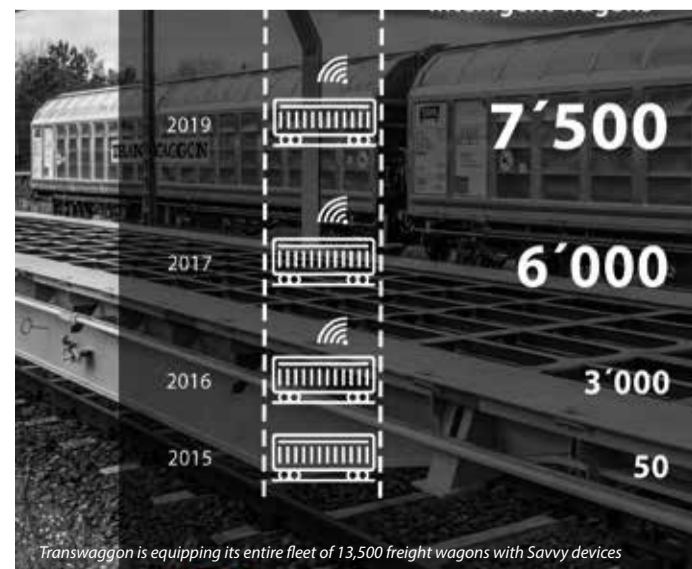
With the aid of this tool, Rinnen can allow customers who so desire to gain direct access to the telematic data. They receive a common user access simply significantly log on to the portal. At one glance, they can see the current position of the shipments and the ETA on a map. Data concerning temperature, fill stand, etc. are also shown in real-time.

"The customers that already use the portal are delighted," says Brucks. "They not only have the benefit of increased transport safety but also improved tracking & tracing. If customs clearance takes longer than usual and delivery is delayed, they know that immediately and can adjust their production plans accordingly. Thanks to the collaboration with Savvy, a competent and innovative partner, we have added true value for supply-chain-management."

Transwaggon digitalises

Meanwhile, Savvy is continuing to help rail operator Transwaggon Group press ahead with its fleet digitalisation.

Headquartered in Zug, Switzerland, Transwaggon is equipping its entire fleet of 13,500 freight wagons with Savvy devices. By taking this step, the rail operator is extending its co-operation with Savvy. During the next three years, another 7,000 CargoTrac ExR MI telematics units will be installed, so that the entire fleet is equipped



Transwaggon is equipping its entire fleet of 13,500 freight wagons with Savvy devices

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Creating fluid business connections

IMT, VTG ink long-term partnership

Intermodal Telematics (IMT) and VTG have agreed on a long-term partnership to extend the digitisation of VTG's rail wagon fleet.

The first step in this new arrangement will be the delivery of 15,000 of IMT's CLT20-Ex main GPS units over the next 15 months, with the potential to expand that number substantially over the coming years. The solar powered CLT20-Ex enables unlimited wireless data transfer allowing for optimal accuracy, which is an ideal match for the high requirements in quality and safety that VTG sets in the field of telematics and information provision for its customers.

"VTG selected IMT as its new additional telematics partner due to its solution-driven approach towards meeting our specific hardware requirements," said Dr Hanno Schell, head of technical innovations at VTG. "The fact that IMT has its own R&D team with experienced hardware, software as well as firmware engineers and offers a high degree of flexibility thanks to full in-house production was another key factor in our decision making. We're continuing to digitise our entire VTG fleet and IMT will help us boost our goals in data integration and global connectivity."

The CLT20-Ex illustrates IMT's innovative strength and scope as a leading telematics solution provider. The solar powered GPS unit enables unlimited data transfer and long-lasting operational

reliability on rail wagons and other assets that do not have their own power source. As the CLT20-Ex serves as a central hub for all IMT sensors installed on a rail wagon, it forms the solid basis for near real-time information on location (worldwide), load status, and cargo related values as temperature, liquid levels and pressure.

IMT and VTG have been working together for the past three years on different projects, but the new partnership agreement will deepen the collaboration. Dethmer Drenth, IMT's founder and managing director, commented: "We are very happy about this solid partnership with VTG. VTG offers its customers the highest service and transparency. Together, we want to create change through innovation and technical leadership. When it comes to transporting goods for the mineral oil, energy or chemical industry, maximum insight into and accurate monitoring of the fleet operation is essential to ensure high quality of both the goods and the transport itself. VTG connects worlds, IMT connects data and transforms data in valuable information."

IMT's solution offers better insights, enabling customers to better monitor product quality and improve the safety and efficiency of the logistics process. All collected and transmitted data about the rail wagon and its cargo by IMT will be collated in VTG's platform.

"An accurate data provision, worldwide monitoring, analysis and reporting and, if necessary, timely intervention are of unprecedented



IMT and VTG agreed on a long-term partnership to extend the digitisation of VTG's rail wagon fleet

value in the transport of liquids and sensitive goods," Schell added. "IMT's solution provides us with valuable insights and added value for our customers' daily practice. We want to deliver efficiency gains, safety improvements and a reduction of the overall environmental footprint. As such, we appreciate the close co-operation with IMT's software engineering team in order to coordinate the seamless integration of the provided data. Together, we're creating a sustainable digital environment that meets VTG's as well as our customers' information needs."

www.intermodaltelematics.com

with the devices.

Along the entire route, the devices provide data such as precise GPS/GNSS position data in real-time. Thanks to this, Transwaggon and its customers gain full transparency concerning the position of the wagons – from loading to unloading. This makes it possible to plan and process goods transport more efficiently.

Transwaggon leases out part of its fleet to a logistics provider that specialises in rail transport for the Scandinavian lumber industry. To be used in northern Europe, the telematics units have to withstand the harshest climatic conditions. The batteries in Savvy devices work reliably, even in temperatures up to -40 degsC. The telematic units are not only very robust, they determine the position with an accuracy of up to 2m.

At more than 1,000 points of interest (POI), such as loading and unloading stations or shunting yards, the software automatically calculates the distance to the next 10 POIs. This makes it possible for transport planners to maintain an overview of all their shipments and the exact position of each individual wagon. This seamless tracking & tracing enables Transwaggon's customers to organise their processes more efficiently. In addition, they benefit from increased shipping safety.

CargoTrac-ExR MI devices have shock detectors: built-in sensors detect vibrations for which threshold values can be defined in x-, y-, and z- directions. If a threshold value is exceeded, the engine driver and the planner can immediately receive a notification.

"After our very good experiences so far, we are looking forward to the second large project phase," says Daniel Schmid, Transwaggon's head of business development and procurement. "The goal is to have all of our freight wagons digitalized with Savvy devices by 2023. This means that we can provide our customers with a state-of-the-art telematics solution that helps them continuously to improve their logistics processes. Savvy has proven itself to be an excellent partner, one that works with us proactively and constructively to obtain best-possible solutions."

