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Tankcontainer MAGAZINE

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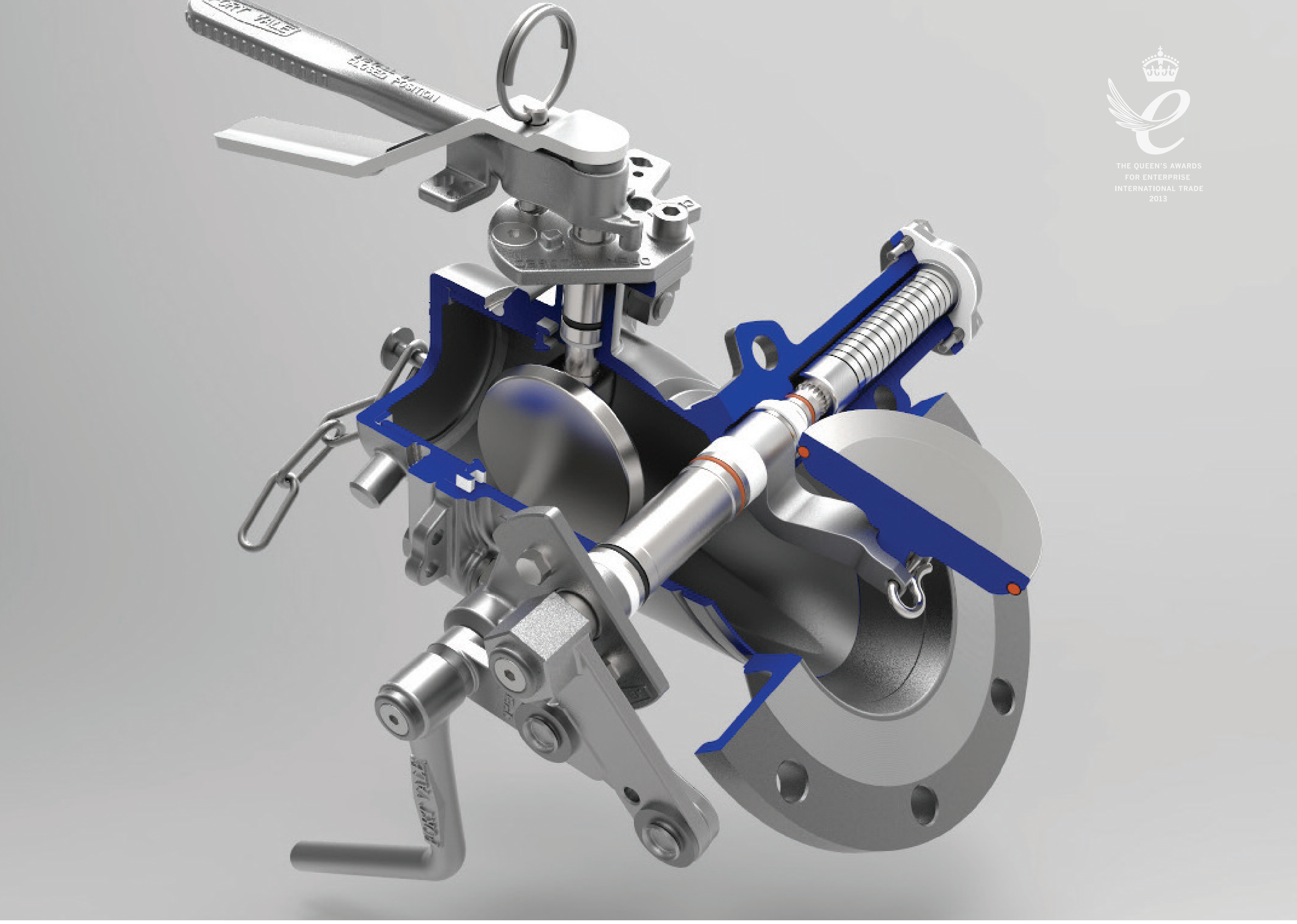

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Confidence returns

This issue of *Tankcontainer Magazine* focuses on Europe but includes the much-anticipated 2017 Review of the Year, a hopefully thought-provoking and challenging assessment of the competitiveness of the tank container leasing sector and commentary on ITCO's 2017 global fleet survey.

If confidence is contagious, so is a lack of it. The recent past has included years of uncertainty and anxiety for many companies in the tank container sector, leading to the demise of some and the strengthening of others. But 2017 was a good year for the industry - financial returns improved markedly, fleets were refreshed, demand strengthened, the chronic over-capacity eased somewhat and rates have improved.

That is not to say that the acute competitive intensity, market volatility and company-specific disappointments have gone away - it is just that there's now much more to be confident about.

Globally, the chemicals sector expects 2018 to be another strong year. Europe's economy performed much more strongly in 2017, with GDP growth in the 19-country Eurozone being the highest for a decade. EU chemicals output (excluding pharmaceuticals) was up 3.8% in 2017 with prices up 5.1%. The major markets in Europe, the US and China all grew significantly. China's strong economic growth continued to attract imports, spurred on by the growing domestic environmental pressure that has forced some chemical plants to close.

In the tank container sector, rates rose from historic lows in the second half of 2017 and some trade lanes showed very high levels of activity. Higher equipment demand was matched by somewhat higher utilisation, which is approximately 75% at the industry leaders.

Operators worked hard to improve margins by reducing empty repositioning costs and benefited from the windfall gain of demurrage revenue. Historically-low tank containers prices were exploited to refresh fleets (although prices have risen from the historic low of $12,000 in the first half of 2017 to, it is claimed, approximately $14,000 for generic T11s).

In the leasing sector, interest rates define the cost of finance, which in turn is one of the primary drivers of the returns achievable by investors. Although global interest rates are increasing, leased tank containers are still sought after as an asset class and, paradoxically, the somewhat higher cost of finance may help lessors increase day rates.

Regional activity was mixed. Europe had a busy year for tank container movements, despite several major disruptions in the main north-south rail corridor. Trade volumes of speciality chemicals from Europe to Asia - much of which are dependent on tank containers - have increased significantly. The transatlantic tank container tradelanes from Europe into the New Jersey/New York gateway were very active.

Domestic tank container business in China increased markedly, benefiting from tighter regulations on the treatment and handling of hazardous chemicals. Importantly, local authorities are now policing the regulations far more diligently.

In the Middle East, the fall off in the imports of tank containers has caused a major shortage of equipment since Q3 2017. Rates have, and will, increase although so too will operators' costs as they reposition empty tank containers into Saudi Arabia from Asia Pacific and South Africa to meet demand. India, which often provides a buffer stock of equipment for the Middle East, is less able to provide empty tanks containers because demand is strong for tank containers in India.

Elsewhere is this issue - and in the first of a series of articles on the competitiveness of tank container leasing sector - we consider the risk of new entrants using a well-known model. It concludes that while there are no strong and durable barriers for new entrants into the tank container leasing market, a variety of other factors suggest that there is a low threat of new entrants.

Global fleet growth is also strong, although that is not necessarily a good thing for the aggregated financial returns of the tank container industry. ITCO's 2017 fleet survey shows industry growth - defined as the number of tank containers in the global fleet - of 8.7% in 2017. At the beginning of this year, the global tank container fleet was 552,000 units, up 44,000 units from 2016.

Much of the industry's growth was driven by Asia, with penetration accelerated by a wider recognition of the acknowledged safety, economic and reliability features of tank containers.

Overall, 2018 is a good time to be in the tank container business. Financial returns will depend, as always, on rigorous cost discipline and well-managed fleets.

Leslie McCune, Editor

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Essers takes over box transport specialist Huktra

Logistics service provider H.Essers has announced the takeover of the Zeebruges tank container specialist Huktra, which also has offices in the UK, Spain and Italy.

Gerd and Tim Van Poucke, the second generation at the head of the family business, have managed to expand the company substantially in recent years.

In H.Essers they have found the ideal industrial partner to lead Huktra into a new growth phase. For H.Essers, the take-over is entirely in line with the further expansion of its strategic market segment in the chemical industry.

Since its foundation in 1976, family business Huktra has become one of the leading European intermodal logistics service providers in the field of chemical substances.

With a fleet of 897 chemical tank containers for the transport of all kinds of chemicals, Huktra specialises in three market segments: liquid bulk (inorganic substances, polymers, special chemicals, and consumer chemicals), dry bulk (food) and powders. Huktra's geographical location, in the port of Zeebruges, is an enormous strategic asset for both European and intercontinental intermodal destinations. Therefore, the company's client portfolio includes leading chemical companies such as BASF, Eastman, and Repsol.

Huktra has a turnover of 50 million euros and employs approximately 50 employees, spread over its offices in Belgium, Italy, Spain, and the UK. In Zeebruges the company also has its own maintenance centre of 20,000 square meters. Current managers Gerd and Tim Van Poucke and all employees will stay on board.

"After the strong growth Huktra has recorded the past years, it is now time for the next step," says the second generation of the family business. "Thanks to the take-over by a strong, industrial player such as H.Essers, Huktra will be able to keep growing in the coming years and to further develop our expertise."

Everybody on the same page

H.Essers' CEO, Gert Bervoets, also looks forward with confidence. "The take-over of Huktra is entirely in line with our strategy to offer our clients the best possible synchro-modal solutions. Combining different modes of transportation in an intelligent way is the future, because it offers an answer to current challenges in the field of mobility and the environment. But most of all, synchro-modality offers a new interpretation for the management of transportation flows. This approach not only makes them more efficient, but also more advantageous and sustainable. A win-win situation for all parties involved: customers, logistics service providers, and our entire society."

"And there is more," Gert Bervoets continues. "Huktra is a family business with the same values and standards as H.Essers. We are all on the same page. Moreover, just like H.Essers, Huktra is committed to safety and quality, including a constant renewal of their materials and installations, which means that their approach and operation also meet the highest standards and strictest values. We eagerly look forward to welcoming our new colleagues to the warm H.Essers family and continue building our future together."

With this take-over, H.Essers also establishes its footprint in two new countries: Spain and the UK. "From now on, our company features 71 offices in 17 countries," says Gert Bervoets. "At a national level, the take-over seamlessly connects to the construction of our trimodal chemical site, H.Essers Dry Port Genk, for which the groundbreaking celebration took place last Friday, and to our recent investments in the upgrade of our site in Wilrijk, with its ISO tank container terminal and state-of the art filling installation. This enables us to continuously improve our all-in solutions for our chemicals customers."

It concerns a complete take-over. No details will be disclosed regarding the take-over conditions, and the transaction is subject to the usual registration procedure with the Competition Commission.

New venture for HOYER in the MIddle East

HOYER is enlarging its operating activities in the Supply Chain Solutions (SCS) division of the business unit Chemilog through a joint venture in the Middle East.

The logistics specialist has acquired 51% of a Saudi company for this purpose. Further participants in the joint venture, trading under the name HOYER Middle East Ltd, are Petrochem Middle East FZE and Al Fahdah Al Arabia Trading Company Ltd with equal shares.

It is the first filling and blending business of HOYER in Saudi Arabia, and therefore a significant step for the company to develop this growth market.

HOYER Middle East is currently building a new filling plant in Al-Jubail on an area of around 10,000 square metres, with four storage tanks, two blending tanks, two filling lines and a warehouse for palleted goods.

Operations on the site will start in 2018. The filling plant's capacity will amount to approximately 30,000 to 50,000 tonnes per year. The jv pools the regional and international strengths of the two partners with the core competences of HOYER as an international logistics company specialising in handling dangerous goods.

Global Director Supply Chain Solutions for HOYER, Ulrich Grätz said: "HOYER Middle East will offer extensive blending, filling, bulk storage, quality testing and dispatch processing services, together with warehouse storage of palletised and non-palletised goods."

Managing Director Middle East & India for HOYER, Menno Douwes Dekker said: "It's the first professionally operated off-site blending and filling plant in Saudi Arabia, and therefore very attractive for chemicals producers with international operations."

RAM launches Tank Connect app

RAM Intermodal Software, a leading solutions provider to intermodal tank operators, container leasing organisations and intermodal equipment traders, has launched the ground-breaking Tank Connect mobile app to boost the bottom line of businesses that use its market leading Monitor4000 tank operating software.

Developed in response to customer demand for increased digitisation, the user-friendly and secure app is available on iOS and Android platforms or as a web app on Evergreen browsers such as Edge, Chrome, and Safari. Tank Connect enables subcontractors to review key information while on the move, making real time updates possible and enhancing customer service.

"Customers have been universally impressed with the usability and features that Tank Connect has to offer," said Ian Rawlins, RAM's General Manager.

RAM Intermodal's customers were struggling to get quick, reliable data on loads and discharges back into the system. Faced with this challenge, RAM's team of software developers has optimised the app to provide a simple, clear interface that allows truck drivers and other supply chain professionals to easily view and maintain data without being overwhelmed by unnecessary information. RAM carried out customer prototype workshops to ensure that the look and feel was exactly aligned with customer expectations.

Tank Connect enables users to search for an open order using the order number or unit key, review product information, including the load/discharge location and reference, and to review and update the date, time, weight and temperature using a clear and practical interface. Trusted users can update data directly, which means that real time updates are sent to Monitor4000 when the device is online, boosting operational efficiency. "Users have been impressed so far with the configurability of the app," added Rawlins.

As an app developed after extensive consultation with a wide range of industry clients, Tank Connect harnesses this knowledge and experience to provide a unique and market-leading solution. It makes updating data more reliable, quicker and less of a time-intensive, manual process. For example, job section dates can pass through the system to update other sections, which will allow an operations team to allocate work more effectively. "This increase in efficiency for suppliers should lead to quicker decision making and faster invoicing, boosting the bottom line of RAM Intermodal's customers" said Richard Shaw, Sales Director at RAM.

User access is managed through the main system inside customer firewalls. The app is password or PIN code protected and uses a token-based authentication system that means no user credentials are stored on the device itself. All external updates can be monitored through the RAM communication centre, an important recent enhancement to the Monitor4000 system.

"The Tank Connect interface communicates over an encrypted secure connection, which minimises malicious attempts to decipher data traffic," added Shaw.

Tank Connect has been built to be flexible. For example, it can easily be altered to reflect a customer's brand, which means colours, images and even logos can easily be changed. The app connects to a secure web application program interface, which means that it can easily be scaled up as a tank operator's business expands with no loss of functionality or performance.

First Chemline global tank container summit

Advanced Polymer Coatings (APC), the company behind the high performance patented ChemLine® tank lining system for Tank Containers, recently convened its first ChemLine® Global Tank Container Summit in Avon, Ohio, USA, with its key worldwide partner applicators and APC representatives.

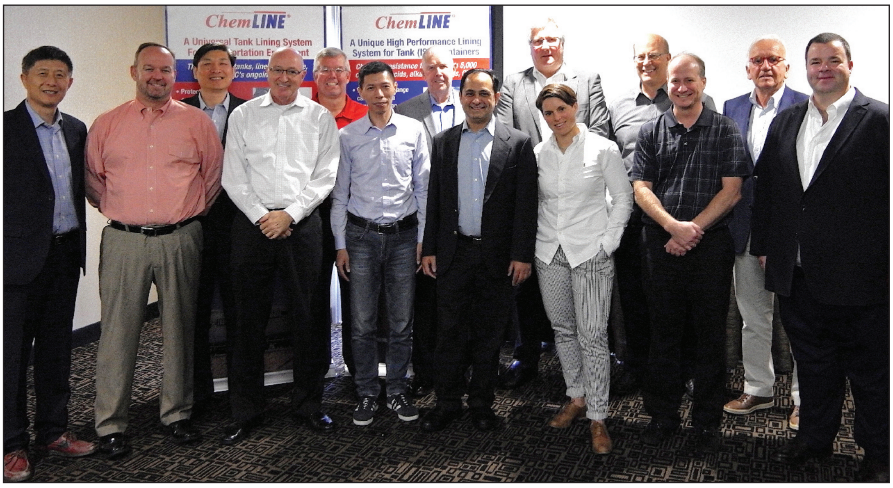
The purpose of the summit, according to Mr. Martin Kilroe, APC Global Tank Container Manager, was to bring together partner applicators that specialize in applying ChemLine® linings for tank containers, to ensure a consistent high quality approach that mirrors APC's core values and quality objectives. The theme of the event was focused on "Partners in Performance."

Mr. Kilroe explains, "At the summit, we were able to connect and build strong collaborative relationships. Each of the applicators exhibits the highest level of professionalism in their work, and they command exceptional quality in every application. They are not only passionate about their work, but also keenly familiar with our ChemLine® system."

The summit was attended by APC personnel and principals from three application companies, each with long history in their respective markets: Amfico Agencies Pvt. Ltd, from Mumbai, India; Hüni GmbH & Co. KG, from Friedrichshafen, Germany; and Shanghai Fuchen Chemicals Co, Ltd, from Shanghai, China.

The Global Summit covered a range of industry and product topics on tank lining successes, customer and industry requirements, changing regulations, goals, worldwide marketing and promotion work, and application and quality control procedures.

There was also a review of the growing demand for specialized tank containers with high performance protective linings to carry high value corrosives and other liquids, thus generating higher revenue.



A technical review of ChemLine®'s extensive chemical resistance list illustrated how the coating can carry more than 5,000 different chemical cargoes including aggressive acids, alkalis, solvents, agricultural chemicals, and many others.

This capability is achieved by the proper heat curing of ChemLine® that results in a highly cross-linked and tightly knit coating structure, providing unprecedented chemical resistance, even at elevated temperatures. The ChemLine® coating sets up to a smooth glossy finish that is easily cleaned and decontaminated after carriage.

The Global Summit concluded with the signing of business relationship contracts between APC and the different applicator principals.

Mr. Kilroe says, "All these ChemLine® applicators share a common mission with APC to deliver high quality tank container lining results. The value message we deliver is that the excellent result is a combination of using the quality ChemLine® system, with the quality services of our applicators around surface preparation, lining application, heat curing, final inspection and spark testing, and reporting of QC reports and documentation." He adds, "The end goal is to provide peace of mind to tank container owners, operators, lessors, tank manufacturers, agri-chem producers, and chemical companies along with an excellent lining and service warranty."

DEPOT joins ATCN

The Association of Tank cleaning Companies Netherlands (ATCN) has welcomed DEPOT Software as an extraordinary member. The ATCN is committed to maintaining a high level of quality of Dutch tank cleanings and fis an information center for the government and other interested parties.

The ATCN says: "The members of the ATCN typically provide a high level of technical services and possess very modern technology for water treatment as well as a great sense of responsibility for the environment.

ATCN members guarantee that the manner in which tanks are cleaned meets the stringent requirements of shippers and their customers.

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Trifleet makes major investment in cryogenics

Trifleet Leasing, the world's largest owner-managed tank container leasing company, is as of 2018 building up a significant cryogenic container fleet and offering a full range of related services.

Twenty 40-ft tanks with a volume of 46,000L and designed to offer superb operational capabilities have been ordered as a first batch for the planned 2018 investments.

The new business will be headed by Jaap Kuijpers Wentink (pictured). Both Trifleet and Kuijpers Wentink have around 25 years of expertise each: Trifleet as a well-established tank container lessor, and Kuijpers Wentink as an expert in the cryogenic business.

With new cryogenic tank containers that focus on LNG, Trifleet continues its sustainable business path and invests in the developing LNG market.

The company will be the technical partner for a customer's cryogenic infrastructure. Meaning that the cryogenic business will not only offer state-of-the-art tanks, but also related services, such as cryogenic pumps, hoses, installation systems and technical advice; all based on the existing infrastructure, processes and expertise of the well-established Trifleet business.

It is the stable foothold of Trifleet combined with Kuijpers Wentink's expertise that provides the new cryogenic business with the ability to design and develop superior tanks to enable operational advantages for customers.

The design and manufacturing of the tank containers have been commissioned to Cryovat in the Netherlands and GasCon in South Africa.

The first 40-ft containers for LNG will be available for leasing within the first quarter of 2018. The Trifleet technical team is trained to work with LNG tank containers and will have the respective global certification by the time the first tanks are leased out.

"We are combining Trifleet's 25 years of expertise in tank containers with Jaap Kuijpers Wentink's 25 years of cryogenic experience. Our new cryogenic business is off to a powerful start, with a substantial number of superior tanks and deep cryogenic insights, based on the well-established and structured Trifleet organization," explains Philip van Rooijen, Managing Director of Trifleet Leasing.

"Building up the cryogenic business at Trifleet is like moving forward with the energy and flexibility of a startup that has the stability and professionalism of an established market player. This is the perfect match for bringing the best cryogenic tanks and services to our LNG customers," adds Jaap Kuijpers Wentink, Director Cryogenics of Trifleet Leasing.

Prior to joining Trifleet, Kuijpers Wentink was Managing Director at Crynorm Group, a manufacturer of LNG integrated systems such as tank systems, LNG/CNG truck fueling stations, LNG Liquefaction plants, LNG bunkering systems, Marine LNG fuel systems, and vaporizers; all of which were cryogenic-related. Before that he worked as Managing Director at tank lessor Cryotainer. He started his career as Manager Chemistry at Linde Gas, part of the Linde Group. With this background, he brings a wealth of experience in the cryogenic business as well as in the cryogenic tank container and services business, to Trifleet.