Savvy CEO Aida Kaeser adds: "We highly value the loyal and co-operative partnership with Transwaggon. We are delighted that, after five years, Transwaggon has once again chosen Savvy. This strengthens our conviction to develop top quality telematics devices that work reliably and very accurately even in extremely cold conditions. Our innovative products generate important competitive advantages for companies in the chemical, transport and logistics sectors."

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Nexxiot has steadily been building a strong portfolio of customers in rail transport.

Since last year, Polish rail operator Transchem has been working with Zurich-based Nexxiot technology on the digitalisation of its fleet.

The two companies agreed a co-operation venture to this effect, which started in the autumn of 2020. Transchem's main aim is to increase the sustainability and quality control of the goods it ships. Nexxiot now enables Transchem to gather and analyse the data it needs to make better decisions for improved operational performances.

"We noticed some of our partners were not as focused on the sustainability and emissions topic as we are," says Rafal Cisek, director for international co-operation at Transchem. "We want to ensure we can say with confidence that we have done all we can to reduce unnecessary emissions and maximise the quality of the goods we transport. Our customers depend on us to do this for them."

Transchem ships liquid bulk goods, many of which are temperature-sensitive. Some of the chemicals are caustic or flammable, meaning monitoring hardware is required that is intrinsically safe to use in hazardous industrial environments. Other goods need to be actively monitored for temperature so they can unload them at the right place and time. With tar or bitumen for example, if it's too cold it won't flow out of the pipes.

"A lot of the time we feel like our partners overheat the product to be on the 'safe' side but this results in excess costs and wasted heat energy which leads to soaring emissions," says Cisek. The Nexxiot solution is able to meet all these requirements to bring transparency to Transchem's processes.

Cisek chose Nexxiot as a technology partner because the latter has an integrated approach to the technology. "This now allows us to make assessments in real time on deployment of heating solutions and decide how much time is required to manage loading and unloading schedules. This means we save on shunting by managing the moves better, we provide better quality for customers and we get better visibility on partner services to ensure we reach our own sustainability goals."

Transchem looked into buying all technology parts and putting it together itself but that remains unfeasible as it's too far from the core business. Nexxiot provides an integrated solution with sensors, gateway devices, device and data management and all the analytics, reporting that's required to extract profit.

Gas wagons

In Germany, Tyczka Gase, a subsidiary of Tyczka GmbH, is equipping its entire fleet with IoT technology from Nexxiot. By the end of this year, all compressed gas tank cars will be upgraded with a Globehopper module from the Swiss scale-up. Tyczka Gase can thus guarantee customers full transparency and traceability of the transported goods worldwide. The sustainability of the supply chain is also strengthened due to better planning. Around half of the Tyczka fleet is already equipped with the Globehopper.

"We have been investing heavily in the development and modernisation of our fleet for years," says Sven Kruck, of Tyczka Gase. "By taking the step of completely digitalising it, we are now meeting several challenges. Firstly, we are interested in making our fleet and processes future-proof. Equipping the tank car fleet with IoT devices is part of our innovation and sustainability strategy. On the other hand, we are responding to the needs of our customers, who want more transparency during transport."

Based on a successful joint test phase, which began in 2017, Nexxiot was selected as the technology supplier. Customers of Tyczka now have the possibility to view forecasts of predicted arrival times, delay patterns, shock events and the utilisation of their wagons.

The holding company and subsidiaries of Tyczka Gase handle



around 50 percent of their transports in the liquid gas sector by rail. As transport safety is the top priority for Tyczka, existing certifications for Nexxiot's hardware were decisive for entering into the co-operation. The Globehopper is certified with IECEx and the ATEX labels IIC and IIIC and can therefore also be used in areas where a permanent explosion risk exists.

"Rail plays a major role for us as an environmentally friendly mode of transport," continues Kruck. "Its share of the transport mix will hopefully increase in the coming years, which is why we are already investing in efficient and modern equipment for our wagons. The solution from Nexxiot supports us and our clients in making data-driven decisions on transport and thus eliminates inefficient processes."

In addition to the Globehopper modules, which are attached to the tank wagons, Nexxiot is also responsible for processing and evaluating the generated data for Tyczka Gase. Tyczka's clients have access to the analyses via the Nexxiot cloud platform, but integration into in-house ERP systems is also possible.

VTG's new hardware

At the end of 2020, VTG became the first partner to be equipped with Nexxiot's new Globehopper introduced late 2019.

The updated version comes with updated Bluetooth Low Energy protocol which helps when connecting sensors in a modular way. It provides options to connect via 4G and is already prepared for 5G. Besides improved localisation the level of ATEX certification has also been further increased. The devices are all zero maintenance with energy harvesting and low power consumption as standard.

In 2016 VTG decided to equip its entire European rail fleet with Nexxiot hardware. The asset leasing firm's chief operating officer Europe and chief safety officer Sven Wellbrock is a believer in combined transport, making rail properly align with customers' needs by syncing it with other transport types so there are smooth transitions. For example, rail can take bulky goods on the longest legs of the journey and road transport can take care of the last mile to the customer. This approach means that the best mode is used for the appropriate part of the journey and the net effect is more sustainable and predictable cargo. This is only possible when each rail wagon is equipped with technology to provide data on critical parameters.

Head of innovation Hanno Schell is leading the adoption of new technologies within the company. He understands the importance of delivering reliability, transparency and the tools that cargo owners want.

"Transparency in accurate mileage, impact events, quality of goods and reliable arrival times (ETA) are all now essential to keep our customers happy," he says. "The pandemic has reminded us of just how critical is rail freight's role in the transport system as a whole. We seek every technological advantage to strengthen the position of rail, the eco-friendly transport mode, and develop a collaborative schedule for a sustainable mobility transition."

VTG also uses temperature sensors developed by Nexxiot to monitor the condition of high-value, temperature sensitive goods and in real time. Some 3,000 freight cars are being equipped with sensors on customer request, which can record the temperature of the tank, the heating system and the outlet. The generated data are consolidated and processed in the Nexxiot Connect Cloud.

Detailed evaluations and further analyses are available to customers on the VTG platform traigo. In the event of temperature changes, all authorised transport participants receive a notification via the system. This ensures that the transported goods reach their destination in perfect condition.

"Some products are no longer usable even after small temperature variations. That is why we want to guarantee our customers complete documentation when transporting high-value chemicals or other temperature-sensitive goods," says Schell. "With launching the Nexxiot solution, we are going one step further. The notification of anomalies enables real-time action to be taken to prevent temperature fluctuations."

www.nexxiot.com



Around half of the Tyczka fleet is already equipped with the Globehopper



The new Globehopper comes with updated Bluetooth Low Energy protocol which helps when connecting sensors in a modular way

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MRI offers M&S a host of opportunities

UK-based M&S Logistics is taking its tank container operations to the cloud with MRI Intermodal SaaS platform.