As an alternative fuel for oil-based products, LNG is considered to be the most environmentally friendly fuel. In the rapidly growing gas market, there is an increasing need for transport storage capacity in the form of intermodal tank containers. And, as an alternative fuel for ships and trucks, LNG is soaring in particular. The supply of LNG requires flexible storage, which can be achieved by operational leasing.

What's more, in view of the significant investment involved in LNG installations – of which stationary tanks are responsible for the majority of this – the need increases when it comes to turning capital expenditure into operational expenditure by leasing storage through intermodal tank containers.


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LHN expands ISO tank depot

LHN Limited, a real estate management and logistics services group based in Singapore, has raised HK$46.5m ($5.9m) in an international share offering to fund its expansion which includes an ISO tank depot.

Under its logistics services business, LHN provides transport services and container depot management services. It transports mainly ISO tanks, containers, base oil and bitumen, and provides container depot management services which include container surveying, on-site repair and storage of empty general purpose and refrigerated containers (reefer).

LHN's Executive Chairman and Group Managing Director, Mr Kelvin Lim said: "We are very proud to be successfully dual listed on the Main Board of HKSE, this represents a significant milestone for our Group. We are also encouraged by the warm response shown by the investing community globally and in Hong Kong for our dual primary listing. This is a real testament to the faith in our Group's strategic direction and growth profile."

The group plans to use the net proceeds of approximately HK$46.5m for the following purposes: approximately 60.4% for the expansion of its space optimisation business by acquiring a new property in Singapore; approximately 23.9% for acquiring a property in Singapore to operate a parking yard for its logistics vehicles and ISO tank depot; approximately 4.0% for setting up its first operation in China; approximately 10.0% for general working capital purposes and approximately 1.7% for acquiring transportation equipment for its logistics services business.

Milestone and Kronoz build washing centre

Cargo forwarders Milestone Logistics and Kronoz Internacional have developed an automated tank washing centre at the port of Veracruz.

The isotank is capable of carrying out four types of washing for breakbulk loads of juice exports to the U.S. from Mexico. The system offers traceability and food grade control products

"This development has saved economic and time costs when making these transfers that were previously made by land and has put us among the market leaders in the export of citrus juices to the USA with 2,500 tanks and a total of 60 million liters of this beverage annually in the country," said Alex Lasheras, CEO of Kronoz.

Headquartered in Valencia, Spain, Milestone is a founder member of the breakbulk association Cargo Connections, a UK-based network offering representation for breakbulk operators worldwide.

Stolt-Nielsen reports fourth-quarter results

Stolt-Nielsen has reported unaudited results for the fourth quarter ended November 30th, 2017. Net profit attributable to shareholders in the fourth quarter was $1.1m, with revenue of $506.8m, compared with a net profit attributable to shareholders of $18.5m, with revenue of $513.8m, in the third quarter.

Fourth-quarter 2017 results included one-time impairments totalling $15.3m. Net profit attributable to shareholders for 2017 was $50.3m, with revenue of $1.9bn, compared with net profit attributable to shareholders of $113.1m, with revenue of $1.8bn, in 2016.

Stolt Tank Containers reported an operating profit of $17m, up from $14.8m, driven by stronger markets, increased demurrage revenue and improved margins.

Stolt Tankers reported an operating profit of $20.4m, down from $34.4m, mainly reflecting the impact of lower contracts of affreightment (COA) volume and freight rates. The quarter was negatively impacted by Hurricane Harvey, which closed the Houston ship channel, disrupted cargo operations and affected onward voyages.

Stolthaven Terminals reported an operating profit of $5.4m, down from $16m in the third quarter. The current quarter included an $8.4m one-time impairment of assets in Stolthaven New Zealand.

Commenting on the company's outlook, CEO Niels G. Stolt-Nielsen, said: "Our outlook for the first half of 2018 remains essentially unchanged. We do not anticipate any substantial improvement in the chemical tanker market until 2019 when the orderbook reduces and the supply/demand balance improves. For Stolthaven Terminals, we continue to expect a modest but steady improvement in results."

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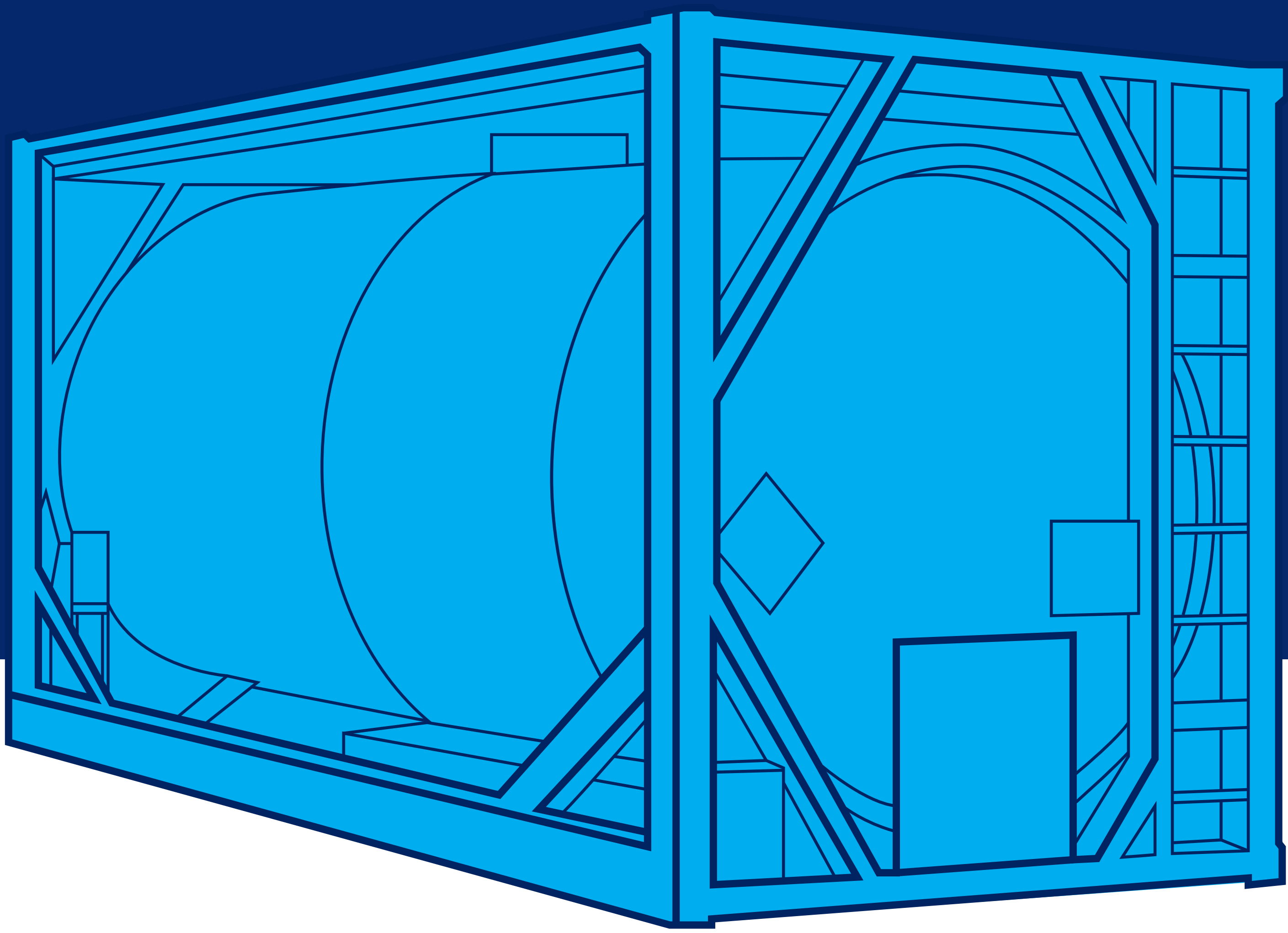

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Odyssey Logistics expands in the windy city

Odyssey Logistics & Technology Corporation's subsidiary Linden Bulk Transportation has expanded its bulk transportation footprint in Joliet, Illinois. The new location positions Odyssey to offer its customers additional capacity and services in the greater Chicago and Midwest region.

"Expanding our footprint and adding to our fleet addresses the capacity shortage issue that's affecting the entire shipping industry," said Michael Salz, COO of Linden Bulk Transportation. "Additional capacity in this area is a huge benefit to our clients and helps increase our productivity by significantly increasing our loaded miles. This also positions us for organic job growth by adding more drivers."

Strategically located in Joliet, Illinois, the facility provides easy access to all major roadways and railways throughout the region

that feed into national routes. As a part of the expansion, Odyssey is adding new tractors and trailers, as well as relocating current equipment from other regions of the country to supplement the new site.

The Joliet location will be an expansion of Linden's growing network and will use the onsite services of Quala, a provider of industrial container cleaning services, including tank trailer, ISO Container, railcar and IBC cleaning.

Odyssey's bulk transportation businesses provide safe, reliable and cost-effective service for over the road tank truck, ISO tank for domestic and international shipments, and rail transfer services. As a single-source solution for North American distribution needs, Odyssey leverages its extensive network to provide its clients with competitive pricing and dependable services.

Odyssey Logistics & Technology Corporation is a global logistics solutions provider with freight network of over $2bn. Odyssey's services include intermodal services, trucking services, managed services, international transportation management and consulting. With operations in North America, Europe and Asia, Odyssey operates in all modes of transport with TL/LTL trucking, containership, rail, air, and bulk transport including bulk truck, ISO Tank, railcar and tanker, as well as food-grade product lines.

HOYER and H&S extend their co-operation

HOYER Group is expanding the activity of its new joint venture (JV) with the H&S Group, H&H Foodlog.

The JV has been active in the liquid foodstuffs transport area in Germany since November 2017, and combines the strengths of HOYER and the H&S Group to enable an optimum response to market requirements.

HOYER owns 49% of the shares in H&H Foodlog, and the H&S Group has 51%.

Foodlog operations of HOYER in Bulgaria and Hungary were transferred to the H&H Foodlog joint venture as of 31 December 2017.

This is a logical step to further expand the cooperation that already exists with H&S, to pool resources and know-how, and to

strengthen further the pan-European network of the two companies, both with long traditions on the market.

Managing Director of H&H Foodlog, Adwin Verhoeks said: "We have already achieved a great deal in the first two months since the founding of H&H Foodlog.

"We look forward to further expansion of the cooperation."

Chief Executive Officer of the HOYER Group, Ortwin Nast said: "We are very pleased with the first results initially obtained. We are confident we have taken the right decision for a positive development of the liquid foodstuffs transport business."

The HOYER Group and the H&S Group have operated successfully in the bulk transport market for liquid foodstuffs for more than 70 years. They place the greatest importance on quality, innovation and partnership in customer relations. Shared values form the basis for constructive collaboration.


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Leschaco expands its global footprint

After opening offices in the U.S. and Asia, Leschaco is now expanding its presence in Europe. The group of companies is now providing its clients a locally-based service via Leschaco France SARL, located in Paris.

The company also plans to open an office in Valencia, Spain.

Leschaco Group Owner and CEO, Jörg Conrad said: "France and Spain are among the European logistics growth markets and offer a lot of future potential. Against this background, the strengthening of our own local presence is a consistent step in our global expansion strategy. Furthermore, we are better able to meet the needs of our customers with own subsidiaries in France and Spain."

Leschaco – as a member of the strategic alliance EURTEAM – was previously represented by agents in France and Spain.

In 2017 Leschaco became main shareholder of the Joint Venture Global Saga Leschaco Pvt. Ltd and now operates under the name Leschaco India Pvt. Ltd.

Managing Partner of Leschaco India Pvt., T.K. Ram said: "The new company name underlines our business targets based on sustainable growth in the strong association within the internationally successful Leschaco group with approximately 2,500 employees."

Jörg added: "The new name of the company is also an expression of the further development of our products and services as well as the perception of the Leschaco brand."

With these new locations Leschaco is now operating from 71 offices in 22 countries. All locations deliver the core business segments of sea and air freight, tank container and contract logistics.

Changes at the top at Bertschi Group

Bertschi Group has appointed Jan Arnet (44) new CEO as of 1 August 2018. Hans-Jörg Bertschi (60), majority shareholder, Chairman of the board and current CEO, will focus on strategic projects for the group.

Jan Arnet (44) joined Bertschi as Assistant to the Group Management in 2003. In 2004 he became CFO and one year later CEO of the newly acquired subsidiary Nordic Bulkers in Gothenburg, Sweden. From 2009 he was responsible for the group's market entry in the Middle East.

Arnet was appointed CFO of Bertschi in 2011. Since 2013 he is heading the group's largest business unit, Liquids Logistics Europe. Jan Arnet lives in the canton of Lucerne and is married with two children.

"My decision to withdraw from the operational management of the company is the result of careful consideration within the board of directors and the family,» said Bertschi. "We firmly believe that this is the right step at the right time for the company, its customers and its staff.

"Digitalisation and expanding markets are major challenges for the chemical logistics industry. A broader management team will help Bertschi stay ahead in this fast changing environment. I will continue to work on a full-time basis and focus on the group's strategy and innovation projects on a group level."

For the company, this is also an important step to secure a long-term succession, based on continuity.

"We want the Bertschi Group to remain a family business. Alongside the second generation of the family, represented by my sister Brigitta Berner-Bertschi and myself, already three members of the third generation are working in first management positions within the company. Our third generation can see itself taking over the company management at a later point in time," said Bertschi.

Hans-Jörg Bertschi

Jan Arnet

Santiago Gonzalez

Also from 1 August, Santiago Gonzalez (40) will lead the Business Unit Liquid Logistics Europe. Currently head of the Bertschi subsidiaries in Spain and Portuga, Gonzalez has been with Bertschi for the last eight years and has over 15 years' experience in European liquid chemical logistics.

"We are delighted to welcome Santiago Gonzalez on our management team, he will make it even more international," said Arnet.

A new generation on TALKE board

TALKE has added a new generation of professionals to its Executive Board. Markus Glöckler and Christoph Grunert are succeeding Armin Talke and Norbert Talke, both of whom are moving to the Advisory Board. Alfred Talke will continue as Group Managing Director.

This change in the senior management team is part of TALKE's long-term programme aimed at creating the conditions necessary for the next stages of the group's development. By filling the two Executive Board positions from within its own ranks and retaining two family members as active participants on the Advisory Board, TALKE is also strengthening the foundations for the group's strategy of continuous and sustainable growth, which it has been pursuing for a number of years.

Christoph will take responsibility for both European logistics activities and international project business. He has been with the company for more than 16 years and, since 2012, has been responsible for the European Warehousing and Value-Added Services division. Previously, he was instrumental in establishing and developing both the group's business in the Middle East and its consulting and project activities.

Markus has been with TALKE since 2014 and during that time has had the Finance and Controlling division and Strategic Procurement within his portfolio. In joining the Board of Directors, he will now also take responsibility for IT and for the Project Management Office. Before coming to TALKE, Glöckler held a variety of commercial positions within the international airline sector.

Group Managing Director and co-owner, Alfred Talke said: "I am very much looking forward to our ongoing cooperation with Markus Glöckler and Christoph Grunert. They are the first managing directors in TALKE's history not drawn from the ranks of the family itself. They nevertheless personify the continuity that is so important for our family, as well as the qualities of professionalism and innovation that will enable us as a team to lead our company into the future."

New VP Americas at Albatross Tank-Leasing

Albatross Tank-Leasing has announced that Martin Peploe has joined the company as Vice President Americas and will be based in New Orleans. Martin has been in the Tank Container industry for many years, having previously held management positions in Sea Containers, ICL, Trans Ocean and TPI, as well as carrying out numerous consultancy assignments.

New MD for Richter Chemie-Technik

Richter Chemie-Technik, a global market leader of fluoropolymer lined pump and valve solutions proudly announces Barbara Wladarz as its new Managing Director.

With the start of the New Year Barbara Wladarz joined Richter and brings many years of leadership experience to her new position. She was most recently General Manager Central Europe for Dematic.

She has a proven track record of successfully leading complex organizations and creating high performing teams.

"I am honoured and excited to lead Richter to the next level and I am very fortunate with a trusted brand and loyalty of key users," said Barbara Wladarz.

"However, the key to Richter's success is its people and their commitment to keep the chemical industry safe." she added.

Philip Nölling is new CFO of Hoyer Group

Dr Philip Nölling has taken over as CFO of the Hoyer Group as from 1 February, replacing Gerd Peters.

He has previously held the same post at the Hermes Logistik Gruppe and DPD.

"Not only are we convinced by the specialist know-how of Dr Nölling, we have also gained the impression that he understands the requirements that Hoyer as a family business asks of a CFO, and that he will identify with our values and exemplify them," says Thomas Hoyer, chairman of the advisory board.

ITCO and @TCO merge

Since 1 January 2018, the tank container industry is represented by a single global organisation, following the merger of ITCO (the International Tank Container Organisation) and @TCO (the Asian Tank Container Organisation), which was completed at the end of last year.

Operating as ITCO, the newly merged organisation will continue to develop the programme of work that ITCO is undertaking, while also integrating and maintaining the projects that @TCO has developed over the past six years.

Most of the members of @TCO have accepted an invitation to join ITCO. Because of the ITCO Tank Container Village at Transport Logistic China 2016 in Shanghai in May, a considerable focus of ITCO's work in 2018 will be directed towards the Asian market.

In addition to the ongoing technical and regulatory service that it provides to its members, ITCO's current work schedule includes a complete upgrading of the website, the publication of the annual Tank Container Fleet Survey, and the development and promotion of the Tank Container E-learning programme.

ITCO will also be organising the Tank Container Village in Shanghai in May, together with a European Meeting in September and an Asian Regional Meeting in Singapore in November.

A major part of the work undertaken by @TCO has been the establishment and management of a Tank Container Depot Audit Scheme, aimed at setting a quality benchmark for tank cleaning and repair.

More than 25 depots have passed @TCO's strict inspection procedures and are entitled to display the @TCO audit placard at their premises and are invited to join ITCO as new TSP members.

ITCO President Reg Lee stated: "ITCO members can offer the safest, most cost-effective, mode of transporting bulk liquid chemicals when operated as part of a door-to-door global logistics liquid supply chain."

Carrying on the family business at APC

Advanced Polymer Coatings, Inc. (APC), manufacturer of patented polymer high performance industrial coatings used worldwide in a range of markets, has promoted David J. Keehan to President.

The announcement, made by Donald J. Keehan, APC Chairman, is designed to ensure management continuity in the closely held family business.

Mr Keehan said: "I am pleased to elevate my son David to this new post. He understands the intricacies of the business and what we need to achieve in future years to continue APC's legacy as a quality, premier coatings solutions provider."

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WHEN IT MATTERS

IMT delivers the digital future

Tankcontainer Magazine talks with Dethmer Drenth, founder of IMT, the Netherlands-based telematics industry innovator

TCM: What services does IMT offer?
DD: IMT is an independent telematics solution partner for the tank container and tank wagon industry. We offer generic as well as tailor-made telematics hardware and software.
Our clients are tank operators, tank manufacturers, tank leasing companies and end-customers.

TCM: What is IMT's background?
DD: IMT was founded in 2013 in Breda (The Netherlands), between the ports of Antwerp and Rotterdam. This location enabled us to learn, test and improve our tank sensors in close cooperation with the industry. In 2016 we opened a satellite office in Spain where 19 programmers are now working on the IMT software platform.

Because installing telematics on a tank in 2013 was relatively novel, IMT had a precursor role, explaining the added value of telematics to the market. For years we were only delivering small quantity batches but that all changed in November 2016 when Hoyer committed to fit all of their tank containers with IMT sensors, creating the first 'Smart Tank Fleet' of the world.

Hoyer was our first client that did a full roll-out on strategic reasoning. I still admire the vision and 'dare-to-act' mentality of Hoyer. It is now positioning them many steps ahead of other tank container operators.

Today all big tank container operators are customers of IMT. In a few years time we have grown from a 5 people company with EUR 300,000 of revenue and a big loss in 2014 to a company of almost 40 people, around EUR 10 million revenue and a healthy profit.

TCM: …….. and your own background?
DD: I have almost 15 years of experience in the telematics sector, starting in the early days of the first GPS oriented solutions. As Chief Technology Officer and co-founder of a company that installed thousands of GPS tracking devices in vans and trucks, I learned telematics from bottom up.

We were the first IT company to turn a TomTom navigator into a track-and-trace solution just by connecting our hardware. Based on this success, GARMIN started to install our application as a standard on all of their navigators: 15 million units per year. In 2010 I started a new venture, developing a low-cost high reliable GPS-antitheft system for the automotive sector that was installed in thousands of vehicles of the VAG and PSA automotive groups.

Based on my years of experience in building high quality, low cost and battery operated telematics devices I was looking for a new challenge in a niche market and found it in intermodal transport. In November 2013 I founded IMT.