Headquartered in Sandbach, UK, M&S today operates a fleet of over 8,500 tanks, with regional offices in Asia, Brazil, China, France, Netherlands, South Africa, the UAE and the USA, plus a worldwide network of agents.

While the COVID-19 pandemic required M&S to make various changes to business operations, not least to support staff in working from home, demand remained strong and international growth continued.

M&S is actively pursuing further growth across Europe and beyond, and plans to add around 400 new tank containers to its fleet during 2021.

The company had been using specialist tank container operating and rental software from MRI Intermodal (formerly RAM Intermodal) for many years, hosted in the UK on servers run by a third party. Rapid business growth had put pressure on this hosting structure and in 2018/19 the company faced the decision whether to upgrade to new servers or move to the cloud, explains Rob Hughes, global IT manager at M&S.

Key drivers for the decision were how best to ensure robust business continuity and the ability to scale up quickly to support future growth. "Hosting the MRI software on an older server was also slowing down software updates and enhancements and we knew that we needed to address these issues," adds Hughes.

The company turned to MRI as its long-term software partner to discuss cloud hosting and explore the benefits of migrating to the MRI SaaS platform. Designed 'from the ground up' and continuously enhanced over many years, MRI's SaaS solution is dedicated exclusively to clients using MRI software. The platform is powered by data centres in the UK, Singapore and USA and all infrastructure is configured for industry best practice and specifically for the software solutions that it hosts. All hardware is owned, managed and maintained directly by MRI engineers, which allows for close continual control over network infrastructure and data security, delivering a secure, scalable, high-performance hosting environment.

A major consideration in deciding whether to move to the cloud was cost, notes Hughes. "The MRI SaaS platform is more expensive than our previous server infrastructure. There's always a hesitancy with a big investment being in the cloud, but our senior team decided that the benefits outweighed the extra cost.

"Having worked for many years with MRI, we had faith in their people and technology," continues Hughes. "The MRI team was



Rapid business growth put pressure on M&S to decide whether to upgrade to new servers or move to the cloud

with us all the way. They gave us a project timeline that they stuck to and were on hand throughout to make the migration process as smooth as possible." Cloud hosting for the M&S tank container operating software went live in February 2020.

Having operated in the cloud for over a year now, M&S has seen clear improvements in the speed, performance, and security of its operating software, says Hughes. With the new cloud set-up, MRI engineers can resolve issues much more quickly in the background. The new web apps also look good and are easy to work with. "We have been impressed with the results. Having successfully migrated our MRI Monitor4000 tank operating system onto the SaaS platform, we are now also planning to do the same with our MRI Rental4000 tank leasing software."

Data and cyber security are, of course, major areas of attention, even more so during the pandemic with staff working from home and relying on their own internet connections. The MRI SaaS platform has very robust security at the data and hardware levels and Hughes admits that managing the higher level of password security required has been challenging at times. With the help of MRI, however, M&S has now implemented Single-Sign-On (SSO) for its global team to alleviate this.

Having settled in with the new cloud model, M&S is now looking at adding further value to its data with business intelligence tools, advanced analytics and interfaces to other systems. In the future, this could well include interfaces to customer portals and other third

party platforms as the tank container industry accelerates the pace of digitalisation, like so many other sectors of supply chain, logistics and shipping.

"MRI SaaS provides us with a stable and scalable hosting environment for other apps to be bolted on," says Hughes. M&S is now testing out API interfaces and has already gone live in-house with a link between its tank operating and financial systems to generate new insights on job profitability and other key business metrics.

Open systems and interoperability are very much the direction of travel for MRI across its software and cloud platform, says marketing manager Nicola Byers. "We aim to support customers like M&S on their digitalisation journey with a 'plug and play' approach that makes it as easy as possible to interface with other systems. At MRI we remain focused on our speciality area of asset management software for intermodal logistics and other industries. As digitalisation advances, our ethos is to allow everyone to play to their strengths with APIs and other tools that enable connectivity across different systems and platforms."

"Moving to the MRI SaaS cloud platform has helped us future-proof our business. We have the infrastructure we need to ride the next wave of digitalisation both inside our business and with clients, suppliers, and partners," concludes Hughes.

www.mriintermodal.com

Epicor – out of the box and into the cloud

Epicor is a leading provider of cloud ERP solutions, with industry and vertical capabilities to attain end-to-end solutions.

The company specialises in distribution, discrete manufacturing, process manufacturing and building supplies industries.

Mark Hughes, regional vice president, UK & Ireland for Epicor Software says customers benefit from out-of-the-box features to satisfy business needs and achieve greater efficiencies, while sharing best-practices and industry expertise through its people and software.

"Epicor Prophet 21 is unique in that it is the only cloud-based ERP solution designed specifically for distribution," he says. "Many other ERP solutions claim to be 'distribution-specific' but require various bolt-ons and third party add-ons, which can have a detrimental effect on future upgrades and integrations.

"Additionally, other 'distribution platforms' are hosted in the cloud by a third party, rather than having a dedicated cloud environment. These differentiators drive significant financial savings for our customers," Hughes continues.

The Epicor Prophet 21 team is made up of dedicated experts who combine both distribution industry understanding and distribution software knowledge, creating expertise for distributors when it comes to driving effective digital transformation.

During the past 12 months many organisations have seen significant disruption within their supply chains, from factors that could not have been predicted or planned for.

Industrial companies that rely on staying connected to global suppliers have in some cases been exposed to weak points in processes and effective supply chain management. Using Epicor



Mark Hughes – Epicor Prophet 21 is unique in that it is the only cloud-based ERP solution designed specifically for distribution

solutions helps businesses move towards smart supply chains creating efficiencies in several ways. For example, providing increased visibility into sales and inventory, organisations can gather better insight to help supply chain teams make better purchasing decisions, or using artificial intelligence (AI) to suggest purchase orders, optimising stock levels and their associated costs, while also ensuring orders can be fulfilled with sustainable lead times. Epicor solutions also allow organisations to stay connected with their extended supply chain with real-time tracking of orders that are due to be delivered; whether they are on a vessel, in a container or being shipped, enabling supply chain teams to distinguish when inventory is available and if action is required due to any issues. In addition, this links to sales and operations teams, as they have real-time visibility of when stock is arriving, so they can begin pre-allocating stock in advance of arrival, ensuring the right product goes to the right customers.

"Epicor has the functionality to integrate with customers and suppliers via EDI, critical to drive business growth in the digital age,"

Hughes adds. "This allows supply chain teams to integrate seamlessly with customers and suppliers, automating what was previously a manual entry process, to save time and achieve greater visibility by connecting to their ecosystem."

For 50 years Epicor has been providing solutions to help customers achieve complete supply chain management (SCM), over the years the company innovated its solutions with the latest technology, while keeping the focus on latest SCM principles. "As a broader company wide solution we have always offered seamless integration with other key core areas to achieve end-to-end visibility," comments Hughes. "As a result, Epicor helps businesses co-ordinate sales, customer services, production, warehousing, inventory, distribution, planning, procurement, finance and delivery teams to respond efficiently to customer demand while minimising costs and having greater control through increased visibility."

For bulk logistics chains, Epicor Prophet 21 is designed specifically for wholesale and distribution industries, where many customers immerse their operations around bulk inputs. Prophet 21 offers modules such as QuickShip, to integrate with third party courier services, as well as a built-in wireless warehouse management system for improved warehouse efficiency with bulk picking, packing and shipping mechanisms. In addition, many distributors supplying industrial goods offer value-added services, which Prophet 21 caters for. This includes a Service & Maintenance module, Manufacturing, Kits & Assemblies, and a Rentals module.

For 50 years Epicor has been providing solutions to help customers achieve complete supply chain management (SCM), over the years the company innovated its solutions with the latest technology, while keeping the focus on latest SCM principles.

"As a broader company wide solution we have always offered seamless integration with other key core areas to achieve end-to-end visibility," comments Hughes.

"As a result, Epicor helps businesses co-ordinate sales, customer services, production, warehousing, inventory, distribution, planning, procurement, finance and delivery teams to respond efficiently to customer demand while minimising costs and having greater control through increased visibility."

For bulk logistics chains, Epicor Prophet 21 is designed specifically for wholesale and distribution industries, where many customers immerse their operations around bulk inputs. Prophet 21 offers modules such as QuickShip, to integrate with third party courier services, as well as a built-in wireless warehouse management system for improved warehouse efficiency with bulk picking, packing and shipping mechanisms. In addition, many distributors supplying industrial goods offer value-added services, which Prophet 21 caters for. This includes a Service & Maintenance module, Manufacturing, Kits & Assemblies, and a Rentals module.

www.epicor.com

X-treme cladding

Tank containers last for decades. During this time, they transport gases, oils, milk and other liquids – and an image. The exterior shell is the operator's business card.

Fibre reinforced plastics manufacturer Lamilux Composites says that cladding a container with Lamilux X-treme glass-fibre reinforced plastic permanently protects the representative shell from UV, weather and mechanical effects.

Lamilux X-treme is a composite material with the maximum possible content of reinforcement fibres in a highly elastic epoxy resin matrix. The shock-resistant material reduces maintenance and repair costs, thus reducing container downtime.

Tank containers of all kinds are also subjected to very high mechanical loads during loading and transport; whether on a cargo ship, trains or trucks.

Even under the toughest conditions, Lamilux X-treme remains visually appealing and maximises the durability of life of the entire structure, the makers say. The operator also saves running costs for its fleet, as the tank has a significantly lower deadweight than ones with conventional exterior shells.

Lamilux X-treme and its carbon version absorb any load and tension forces on sandwich panels with their large-scale use in a wide variety of applications, making the whole structure resistant to torsion. This becomes clear when the carbon-fibre-reinforced polymer is compared with other materials used as sandwich face sheets. It is up to 50 percent lighter with a tensile strength three or four times greater than steel or aluminium.

The low thermal expansion ensures that large structural components can be produced without bubbles or distortions emerging in the long term. The low thermal conductivity in products and the consequent optimised insulation in cooling transport containers make powerful arguments for the material's use in refrigerated trucks.

However, all such properties are not of any use to the commercial vehicle industry if the material is unable to take mechanical stress loads caused by shock and impact. X-treme products not only withstand such loads, but usually resist them in a way that completely prevents major damage and downtimes due to repairs in most cases. The material even manages to hold fast during hail storms and adverse weather conditions, making it ideal for both body interiors and exteriors.

Lamilux composites are produced in a continuous, automated production process. The separate production lines guarantee minimum delivery periods while providing consistently optimum quality which can be reproduced at any time. The product range can be manufactured in widths up to 3m, while the length of sheets or rolls are tailored to customer requirements.

Thanks to the maximum possible content of reinforcement fibres, equal to approximately 70 percent by weight, and perfect bonding with the high-strength epoxy resin matrix, enormous tensile strengths can be achieved which are more than twice that of steel.

X-treme thus achieves three times the tensile strength of other most other cladding materials and exceeds the strength and rigidity values of most materials many times over, the company claims.

In February this year Lamilux Composites, based in Rehau, Bavaria, Germany, became a member of ITCO. "We are very pleased to be able to work with ITCO on its mission to promote and present tank containers as a safe, cost-effective and flexible means of transport. Here we can support the organisation especially in technological developments in the interest of quality and safety," says Sascha Oswald, head of product management.

www.lamilux.de



The makers say the strength and rigidity values of Lamilux X-treme are many times those of normal composites



Lamilux X-treme remains visually appealing and maximises the durability of life of the entire structure



Interchangeable with ALL manufacturers
Non-protruding tank unit poppet
Short body design
Designed to STANAG 3756 (Ed 4)
Approved to EN12516-2

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Made with 316 Stainless Steel for maximum corrosion resistance, and with colour coding available to prevent cross-contamination of products, the DryTyt range is available in 70mm, 105mm, 119mm and 164mm - Drytyt is rugged and durable, with unique features to ensure failsafe fluid handling.

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Lashed together FV's DryTyt continues to impress

Having already worked together as partners since February 2020, lashing companies Hlash GmbH and Rainer GmbH formally merged on 1 January this year.

Under the company name Hlash & Rainer GmbH and the management of Andreas Rainer and Christian Kunert, the company can now offer a wider range of container-load lashing and restraint systems.

The portfolio created by the merger of the two companies offers not just physical products but also professional all-round support from an experienced team of load securing consultants around the globe, including standard-compliant consultation on site, selection of the most adequate restraining systems for securing cargo in containers, development of modular individual solutions, AAR approved (non-hazmat) restraining systems, tailor-made loading instructions

supported by on-site training, test facilities at the company's own load securement testing facility, and CTU Code of Practice training.



www.hlash-rainer.com
Hlash & Rainer offers a wide range of container load securing systems

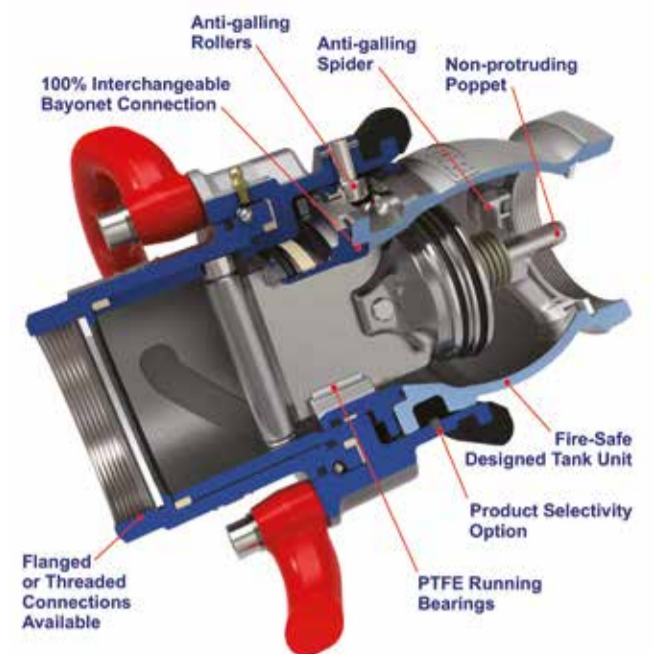
Fort Vale's DryTyt range of self-sealing couplings has been a mainstay in liquid transfer since their first introduction 35 years ago.