TCM: What are the benefits of telematics?
DD: The main benefit is fleet efficiency: by knowing the exact whereabouts and idle times of the tanks, one can transport more cargo using a smaller fleet. This secures cost reductions on several levels.

As telematics gives a better view on what is where and in which status at the depot, internal processes as storage, tank maintenance and tank cleaning can be better managed and optimized.

Also customer service is enhanced in a big way. Imagine the impact on the customer when they receive a fully automated e-mail including loading/unloading timestamps and a cargo temperature chart of the trip, just a few seconds after the tank is unloaded.

But telematics can be much more. Our platform can connect to other sources such as production and transport databases and on-site data pools. We exchange logistic data between different sources such as freight forwarders, tank container owners, sea ports and railway terminals. On-site data, such as production information, a supply chain order or depot information can also be added to create the total supply chain picture.

It is therefore no wonder that the Industrial Internet Of Things is now becoming more standard on tanks and demanded by the end-customer.

TCM: What are IMT's biggest successes?
DD: By far our biggest success is the Hoyer deal, installing their whole tank fleet of around 40,000 tank containers with our sensors and helping them to get a clear digitalisation strategy in place. We are connecting the Hoyer tradition to the digital era, adding a lot of value by offering digital propositions to their customers.

One example of that is the way we supported Hoyer in developing the 'Connected Container' project with Bayer, where Bayer has chosen Hoyer to supply all their containers worldwide with smart technology, powered by IMT. The software team of IMT also integrated Bayer ERP data into a global information and alerting system of Hoyer.

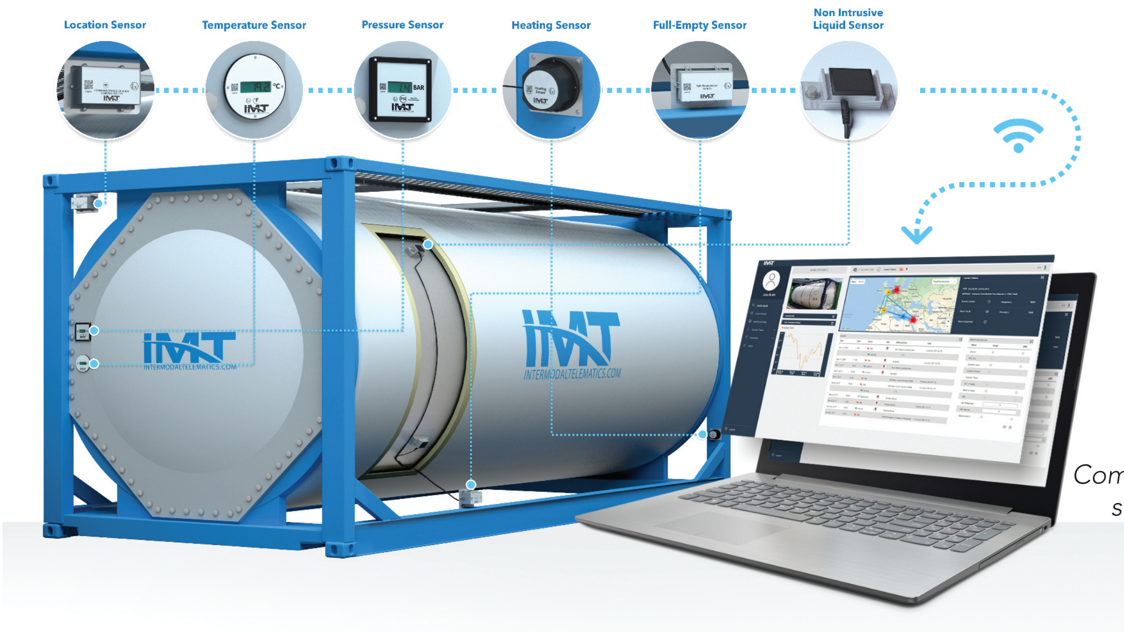
The second big success for us is VTG Rail for whom we are developing a load-unload sensor for their fleet of over 60,000 wagons. This sensor will measure the load of the wagon and alert automatically in real-time when a wagon is loaded or unloaded. The fact that a market leader as VTG asked IMT to develop and produce this sensor is a big endorsement.

For me the third big success is our open way of partnering with other players in the market. Pelican Worldwide became the global distribution partner of our sensors. All new tank containers manufactured by Singamas and CPT are produced with our mounting plate already on the unit, enabling faster installation. We have also just entered into a partnership with TankContainerFinder.com, the leading online tank container platform, which will offer an IMT-powered smart telematics solution to their users.

TCM: Has IMT developed its own patented technology?
DD: Yes, IMT holds two international patents. One patent is based on the non-calibration

CV: Dethmer Drenth

Dethmer Drenth has always lived an IT life. At 14 he was a columnist in *Atari Magazine* and authored a book on Commodore 128 programming.
During high school he worked in his spare time as a programmer for a Dutch software company, Davilex, and developed a password control system for the Belgian bank Kredietbank.
He was chosen as one of the best 100 youth programmers in The Netherlands by the Dutch Ministry of Internal Affairs.
Dethmer developed logistic and planning software for cleaning companies and built the first multilingual multimedia training software on CD-ROM.
He sold the business after 18 months to Elsevier Training, at the time the largest IT training company in the Benelux region.
During the early internet boom years, Dethmer co-founded a web-based training company and then switched to telematics, co-founding telematics companies GPS-Buddy, GlobeSpot and Suivo. He leveraged his considerable telematics experience to found IMT in 2013.



Complete tank telematics sensor offering by IMT

technology of our temperature sensor. The thermometer will always show the temperature with an accuracy of 0.3°C and never needs to be calibrated.

The second patent IMT holds is for non-intrusive measuring of the liquid level of a tank through the tank wall. This technology is developed for and used in our liquid level and full/empty sensors.

TCM: Cyber-security is one of today's major issues. How does IMT protect customers' data?
DD: IMT takes data security and availability very seriously and has dedicated specialists in place to make sure procedures, protocols and security measures are being reviewed and updated continuously. This ensures that the data will be secure and protected, only accessible to authorized users.

IMT is also the first telematics provider that is ISO 27001 certified. ISO 27001 certification requires an extensive set of procedures, protocols and security measures being in place to guarantee data availability, security and credible scenarios for disaster recovery.

The ISO 27001 certificate was mandatory for some chemical companies we work for and we believe it will be as mandatory for telematics data security in the future as ATEX certification currently is for hardware sensors.

TCM: Do sensors operate in explosive atmospheres?
DD: Yes, our sensors are ATEX Z1T4 certified and, since we produce the units and sensors in-house, our production hall is also certified to assemble ATEX devices.

TCM: Isn't it expensive to equip tank containers with telemetry?
DD: Those times are gone. On a 10-year period the cost per day per container is between EUR 0.29 for a basic installation and EUR 0.60 for a full-fledged telematics container. All costs included and with unlimited concurrent use of the IMT platform and API.

TCM: How important is scale?
DD: Scale helps lowering the average tank telematics price and enables the user to have the utmost efficiency return of the installation.

TCM: How is IMT's telematics package different from SAVVY?
DD: Very different. It's probably better to not only compare it to SAVVY but, in general, to all tank container telematics suppliers. Firstly, we are quantity-wise by far the biggest supplier of telematics solutions for the tank container sector.

The deal with Hoyer is, of course, instrumental in that but it also enabled us to invest heavily in growth. We currently have 6 hardware engineers and 19 software programmers working every day on new tanks sensors and extra platform functionalities. Only last year we developed four new tank sensors and the IMT platform got an update with new functionalities at least every three weeks.

By investing heavily into hardware and software development, IMT is now the only provider of a complete tank telematics sensor offering: location, ambient temperature, cargo temperature, pressure, heating history, full/empty status, heating system control, etc.

The development of a new sensor takes easily more than two years: at least one year for research, development, prototyping, field testing and making production of the sensor itself ready and another year for the necessary ATEX certification. Not many will take this effort anymore.

It sounds a bit frank but no tank telematics provider is currently on our level of speed. By investing heavily in new hardware and software development, we believe we will keep ahead of every competitor, which in the end will neither have the interest nor the money to try to catch up.

TCM: At what rate can a telematics system be added to a tank container fleet?
DD: It all depends on the installation power one has. In general, installing a basic set of sensors (location and temperature) will take about 30 minutes for a skilled installer. Installing more sensors of course adds to the installation time.

TCM: How are customer preferences for telemetry changing?
DD: In 2013, on a hardware level, only location was asked for. ATEX certification was not spoken of. At that moment it was very easy to enter the market with a low-end product, so many did.

During the years ATEX-certified hardware became a necessity and more sensors were asked for. In the end our customers demanded fully control of the tank from the office, measuring not only location and cargo temperature but also the pressure and the heating history of a tank. The last sensor that hit the market is a full-empty sensor, measuring the liquid level in a tank (20%-80%).

Also the need to connect third party sensors became a need as certain clients may only install the sensors of certain suppliers. Currently we see the need of controlling a heating/cooling unit on the tank as a growing demand. In that respect we are now developing such a unit, able to set and read-out heating systems of multiple suppliers (Loebbe, Eltherm, Klinge, …).

Also, on a software level, demands have changed in time. Where first only the whereabouts of the tank was needed, we are now building full-fledged software platforms connecting to the production and transportation databases of the producer and the operator. Also inter-operability between systems is a growing need in order to finally have the whole supply chain connected.

TCM: How will telematics develop?
DD: As telematics become a commodity on tanks very fast, everybody will get used to working with the tank data and, inevitably, customers will get more demanding, resulting in new hardware and software requests.

We already saw that with our customer Rinnen, for whom we developed a display in the truck that is wireless-connected to the IMT thermometer on the tank and shows the real-time temperature of the cargo to the driver.

Application examples like this will pop-up in the whole supply chain, not only at tank container level. IMT will not only install sensors on the tanks, but also at various locations in the tank depots and at the end-customer production site to measure production flows and predict transport needs.

All these sensors will interconnect and give a complete real-time overview of the total supply chain to make it fully transparent and therefore as efficient as possible.

New core technology will create new opportunities. Currently, a completely new worldwide low power low bandwidth network is being activated, called Narrow Band or CAT M1. It will enable sensors to become much smaller and much stronger. By 2021 it is expected that this will be active worldwide. One of our six hardware engineers is working full-time on this new technology as we see many possibilities ahead.

IMT platform connects to the production and transportation databases of the producer and the operator

TCM: What next for IMT?
DD: Our business focus will stay on tank containers and tank wagons. More sensors will measure and control more steps and finally the complete supply chain will be online.

But sensors are only a data input. It is all about what you do with that data and especially in connection with other big data. We foresee that all processes in the supply chain in the end will be connected to each other. With our excellent programming team, we will keep on enriching our generic platform as well as supporting the market with tailor-made integrations.