It was originally designed to satisfy the increased demand for a coupling that could provide quick and safe bulk liquid transfer where product spillage cannot be tolerated due to environmental regulations, operator safety or hazardous cargoes.

With a long list of safety features and continued development since its first appearance in 1986, the DryTyt system has been a worldwide success with its rugged construction, durability and low maintenance costs.

Not only is DryTyt 100 percent compatible with other industry couplings, its computational fluid dynamics (CFD) ensures higher flow rates than competitors and ensures less down time. Built with 316 Stainless Steel as standard for maximum corrosion resistance, the range is also available in specialist materials to suit a wide variety of applications. It also features flanged and threaded versions to facilitate a range of connections and a wide range of O ring materials for complete cargo compatibility.

As usual with Fort Vale products, the DryTyt range is designed to exceed current regulations, with STANAG 3756 (Edition 4), BS EN12516-2 and BS EN14432 accreditation. With regard to fire safety, the fire-safe designed tank unit seals metal to metal in case of fire, preventing loss of cargo and includes an optional fire-safe pressure-



As usual with Fort Vale products, the DryTyt range is designed to exceed current regulations tight cap that safely releases any build-up of pressure from the tank unit.

With colour coding available to prevent cross-contamination of products, the DryTyt range is available in sizes of 56mm, 70mm, 105mm, 119mm and 164mm.

The couplings are used on ISO tank containers, road tankers, offshore and marine vessels and rail tankers. Product applications include chemical, petrochemical, fuels, pharmaceutical, by-products, waste, food and beverages.

www.fortvale.com

Out of the box

The rationale for using bulk liners is to ship bulk produce in standard shipping containers which are both cheaper and more readily available than other specialised ISO containers.

However, safely discharging the bulk material at the end of its journey remains something of a challenge.

But an American company has devised a solution which the company says offers a number of benefits. Tennessee-based Greenfield Products developed a container dumping spreader that can tip loose bulk materials out of a standard dry container.

Greenfield said the company was approached by a customer looking for a cost-effective way to tip bulk materials out of a standard dry freight box using a single hook crane. Other solutions to handle bulk in containers already exist, but the customer did not want to invest in special open-top containers, often known as bulkers.

Developing a method for tilting a container under a single hook crane presented a challenge, as there is no fixed component to resist any tilting force. The application also required a fully self-contained and powered dumping spreader that could be used under a Manitowoc or similar construction crane with a single rope hoist system.

Greenfield developed an electronic/remote-controlled container spreader with a diesel-powered headblock power unit driving a pocket wheel chain system that adjusts the centre of gravity using heavy-duty chains to tilt the spreader and slowly dump the load.

The chain pocket wheel is an engineered product usually found in mining applications. For the spreader, it is mounted on a frame that pulls the chain links over the wheel. The resulting application can tilt a loaded container up to 50 degrees in either direction.

To secure the container, the spreader has four twistlocks that are powered by a standard 12V automotive battery. All motions are activated by remote control, so no electrical connection to the crane is required. This allows the operator to maintain a safe distance while handling the suspended load.

It can be operated under virtually any crane with a hook, or integrated into a 20ft ISO spreader bar mounted to any container handling crane. The pocket wheel system can tilt the container in both directions, and gravity is used to open the container doors to start the materials flowing.

The tilting system allows the operator to control the angle of the container and, therefore, the flow rate of materials, very carefully, which is required for unloading and positioning materials such as frac sand in a flexitank. With the container on the ground, an operator can open the flexitank and control the container tilt angle precisely as the box is positioned.

The tare weight is 16,000 lbs (7.25 tonnes) and is rated for containers up to 80,000 lbs (36 tonnes). Greenfield Products believes this will prove a more economical solution for unloading containers in non-fixed locations compared with existing systems.

www.greenfieldpi.com

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Suttons wins Azelis contract

Suttons Tankers has won a three year contract with Azelis UK Ltd for the transport of bulk nitrogen chemical liquids and gases which went live in November 2020.

The logistics provider had been providing ad-hoc support for Azelis over many years when there had been an increase in demand and had therefore proved itself to be a trusted and reliable partner.

In addition to providing excellent level of customer service, Suttons' willingness to invest in new fleet meant that Azelis was able to see not only an improvement in reliability, but also a reduction in environmental emissions.



The Azelis contract involves deliveries across the UK and Suttons' nationwide network coverage allows it to fulfil this requirement

Due to the hazardous nature of the material, Suttons focused on risk assessing all aspects of the logistics process to ensure a quality-led safety approach. This was welcomed by the customer and reinforced confidence in the haulier's capabilities.

Suttons has notable experience in transferring employees into its business and this contract was no exception. The incoming employees underwent a successful TUPE transfer and despite the challenges and confines of the pandemic, a diligent consultation process was undertaken, and all individuals were content with the outcome.

The contract involves deliveries across the UK and Suttons' nationwide network coverage allows it to fulfil this requirement confidently.

Michael Cundy, Suttons Tankers managing director, commented: "This contract with Azelis reinforces our position as market leaders in the hazardous liquids and gases sector and links directly to our growth strategy."

Jim Robertson, operations and SHEQ manager at Azelis, added: "Suttons is a competent partner that has demonstrated a strong focus on customer relationship management and providing a high quality, safe solution for us over the years. We are delighted to be working with such a reputable logistics provider who can provide continuous improvement to our business."

www.suttonsgroup.com



New Felixstowe rail service

Hutchison Ports' Port of Felixstowe launched two new rail services during March.

A daily connection operated by GB Railfreight now runs between the UK's largest container port and Wakefield, in Yorkshire.

The service is the 13th operated by GB Railfreight and the 12th daily rail connection to destinations in Yorkshire.

Chris Lewis, the port's CEO, said: "Expanding the number of rail services available to importers and exporters from the port is one of our key objectives. Felixstowe is the Northern Powerhouse's major container gateway and approximately 50 percent of traffic between Felixstowe and the North moves by rail."

The train will initially comprise of a mix of wagon

types, including two Eco Triples, two Q8s and eleven IKA Twins. The combination of a variety of wagons is significant, as it allows for enhanced flexibility, maximising the number of boxes that can be carried to better satisfy consumer demand and make more effective use of overall capacity.

Felixstowe also started a rail service to the East Midlands Gateway (EMG). Operated by Maritime Transport and DB Cargo UK, the service is Maritime's fifth connection with Felixstowe and runs Tuesday to Saturday.