BOLT from the blue

Singapore-based Bulk Oil & Liquid Transport is a small ISO tank container operator with big ambitions, reports Sam Whelan

Bulk Oil & Liquid Transport's (BOLT) current fleet of 800 T-11 25,000l tanks places it outside the top 60 or so operators, according to ITCO's annual fleet survey (the report lists operators all the way up to Stolt Tank Containers, which leads with a fleet of over 35,000).

However, BOLT should soon break into ITCO's table of top players. Director Anand Sheth told *Tankcontainer Magazine* that the company would breach 1,000 tanks for the first time by mid-2018 - and that's just the start of BOLT's ambitious growth strategy.

"We have a very deep expansion plan to reach at least 5,000 tank containers," says Sheth. "But short term, we're aiming for about 2,000 tank containers and to become a leading supplier in Far East and Southeast Asia, India and the Middle East."

BOLT began operating just three-and-a-half years ago. While domiciled in Singapore, the operator has its origins in India and Sarjak Container Lines,its parent company, and the Sheth-family business. Mumbai-based Sarjak is an NVOCC specialising in over-dimensional cargo.

"I was working for Sarjak Container Lines when the opportunity arose to start BOLT. We started it from scratch as a subsidiary of our family business," explains Sheth."In a short time we have established ourselves as a reliable player. We have complete capability to handle International Maritime Dangerous Goods (IMDG), including a dedicated compliance team that deals with IMO and IMDG regulations."

BOLT provides its customers with integrated storage, sea freight and domestic haulage services for bulk liquid cargoes, including hazardous, non-hazardous, oil and petroleum products. Cargoes shipped are normally feedstocks used in chemical processes, such as in the paint, FMCG, construction, petrochemical and crude oil industries. Complete chemical supply chain management services are also provided - from the point of tender to cargo collection, delivery and consignee inspection.

"Our aim is always to provide every customer with high-quality, tailor-made solutions, such as door-to-door, door-to-port and port-to-port logistics. This is all backed by the latest state-of-the-art equipment . All of our tanks are brand new, between two-and-a-half and three years old," adds Sheth.

All of BOLT's tanks were either purchased or leased from CIMC. Sheth says BOLT is keen to continue its relationship with the Chinese manufacturer.

While BOLT has grown quickly since inception, it hasn't all been straightforward. Indeed, Sheth notes how big fluctuations in tank prices and freight rates have impacted the business.

"Around a year-and-a-half ago the freight industry went into a very big downturn, and it definitely impacted the tank industry a little bit more than dry containers because the cost of tanks is a bit higher. So people like us who invested in tanks right before the downturn faced a bit of a glitch in our growth plans.

"We are back now and I think freight rates are definitely not as high as they could be, but they are moving in the right direction, and, by say 2019, we should be seeing the shipping industry shifting back to the higher rate levels that were there previously."

Tank prices were roughly $23,000 when BOLT launched, according to Sheth, but the downturn saw prices plummet to $12,000.

"I think right now it's rotating at around $14,000, so it's starting to recover a bit. We're in talks to purchase a few tanks. We didn't purchase at rock-bottom, but it's going up now so it's a good time to purchase."

BOLT's emphasis on quality services is driven by the high standards of its customers, who tend to be high-profile chemical shippers and traders. In fact, Sheth says the firm rarely works with forwarders and instead prefers to deal almost exclusively with multinational chemical companies.

BOLT enjoys "leadership positions in all tradelanes" with most of its customers, he adds. "In Korea, for example, we're working with some well-known multinationals. And we also have long-term contracts with big chemical traders, and a contract with one of Southeast Asia's biggest palm oil manufacturers.

"So we have a decent orderbook right now with direct customers, and we have all the big customers we need to maintain a certain service quality and standard."

One way BOLT maintains high service quality is through its tailor-made IT system, specifically designed for ISO tank operations. The system handles enquiries, bookings, invoices, container tracking, financial and inventory reporting and maintenance and repair records.

"It does everything for us, including regular reports on whatever aspects we require – spending, business development, inventory positions, finances, everything," Sheth says.

He highlights Singapore as an advantageous location for the business, describing the city-state as the "Dubai of the Asia Pacific" since so many traders are based there.

"Singapore also has a lot of companies that have outbounds from there, and it is home to a lot of companies, even European and American companies which have a presence in Asia. So overall it's been much easier to tap up our customers and build a good rapport and relationship with them."

BOLT's Singapore office oversees its agency network across Asia, where it is represented mostly by Ben Line Group. The operator has another office in India which takes care of the Subcontinent and the Middle East, where representation is handled by Sharaf Group.

Freight rates in the Middle East are on the rise thanks to the current fluctuation in oil prices, Sheth notes, which he describes as a "big boon" for operators. And in India, he says, chemical imports are booming due to heavy government spending on, and new investment rules for, infrastructure projects.

"More generally, since most of the chemical business is carried out by traders, and with the fluctuation of prices of cargoes in China and India, the trading in chemicals has also grown a bit, so that is the reason the demand has increased."

He says China is a unique market for operators, since "every operator has a presence there and every new operator would like a presence there."

This market supply means rates are generally lower for loads into China, especially from Southeast Asia.

He adds: "Similarly, Malaysia is different in its own way because it has Kuantan deepsea port and Petronas is there. To cater to Petronas requires special skills and special talent and considerable amount of experience."

Sheth also says Vietnam's chemical industry is looking "quite promising", due to Chinese investments and favourable conditions for manufacturing. Vietnam's chemical industry is currently targeting 14-16% annual growth, according to the country's Chemicals Agency, while the paint industry is also growing quickly at around 10% a year, due to demand from the construction, property and infrastructure sectors.

"I think over the next eight to 10 years Vietnam could be a booming area for ISO tank operators."

Working in local markets does have its downsides, however. Sheth pinpoints "unethical" local players who pay little attention to regulations and safety standards as a significant short-term threat.

"But we all know that this kind of business model does not work for the long term, so we let them be and we wait for our turn. This is the reason we are having success in the long-run."

Indeed, Sheth sees BOLT's long-term vision of transforming from a small operator into a major player as their greatest opportunity. He says the firm will continue its thus far successful strategy of concentrating on inventory availability in order to achieve that goal.

"We mostly have regular clients who require regular exports into India and Asia, so the key here is to plan and position tanks to provide them with consistent and sufficient inventory whenever required."

After capturing more market share in its core markets, BOLT plans to launch in East Africa and Europe.

"These are important markets for exports from Southeast and Far East Asia, so to support our customers with more and more geographical capabilities, to cater to their different kinds of businesses, we intend to open up more and more locations as our inventory grows.

"We are just a small operator right now but we always dream big. We have a lot of opportunities because we only have T11 tanks, so we can diversify our fleet into refrigerated tanks, for example.

"We plan to have a plethora of services and a decent range of options and products which will help us retain customers for a long time."

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A one-stop Moose

Dutch entrepreneur Frank Van de Moosdijk demonstrates the added value gained by keeping it small, reports Janny Kok

Frank Van de Moosdijk must have a creative mind. When he started his tank container business in 2017 he juggled with the idea for a company name: it had to be Moose Tank Parts.

The name stands for a one-stop shop in the wider sense of the notion.

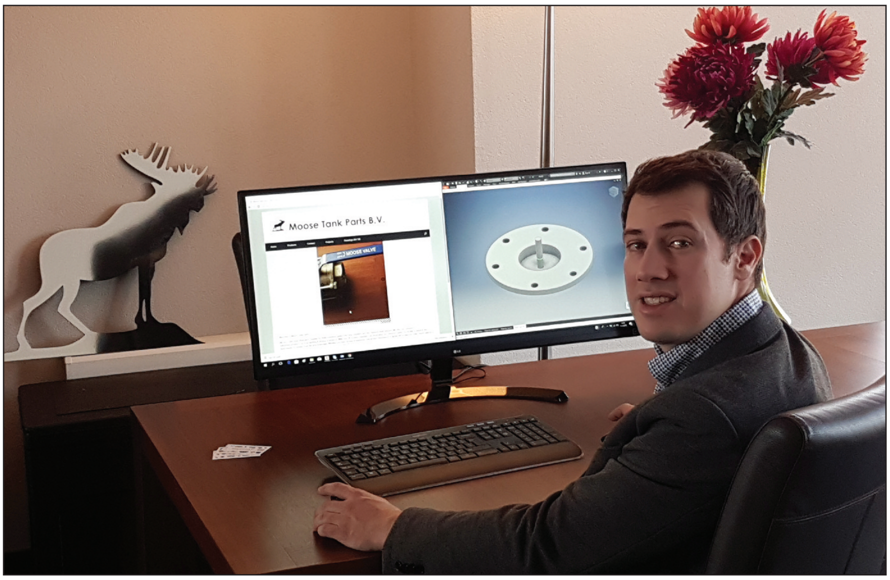
"We offer a wide product range of over 6,000 different articles, such as box container parts, couples and connectors, made-to-measure handrails and many more. The latest is the manlid cover."

Van de Moosdijk is certainly experienced – he started his career in the metal industry 20 years ago. He specialises in metalworking and in high-sheen polished stainless steel work, ranging from 1 to 1.5 mm thick. Fellow craftsmen and experts know that this is careful and precision work.

Today, his Moose Tank Parts customers can rely on being served by a mechanical engineer with an over 16 years of experience in the tank container business.

Over his time in the business, Van de Moosdijk has built up a wide international network of customers. He likes to visit customers and business relations in countries worldwide, to learn about specific requirements of products people in the business may have.

"At times it is quite a challenge, as each country will have its own way of doing things, its climate and legislation one has to comply to", he says.



"Supply on demand, design accordingly and supply when required on location" is the total concept for almost any dedicated tool the customer may need. "It is a matter of thinking along with the customer about his specific requirements", Van de Moosdijk says.

The polished stainless steel moose figurine Van de Moosdijk made is waiting for a hole to be made to fit a little clock inside. It could well become a popular promotional gift.

It is just one example of the unusual skills of its maker. Van de Moosdijk gives other examples: "I've constructed a tube for sample collection from tank containers for Dutch Customs".

Others include a handrail that can be constructed in parts. He did just that, making it precisely fit to measure on specific tank containers.

One could suspect that authorities within the EU are not particularly practice-driven in the process of introducing regulations and legislation. Van de Moosdijk thinks otherwise: "Legislation and regulation are really practice-driven within the sector. Yet, the chemical industry and transport community are continuously developing themselves. This is a good thing for the sake of common practice, safety and sustainability. More and more handrails are constructed on tank containers and top valves can be controlled from the bottom."

Van de Moosdijk offers more than a usual trade supplier of tank parts: "Besides supplying products on demand, it is important to refine existing products and, if needed, find solutions for any problems that arise. To me, the market is multi-facted and offers many opportunities. It is never a dull moment.

Review of the year

Tank container market expert Leslie McCune summarises 2017, a year that beat expectations

Growth is said to be a spiral process, doubling back on itself at times, reassessing and regrouping. So it is has been for the tank container industry in past few years as it dealt with fundamentally weak demand, a collapse in rates and a structural over-supply of tank containers as Asian manufacturers kept their lines running, no matter what the cost. This drove down the price of generic T11 tank containers to below $12,000 in the first half of 2017.

These low price levels enabled smaller, more specialist or regional players to enter the market and caused the remanufacturing and refurbishment of old tank containers to all but cease.

The challenging market conditions led to consolidation among tank container leasing companies and, to a lesser extent, operators. Among lessors, GE SeaCo and Cronos gladly conceded their independence to HNA/Bravia's strategy of acquiring top-tier, asset-heavy businesses within the transportation, logistics and infrastructure sectors. Poorly positioned operators, such as Interbulk, inevitably capitulated to stronger rivals.

But 2017 was a turning point. Global economic growth of 3% was much stronger than expected as the recovery in investment, manufacturing and trade continued. Growth is forecast to edge up to 3.1% in 2018, although there remains a risk that this is a short-term upswing rather than the resumption of sustained global growth.

Petrochemical demand is correlated to GDP - petrochemicals growth has been about 1.3 times GDP in recent years. This, combined with increasingly lengthy chemical supply chains, augers well for tank container demand although the risk associated with the increase in global feedstock opportunities is that petrochemical markets may become more regional. Long supply chains may also be threatened by employment, political and environmental considerations.

Long-term opportunities

The petrochemical sector itself is somewhere between the growth and maturity stages of its life cycle, offering plenty of long-term opportunity for tank container players. In the ten years to 2017, 212 new petrochemical companies entered the industry, increasing the number of players by 20%. In the next five years, at least another 51 companies will enter the market.

In the tank container sector, rates rose from historic lows in the second half of 2017 and some trade lanes showed very high levels of activity. Higher equipment demand was matched by somewhat higher utilisation, which is approximately 75% at the industry leaders.

Operators worked hard at improving margins by reducing empty repositioning costs and benefited from the windfall gain of demurrage revenue.

Historically-low tank containers prices were exploited to refresh fleets (although prices have recently risen to approximately $14,000 for generic T11s).

In the tank container leasing sector, interest rates define the cost of finance, which in turn is one of the primary drivers of the returns achievable by investors. Although global interest rates are on the rise, leased tank containers are still sought after as an asset class and, paradoxically, the somewhat higher cost of finance may help lessors increase day rates.

Although many lessors have enjoyed the low purchase prices for new tank containers, some have struggled with utilisation and suffered the pain of having to renew long-term contracts at much lower rates.

A close reading of the financial press shows the interest of an Asian conglomerate in the sector. This could be directed at one of the top five lessors or, possibly, lead to the creation of a large combined lessor/operator. HNA of China, for example, could combine Seaco/Cronos leasing business with, say, NewPort/Sinochem. Many other permutations are, of course, possible.

Regional activity

Regional activity was mixed. Europe had a busy year for tank container movements, despite several major disruptions in the main north-south rail corridor. Trade volumes of speciality chemicals from Europe to Asia - much of which are dependent on tank containers - have increased significantly. The transatlantic tank container tradelanes from Europe into the New Jersey/New York gateway were very active, although many tank containers then have to be repositioned empty down to the US Gulf Coast (USGC) for export loads.

Hurricanes along the USGC badly affected chemical production, causing the usual build-up of tank containers in depots. Boasso and Odyssey's Linden Bulk Transportation in New Jersey were unable to accept any more empty tank containers and operated on a 'one out, one-in' basis.

Domestic tank container business in China increased markedly, benefiting from tighter regulations on the treatment and handling of hazardous chemicals, partly a result of the 2015 Tianjin explosion.

In the Middle East, the fall-off in the imports of tank containers has caused a major shortage of equipment since the third quarter of 2017.

Rates have, and will, increase although so too will operators' costs as they reposition empty tank containers into Saudi Arabia from Asia Pacific and South Africa to meet demand. India, which often provides a buffer stock of equipment for the Middle East, is less able to provide empty tanks containers because local demand is strong for tank containers.

The promise of Sadara, the giant $20 billion Dow/Saudi Aramco joint venture in Jubail, is at last being realised by the tank container operators that endured the uncertainties of the project and agonies of the Royal Commission's planning process. Shuttling movements are giving plenty of work for those involved (and if you aren't involved already, it's too late) although deepsea traffic for Dow customers of Sadara has not yet taken off to the extent imagined.

The restrictive 'last cargo' policy of Sadara's supply chain team has significantly limited the availability of equipment that operators can offer them.

ITCO's 2017 fleet survey shows industry growth – defined as the number of tank containers in the global fleet – of 8.7% in 2017. At the beginning of this year, the global tank container fleet was 552,000 units, up 44,000 units from 2016. Much of the industry's growth was driven by Asia, with penetration accelerated by more prescriptive regulations in China, combined with more diligent policing.

48,500 units were manufactured in 2017, up 10% on 2016. Chinese manufacturers built 40,100 new tanks with another 5,400 coming from Welfit Oddy in South Africa, which reduced the number of tank containers manufactured while maintaining the number of processing hours at the factory. This suggests that Welfit Oddy are producing a greater number of more specialised tank container, a fact consistent with the industry view that the average selling price of Welfit Oddy's more specialised tank containers is approximately 20% higher the price of generic T-11s from Chinese manufacturers.

The industry has become relatively concentrated with a small group of tank container leasing companies and operators dominating the global fleet. The top three leasing companies - Exsif, Seaco Global and Eurotainer - account for 59% of the leased fleet of 245,000 units. Raffles, Triton/TAL and Trifleet make up a second tier with TWS, NRS, International Equipment and CS Leasing having minor positions.

The top three tank container operators – Stolt, Hoyer and Newport/Sinochem – account for 27% of the operator fleet of 365,000 units.

In summary, with the exception of some Asian tank operators, tank container lessors and operators have improved their financial performance in 2017, with further gains expected in 2018.

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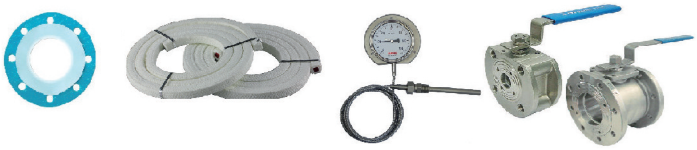

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The final curtain

James Graham looks at some of the reasons the revenue-earning life of an ISO tank container can come to an end

A tank container is a depreciating asset for its owner. Its revenue-earning lifecycle is measured in years or decades. At some point an owner will face a decision as to when it is to be withdrawn from service. Given ordinary commercial usage, this is normally after 20-30 years.

The catalyst for disposing of a tank container can come from a number of operational and economic reasons. The main operational pressures come from damage that may be too costly to repair, a fall-off in the traffic it was acquired to handle, or simply having a surplus of tank container assets. A key economic pressure may be the need to replace out-dated or obsolescent equipment with more modern equipment.

Container owners have three options. Firstly, if an owner with manufacturing or storage requirements, a container can be used for static storage, or it can be sold for non-revenue storage use to a third party. If the owner keeps the container, this is income-neutral as no money can be recovered, but then none is spent on new storage.

The other two options for disposal involve the recovery of some of the original investment in the container, but this is unlikely to match its whole-life costs. The choice for the owner will be the sale or scrapping of the container.

John Bannister, VP Tanks & Reefers at Seaco Global, explains the factors that lead container owners to decide between sale or scrapping.

He says: "It is mainly the age of the tank or sufficient damage that it is not economical to repair and return back into service. In some cases, it could also be technical obsolescence where older designs had higher tare weights or an older style of construction making them less attractive for use today.

"Residual values influence the decision on whether it is worthwhile to sell or scrap the tank, but the real driver to the secondhand market is scrap price levels, in particular the price of stainless steel."

Fit for purpose

Singapore-based used container reseller Tankformator considers that used tank containers may not match the gloss and other showroom standards of new equipment. However, their containers are supplied 'fit for purpose' and delivered complete with the required certification issued by independent third parties such as Bureau Veritas.

Used tank containers are attractive for the 'here and now' requirements and, for this purpose, may not be rivalled by newbuilds. A used tank container still has a respectable service life remaining, with many coming to market midway through a 30-35-year life cycle.

Tankformator inspects each container prior to acquisition, claiming to know exactly what to look for to select the best. It is more than simply the age of the equipment; it is equally about the container's past service life.

Knowledge of operational history far outweighs age. The first consideration for Tankformator is in which mode was it used?

The second consideration is the history of its service life? Has it carried fuels and lubricants (except sulphur-containing diesel fuel), non–hazardous vegetable oils and oleo chemicals, alcohols, corrosives such as acetic acid, cargoes with other primary hazards, with corrosion as secondary hazard, chloride-containing cargoes, cargoes containing sodium?

The third consideration is the question of how well or badly it was maintained by its previous owner or owners. If maintenance is deferred or dispensed with altogether inevitably tanks get run down. Tanks less than 10 years of age can get wrecked.

Corrosion is not limited to interior linings but also adversely affects the carbon steel frame. If the coating gets damaged, chipped, thinned and the bare metal gets exposed to air - especially with high humidity and heat - corrosion will occur. The corrosion rate can be quite fast to the extent that the frame of a container in a marine environment could corrode badly in which case renewal of frame members becomes necessary.

Tankformator offers used tank containers for sale that are just over or just under what is termed mid-life. This normally equates to around 16 years.

Tankformator issues customers a Tank Container Fitness Attestation with Dial life cycle to illustrate where a tank container considered for purchase is relative to its life cycle. The Tank container Fitness Attestation is backed by independent third-party inspection.

Storage options

The use of redundant ocean containers as storage units is becoming increasingly popular as a method of avoiding having to construct a suitable storage tank from scratch. Additionally, ISO tank containers are increasing sought after for applications as blending tanks and are ideally

suited for blending lubricating oils complete with agitator easily inserted in any of the existing nozzles or through the manhole.

Tankformator supplies ISO tank containers for storage as well as new build for bulk food service.

Tankformator is well acquainted with the food industry's requirements, including the standards introduced by organizations such as FOSFA, AOF, NIOP, SCOPA and others. The same applies to requirements such as halal and kosher certification and practice.