Maritime Transport's 17-acre intermodal terminal provides access to the UK's major ports, operates 24/7 and is able to accommodate up to 16 775m freight trains a day.

www.hpuk.co.uk

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Starting 'em early

Peter van Duuren outlines an innovative way to engage young people in engineering in general, and the logistics industry in particular

Affectionately dubbed the Tardis of automotive history, the DAF Museum in Eindhoven, the Netherlands, boasts an impressive collection of DAF cars, trucks, buses and trailers.

It highlights the impressive, established development and production history of DAF Trucks, from its beginnings in 1928, to the very latest products driving off the assembly line. The museum is mainly run by volunteers, consisting of retired teachers, industry experts and a substantial number of retired DAF staff.

What may be less known about the museum is a commendable addition called the 'Trucknasium'. This was set-up by Hans Staals, a retired DAF Trucks product development director, to promote technical engineering as a vocation to the next generations. This is a direct initiative to combat the substantial shortage of technically educated applicants across industries due to the lack of students looking at engineering as a career choice; a situation undoubtedly still current, and familiar in many countries, with industries grappling to fill technical vacancies.

The objective of the Trucknasium is therefore an interesting, industry-led initiative to lift the veil on technical vocations, through a 'do-and-discover-it-yourself' programme for young students. According to the mentors, interest needs to be established early so the programme is aimed at children in their final years of prep school, to second and third years of secondary school.

Children follow presentations on varied technical mobility modules, after which they are immersed in a set of practical assignments with suitably appealing gadgetry. The Trucknasium and its passionate mentors, help create awareness of the industry and awaken possible previously unknown, interest in technical engineering. Engaging students at this young age is crucial to sow the seed for the industry, as this is the time they select those subjects that set them on course for their future careers.

Just like the museum, the Trucknasium is run mostly by volunteers (DAF, teaching and industry retirees), who design and develop the various mobility modules, all of which are constantly updated and renewed to reflect new technological demands and developments in the industry, an admirable feat, as such dedication requires much time and effort on the part of the volunteers. Their devotion to their vocation, expertise and experience are invaluable to this project and the results are evident.

Groups of 20 to 30 children sit through exciting presentations and are guided through practical assignments from designing a truck, measuring rolling resistance and even air resistance in the specially created wind tunnel.

Modules include:

- Cab construction – cab variety and design, safety measures,



The Tardis of automotive history



Students sit through exciting presentations and are guided through practical assignments from designing a truck, measuring rolling resistance and transport propulsion

comfort, instruments, future developments. Students are then assigned to design their own cab on large interactive screens.

- Loading and weight distribution – maximum loads, legislation, road safety, weight distribution. Students are then assigned to load a (mini) DAF truck and assess correct weight distribution and maximum axle loads.
- Road safety – on-board traffic safety systems, interplay & awareness of truck/bus traffic and other road users.
- Air resistance – a wind tunnel simulator is available, where mini trucks of various models and designs, are tested up to a speed of some 80kph, to check the design measures taken to reduce air resistance and fuel consumption.
- Truck specification – especially for those students keen to work in the logistics industry, students are encouraged to design the truck for their (future) required logistical needs, including aspects of EU legislation on driving time, costs, etc.

- Rolling resistance – presentation the concept, measurement, what can be done to reduce, costs to logistics companies. With the use of (and sitting on) a special mini DAF Truck, students are taught to measure tyre pressures and loads.
- Robotics – students build their own mini truck and program it so that it performs various requested manoeuvres.
- Module Green – energy, environmental aspects of road transport, as well as new forms of transport propulsion such as EV, hybrid, hydrogen, etc. The new modules are CO2 and transport, air pollution and diesel engine, energy and transport, complete with practical test assignments.

Curriculums are actively sent out to schools each year, and schools can book their students in for museum and technical educational immersion. Pre-Covid, the Trucknasium would see approximately 50 school visits a year, which amounts to some 1,400 students enjoying a professional insight into the automotive industry.

Active school engagement, and an added push from social media engagement from both the Trucknasium as well as the students themselves, this number is growing and set to rise. An impressive feat, which will hopefully be rewarded with increasing numbers of students opting for technical careers, and one to see duplicated in other countries and industries.

Volunteers report that fortunately they have seen an upsurge in interest in technical based careers, some of which possibly through efforts of the Trucknasium. Though, as they confirm, there is a still notable shortage of technical skill in the labour market and much work is yet to be done.

Peter van Duuren is a retired MD of DAF Trucks, including the truck maker's operations in Kenya, Poland and Taiwan. He has more than 40 years working experience in the automotive industry, mainly in truck sales and marketing, management and business development. He currently works at the Trucknasium in the roles of organisation and management, as well as module design and teaching.

www.dafmuseum.nl/en

Brexit buster route links Morocco and UK

A new direct shipping route connecting the UK and Morocco is to be launched. The route, which has been established by maritime and transport specialist, United Seaways, will link Poole in Dorset to Tangier, Morocco.

In planning for over two years the new line will help bypass post-Brexit traffic congestion and additional import procedures on goods arriving via Europe. It will also significantly reduce emissions compared to current logistic chains by road.

The service will run once a week and cut journey times on Moroccan goods to fewer than three days, compared with more than six days via road.

The route currently includes two ferry crossings – one from Morocco to Spain and one from North Europe to UK – but the new link will avoid the associated Brexit procedures and time delays the other crossings face. It will also be used to encourage British importers to source fresh produce and other products directly from Morocco and Africa, promoting southbound trade and scale-up exchanges between the two kingdoms.

Nigel Jenney, CEO of the Fresh Produce Consortium, said: "Any solution that makes imports more effective, or eases trading with alternative countries, may well be a great opportunity for helping the UK source fresh produce from around the world.



United Seaways is linking Poole, Dorset with Tangier, Morocco

"I anticipate a strong demand for this new direct ro-ro service. The route offers a rapid service and avoids the additional tariff complications of trading via the EU since the beginning of the year."

Elsewhere, Danish shipping company and member of the Cuxhaven Port Association (HWG) DFDS has expanded its scheduled freight liner traffic between Cuxhaven, Germany and Immingham, UK by one additional departure, which means there are now six

weekly vessel departures.

Thanks to unaccompanied trailer transits, the route through Cuxhaven has shown itself to be robust despite the COVID-19 pandemic and Brexit. Thus, handling at the Cuxport terminal for shipments to the UK can be carried out without interruption.

With the additional Wednesday departure, the route originating at the Lower Saxony deepsea port will be served from Monday to Saturday. Two ro-ro vessels, Selandia Seaways and Britannia Seaways will be deployed. Transit times between Cuxhaven and Immingham have been reduced to 19 hours; plus, all departures now occur in the evenings. In particular, truck-trailer customers can now deliver their trailer or container units at HWG member Cuxport's terminal in the evening and these units can be expedited on their onward journey without escort.

"With the additional departure and improved departure times in the evenings, we are offering our customers an attractive and reliable alternative for their shipments to and from Great Britain," said Marcus Braue, Cuxhaven site manager for DFDS Germany. He added: "The market is indicating a general trend away from accompanied and towards unaccompanied trailer transits. For this reason, we have adjusted the departure times to be more in line with our customers' preferences."

MX 560 offers compact design and max performance

Schütz's new Ecobulk MX 560 has a lower height than standard models and a nominal volume of 560 litres, the packaging firm claims.

This makes it ideal for applications where smaller containers are an advantage, but where maximum performance and the highest quality are also decisive. The MX 560 combines optimum filling volume with a compact design consistent with other MX types with 820, 1,000 and 1,250 litre capacities.

Designing the new container on the basis of the 1,200 x 1,000 mm pallet also ensures that handling is flexible and the MX 560 can be used in all production lines and machinery configured to these dimensions. The container also offers a significant advantage when shipping by sea: the pallet size makes optimum use of the storage and transport space in standard large-capacity containers, even for mixed loads with larger MX variants. With triple stacking throughout, 30 IBCs of this model will fit in a 20ft ISO container.



The Ecobulk MX 560 combines optimum filling volume with a low container height

The four horizontal tubes of the steel grid provide the necessary stability and ensure secure stacking. The large metal label plate, which covers eight fields of the steel grid, provides plenty of space for detailed product information.

Schütz says compact packaging sizes are preferred in many industries, such as farming and agrochemicals. In North America in particular, IBCs with smaller volumes are used for the application of concentrated crop protection products or high-value seed treatments. Another priority for users is containers that are easy to handle during use and storage. The MX 560 combines low weight both empty and filled, and is easy to handle in day-to-day operations, especially compared with stainless steel containers and steel or plastic drums, Schütz explained.

These factors also translate into lower capital tie-up and shorter storage times for products with a slow turnover. This reduces the risk of the product deteriorating. If required, the IBC can be equipped with an EVOH permeation barrier, to ensure product quality and safeguard the filling product by stopping oxygen, nitrogen and other gases from permeating in and out of the container.

Further optional features, include a Foodcert version. For highly sensitive non-food filling goods, Schütz also produces the MX 560 in a Cleancert version.

Optional Ex-protection with a grounded outlet valve and pallet plus an antistatic inner bottle makes the IBC ready for use in Ex-zones 1 and 2 and for the transport of liquids with a flash point of $\leq 60\text{degC}$. Additional optional components include a check valve in the outlet fitting. This prevents the filling good from flowing back into the container, a frequently used function, especially for agrochemicals.

For optimum aeration and ventilation during transport, storage and emptying, a breather system is available, consisting of a plug, membrane and valve in the screw cap of the IBC.

www.schuetz.net

Screw conveyor resists abrasion

A new wear-resistant flexible screw conveyor from Flexicon is capable of moving crushed glass, garnet, aluminium oxide, silica sand, aggregate, cement and other abrasive materials.

Featuring a carbon steel conveyor tube, heavy-duty flexible screw, and heavy-gauge floor hopper and discharge housing, the screw is available in lengths up to 12m in round, square, flat or bevelled profiles to optimise conveying for each application. The 115mm diameter conveyor tube is available curved to vertical, to horizontal or any angle.



The Flexicon screw conveyor conveys crushed glass, garnet, aluminium oxide, silica sand, aggregate, cement and other abrasive materials dust-free

The screw is the only moving part contacting material. Its lower end has no bearing, while its upper end is driven beyond the material discharge point, preventing material contact with the upper seal or bearing. This configuration facilitates simple maintenance in harsh environments since the single moving component can be quickly replaced if necessary.

As it rotates, the screw self-centres, providing ample space between itself and the tube wall to

minimise or eliminate grinding. The gentle rolling action imparted by the screw prevents the separation of blends, while the enclosed conveyor tube prevents product and plant contamination.

Supplied as standard with a durable industrial coating, the unit is available with an optional start-stop control panel and a range of flow-promotion devices.

www.flexicon.co.uk

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Learning lessons from our shops

“The chemical industry can learn from the retail sector’s response to Covid-19,” reckons Schoeller Allibert UK

The reusable transit packaging company has shared insight into how the chemical supply chain can learn from the retail sector’s adaptations for Covid-19 operation.

The manufacturer, which serves both industries, has noted key differences in how the two sectors have shored up their supply chains and believes that better sharing of best practice between the two could help deliver a more robust chemical industry and underpin the innovation and resilience of the sector.

Nick James, sales director – chemicals for Schoeller Allibert UK, commented: “Our business sits in a very privileged position, with a bird’s eye view of both food and chemical manufacturing. Too often, these industries are siloed, despite having a great deal in common. From our perspective as a supplier to both, we have seen challenges and successes on both sides, and there are fantastic opportunities for the chemical sector to learn from how retailers responded to

Covid-19.

“From the outset, retailers escalated their use of big data and used it more strategically, which hasn’t been as common in the chemical sector,” James continued. “Audit and insight specialist KPMG notes that the industry has been a ‘slow mover’ in adopting digital and data technologies in key areas such as machine learning and AI, which rely on big data to be effective. By making better use of sales and customer behaviour data, retailers have been able to shore up sales in a remarkably volatile market.

“Rather than trying to underpin every single process at once, which could easily have been the knee-jerk reaction, retailers streamlined their supply chains to focus on core ranges, to support their logistics and stockholding scenarios. It’s the ideal time for the chemical industry to follow suit and identify what data is available through production, storage and sales and to use it to create more agility and value in the supply chain.”

The manufacturer also commented on the rapid acceleration of automation in the retail sector, which has allowed many brands to continue



Schoeller Allibert’s ChemiFlow IBC – the chemical industry can learn much from the retail sector in its response to the pandemic

operating at speed. Schoeller Allibert has worked with high-profile retailers to switch from existing containers systems to durable returnable transit packaging (RTP).

James went on: “There is a great deal of opportunity for the chemical sector to explore greater digital automation. Intelligence agency McKinsey notes in its 2020 insight report on the state of the chemical sector that it has typically been a slow adopter of digital and analytical technology, which is why we see so much potential on the table for automation and big data-driven decisions. There is certainly movement towards this in the industry in terms of chemical handling, but overall take-up has been slow.

“From the start of the Covid-19 pandemic, retailers – particularly FMCG – were able to use digital automation as a means to speed up logistics and ensure accuracy, with technologies such as RFID showing real commercial value. In fact, we have been able to assist larger retailers in turning warehousing and logistics into a competitive advantage with recyclable transit packaging that enhances space, time and manpower efficiency, while supporting sustainability initiatives at the same time.”

To help the chemical sector achieve the same

results, Schoeller Allibert recently launched the ChemiFlow IBC, a 100 percent plastic UN-approved container purpose-designed for the sector. Created to blend sustainable operation with durability, security and handling excellence and in response to the cross-industry demand for digital automation, the range can be equipped with IoT (internet of things) and RFID (radio frequency identification) technology.

“Automation in areas such as order picking has allowed retailers to operate with fewer staff at any one time, creating a safer and less-dense working environment,” James said. “The chemical sector has, overall, been much slower to adopt automation and we have seen some businesses struggle to retain their productivity on the warehouse floor. A report by market research business Deloitte found that 52 percent of chemical enterprises don’t have a digital strategy and transformation roadmap in place; the pandemic could be a great jumping-off point for the chemical sector to embrace greater digital automation.

“Finally, we have to compare the overall mindset of the two sectors, because that’s just as important. As a legacy industry, the chemical sector is known to have traditionally been slower to adapt and change. However, volatile situations like the pandemic have shown that disruption and agility are crucial across all markets. The retail sector has been a great example of almost ‘starting from zero’, in that sales strategies, supply chains and even business models were redesigned in short order. The result has been that the expected volatility in sales could be addressed very early on. While the overall decline in consumer sales has impacted many businesses, this combination of foresight and flexibility has enabled some retailers to defend the bottom line. We’d like to see the chemical supply chain become more flexible with strategy, to ensure the continued success of the industry.”

www.schoellerallibert.com

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Events

The following event dates were correct at time of going to press

Transport Logistic

4-7 May 2021
Munich, Germany
With exhibition cancelled, the organisers have decided to go ahead with the associated conference in a virtual format
www.transportlogistic.de

PBLA

18-20 May 2021
www.pblalliance.com

UKIFDA Expo 2021

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StocExpo

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Wet and dry mixing from NBE

A new NBE processing system integrates dry bulk material discharging systems and bulk liquid handling systems to increase batch process line yield and reduce product quality loss.

The ‘fullstream processing project’ is designed to ensure homogeneous slurry is accurately produced, and reliably supplied to downstream food processing operations. It complies with the hygienic requirements of the process environment and is built to stringent sanitary design and materials-of-construction specifications.

Beginning upstream, major dry ingredients are introduced into the batch processing operation through controlled supply from the NBE bulk bag discharging system. The discharging system provides a dust-tight bag spout interconnect that encloses the bag spout and the material discharge path, protecting the operator and the surrounding work area from dust escape during material discharge.

Material from the bulk bag is discharged directly into the NBE metering hopper. Based on the recipe of each slurry batch, and controlled by NBE process automation, the dry ingredient is metered from the hopper into the NBE wetting bowl where the major ingredient enters the project’s secondary liquid flow. Also, upstream, an NBE bag break station enables the operator to introduce minor dry ingredients directly into the wetting bowl and into the secondary liquid flow.

Dust collectors, ducted to the bag break station and the bulk bag spout enclosure, draw material dust away from the operator and into the filtration system. A reverse air-pulse action from the dust collector removes material from the filter for later reintroduction into the process, reducing material loss and improving process yield.

At the midstream stage, the motive action of the secondary liquid flow into the NBE wetting bowl is sufficient to wet the major and minor dry ingredients and facilitate supply of these wetted ingredients into the Venturi eductor at the base of the wetting bowl. A separate, primary flow of the liquid ingredient, also received from upstream, is pumped through the educator which then mixes the wetted dry ingredients with the primary liquid ingredient to produce the slurry to its correct concentration and suspension of solids. The finished slurry is pumped downstream at a rate of 150 gallons per minute to a high-capacity mixing tank.

NBE says the system enabled a global food processing company to move beyond the constraints of build-to-order and engineer-to-order processing operations. From pre-RFQ stages through project turnover, the project owner was able to advance its equipment project delivery while also reducing its capital equipment total cost of ownership.

www.nbe-inc.com



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Green light for English freeports

Teesside will be among the first eight UK freeports



Eight freeports are to be established in England. The Chancellor of the Exchequer Rishi Sunak gave the green light for the development in his March Budget speech, acknowledging the port sector's role in anchoring jobs and prosperity in regional economies.

The first tranche includes successful bids from East Midlands Airport, Felixstowe/Harwich, Liverpool, Humber, Plymouth, Solent, Thames and Teesside. However, more designations could be needed elsewhere to prevent regions losing out.

Richard Ballantyne, chief executive of the British Ports Association (BPA), which has promoted a policy of port zoning akin to the freeport concept, said of the move: "We welcome this as a first tranche of freeports in England but there will be regions that are disappointed not to have been recognised. This is an interesting selection of bids and we look forward to a continuing partnership with ministers who rightly recognise the critical role that ports can play in anchoring prosperity and supporting important industries in our coastal communities.

Ballantyne continued: "It is important that the government now considers how it can extend many of these benefits elsewhere if it is serious about implementing its levelling up agenda. We hope that Government will keep an open mind on further bids in England and perhaps reconsider proposals for those ports not successful today. Some elements of the freeports programme could easily be spread much further, helping to create more productive and high quality jobs without incurring significant costs to the exchequer or requiring complex oversight or administration."

Following the inclusion of Teesside among the eight freeports, Gary Dawson, chair of the Tees and Hartlepool Port Users' Association said: "This is a defining moment for Teesside, the government has unlocked a major opportunity and we now need to all work together to realise the potential that this can deliver for our industry and our region."

However, freeports are controversial. The successful candidates in England will be given breaks on business rates, property taxes and national insurance contributions. That might persuade some firms to move there from other parts of Britain, but it remains to be seen whether they can create new businesses, rather than just cannibalising other regions.

Imports to freeports are tariff-free, meaning components and other inputs can be brought in and assembled into added-value products. Tariffs are then paid when the finished goods are brought into the country.

In high-tariff countries that is a big advantage, but tariffs in Britain are generally low. A study by two economists at the University of Sussex looked for tariff structures that might draw a company to a British freeport but found only one big opportunity: dog food.



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The merged Antwerp/Zeebrugge port will handle some 278 million tonnes a year

A giant in Belgium

Belgium's ports of Antwerp and Zeebrugge are to merge. The City of Antwerp and City of Bruges reached an agreement to unify their respective ports in a process expected to take a year to finalise. Once completed, the ports will operate under the name 'Port of Antwerp-Bruges'.

The merged port will handle some 278 million tonnes a year and edge closer to Rotterdam as Europe's largest container port. Furthermore, the port will account for more than 15 percent of Europe's LNG transited and will remain Europe's most important chemical hub.

The ambition is to become the world's first port that reconciles economy, people and climate. The unification project is all about creating added value for the surrounding areas of Antwerp and Zeebrugge, for customers and stakeholders, as well as for the rest of Flanders. As part of a joint plan, the two ports have defined three strategic priorities – sustainable growth, resilience and leadership in the energy and digital transition.

The two ports are largely complementary. For example, Antwerp specialises in the handling and storage of containers, break bulk and chemical products, while Zeebrugge is a major port for ro-ro traffic, container handling and the transhipment of LNG.