When it comes to used tank containers and liquid waste tank, it is the cargo history that plays a critical part in the pre-selection for any container that will be used for food.

There are a number of requirements, such as the finish of the stainless shell, that play an important part in food conveyance.

Food industries set the bar high when it comes to shell finish. ISO tank container generally have a cold rolled 2B Finish. This is well below the desirable sanitary finish of grit 120. But whether or not this is acceptable depends on the cargo intended for carriage.

The finish is important because a rough surface could retain cargo products and from there raise the risk of bacterial growth.

However, the level of risk also depends on other factors including the intended cargo for carriage. Simply put, what may not be important for carriage of ethyl alcohol could be very important for carriage of dairy products or vegetable oils liquid waste.

State of the art

For Hoyer it is important to have a state-of-the-art tank container fleet available for customers at lowest cost levels, says Andrea Schwabe, Head of Corporate Marketing of Hamburg-based Hoyer.

"Therefore, it is important to replace a certain number of tank containers in the fleet by newer ones, to meet our customers' demand for more modern equipment," she says.

"We focus on safety, quality, user-friendliness and damage resistance. The decision to sell the selected old tanks to the second-hand market or to scrap them is mainly influenced by efficiency and profit, less by 'strategic' aspects in regards of competition. This is only the case for very specialised tank container segments."

For Hoyer the second-hand market is an option when remanufacturing is not an alternative.

She adds: "For the company looking at the prices for this in the last two years. If you remanufacture an old tank, you still have an old tank and a container design as well as old specifications, which is not in line with our fleet strategy."

A first in Spain

Gröninger Cleaning Systems has installed a tank container and tank truck cleaning system in the Spanish location of client Global Talke in Zaragoza, reports James Graham

Global Talke Spain is a joint-venture between Alfred Talke Logistic Services and Global Spedition.

Gröninger has installed four pumps of 9,000 l/h at 100 bar for tank cleaning purposes at the Spanish location.

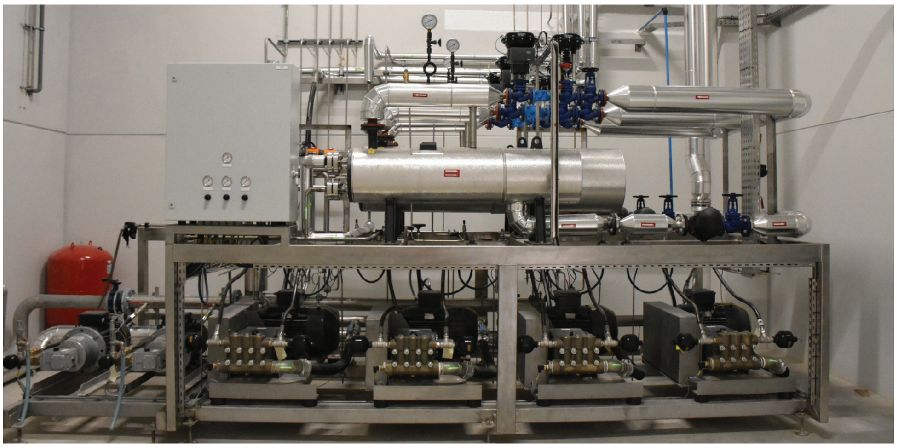
According to Marcel Versluis, Gröninger sales engineer, they provided high pressure heat exchangers for cleaning temperatures up to 90°C.

He says: "Every bay is equipped with five rotor jets, airline cleaning and steaming nozzles. Furthermore, we installed two pumps, each 3,000 l/h at 100 bar for spray guns and hose cleaning, for use of cold and hot water."

Each bay is also equipped with a hot air blower for drying the tanks and containers. Installation is completed with a modern waste water plant. All bays are equipped with a Cleaning Guard system, which is audited and accredited by SGF (Sure-Global-Fair), the world's leading independent industrial self-control platform for the fruit juice, fruit nectar and fruit products industry.

A Gröninger Tank Cleaning System combined with Depot Cleaning software provides operators with the key requirements for the system. Depot Cleaning Base is the user friendly software base that plays a pivotal role in every cleaning.

Cleaning Guard ensures the security of cleaning registering hardware information in the software. Data on water pressure, flow, dosage of detergents, disinfectant and temperature and so on are recorded in the wash bay through special sensors and gauges. This data is continuously validated. If one of the parameters doesn't correspond to the program requirements or the pre-set values, the system will repeat the previous step in the wash programme. Based on this principle, the quality and validation of the entire tank cleaning process using the Gröninger Cleaning Guard module is verified.



The values of the different parameters such as pressure, temperature, flow, etc., are constantly measured during the cleaning. A client certificate will provide both graphic and numeric data. The Gröninger Cleaning Guard is proof that the cleaning has been completed as specified.

If the cleaning is performed adequately, the Depot Cleaning issues an ECD (European Cleaning Document) to confirm the cleaning method has been executed in accordance with the requirements. It is also possible to design customised certificates.

There are two temperature controlled heating points for heating and keeping tank temperatures steady overnight or over the weekend.

The tank cleaning pumps at the Spanish site will function in alternating mode for the three cleaning bays. One of the cleaning bays is for chemicals and the other two for food-grade container cleaning purposes.

Versluis says: "The installation is designed for cleaning mostly tank trucks, but however each bay is also equipped with a power jet for container cleaning."

This location in Spain is Gröninger's first complete tank cleaning installation in the country, says Versluis. The location in Zaragoza was a completely new build project. The client Global-Talke has some existing facilities in the same industrial zone in the city. However the sites are located in two different locations.

The official opening of the plant for commercial cleaning was planned for mid-March.

Experience for rent

Hamburg-based leasing company TWS provides the complete range of tank container types. Felicity Landon reports on its latest developments

TWS prides itself on being a system provider with 'all-in-one' solutions. With a fleet of 9,000 tank containers available for worldwide leasing, the company focuses on the chemical and food industries. Under the 'Rent-a-Tainer' brand, the message is 'Experience for Rent', says Steven Stübchen, recently appointed general manager of TWS's technical department.

"We provide tank containers for every product and all volumes; they are all fitted with steam heating systems, full walkways, collapsible handrails, man lid and outlet boxes," he says. "When necessary, an electric heating unit can be fitted. Some of the tank containers are fitted with baffles. On top of this, a number of units have high-quality linings and rubber coatings for use with corrosive or high-purity products. Individual tank containers are fitted with agitators or Clean-In-Place facilities."

The company's focus on specialised equipment is based on the understanding that customers are looking for customised solutions for their projects, says Mr Stübchen. As a result, technical support and consulting-on-location have become much more important in recent years.

"It is very important that we are able to create full service packages for our clients. When a client comes to us and says they need a tank container for a specific product, we will start working on engineering solutions to meet their needs. We start with a check of the product and consider the lining required – and all the other features – in order to find real solutions.

"It could be one client needs one reefer container for transporting a special product from Finland to Greece or it could be a large industrial customer looking for a larger number of containers with special discharge capabilities but they don't know exactly what they need.

"We focus on purpose-built constructions and continue to invest in expanding our high-quality tank containers."

Innovation

Among TWS's innovations for the food industry, special reefer tanks are available with heating/refrigerating systems, as well as swap bodies and tank containers fitted with agitators. For the chemical industry, there are specialised tank containers for phosphorus and hydrogen peroxide.
For temperature-sensitive products, super-insulated containers are available.

TWS says its mobile heating systems are very specialised, the result of spending a lot of time in development. "These systems ensure that products remain at the necessary temperature in the tank containers. Up to four tank containers can be heated at a time. Weighing just 350kg, the heating units can easily be transported wherever they are needed," says Mr Stübchen.

Spill troughs are another speciality – available in different sizes, TWS's spill troughs are specially made of stainless steel and have gained all necessary approvals. "They can be used in an emergency to deal with product leakage, for temporary intermediate storage or when decanting products from a container," he says. And as with tank containers, special troughs can be manufactured at the customer's request.

'Unique' is an overused word but it can genuinely be applied to

TWS's high cube tanks, a particular success story. "We started working on high cube ideas about three years ago, talking with manufacturers all over the world to see what is possible, what processes are involved, and so on. Now we have the first ones in operation," he says.

Specially built for storage purposes, the high cube tank containers have been designed with a slope of 4 per cent from the front to the rear end. Viscous products such as glue can be discharged faster, leaving almost no residue inside the tank. The tanks can be used to store and then directly feed product into a customer's manufacturing process.

Telematics

In line with the general drive for real-time information and intelligent solutions, TWS has also focused on monitoring and control systems. "Our tanks can be modified with telematics," explains Mr Stübchen. "The sensors generate and transmit data about the tank container and its cargo – locations, temperatures, etc – to our customers. M2M technology is a great new instrument for communication and information transfer between our equipment and our customers.

"Small features like selectable languages for our touchpad panels for the agitator and reefer systems will make handling of the tank containers easier for our customers worldwide. And by clicking on a small flag, the language of the whole system changes to the desired language, wherever the tank container is at that particular moment."

It's also no surprise to hear that energy management is a key focus within TWS's research and development programme. TWS is actively searching for new solutions for saving power and reducing the carbon dioxide footprint, says Mr Stübchen.

It has developed a new range of composite tank containers with up to 30 per cent reduced weight and 40 per cent improved thermal properties. "These characteristics save fuel and heating capacity. Furthermore, a higher load volume is possible, which saves money for the customer. Customers have welcomed this," he says.

Steven Stübchen, 39, has worked in the tank container business since 1999. He worked for two tank container workshops in Hamburg, in maintenance and repair, and as workshop manager, before joining TWS in January 2011 as tank container engineer and project manager.He was appointed general manager of the technical department of TWS in October 2017. He and his team are responsible for all newbuild orders, technical support, certifications, modifications and all technical-related matters

A second project he highlights is the super-insulated tank container. TWS has developed a box shape insulation of 130 mm up to 160 mm, depending on the size of the tank (21, 24 or 25 cubic metres). This type also promises lower energy consumption, he says. "Our super-insulated tank container is in operation for both food and chemicals. Some of our food clients are very interested, as their cargo needs to be 4-5°C, for example. With this super-insulated tank container, they can save money and transport their products over longer distances."

Safety and quality in all areas remain a top priority, he adds. "Our focus is on a clear customer-orientation, cost-efficient operations and protecting human beings and the environment. In addition to central coordination, qualified and flawless order management, positioning and insurance, TWS is able to deliver a full service offer meeting consistently high standards."

TWS has a nominal capital of €6m and its rental operations generated €25m of turnover in 2016. The company's 2017 results have yet to be published but turnover increased, says Mr Stübchen, and further growth is planned.

In terms of products, TWS's strategy remains to provide the complete range of tank container types, with the focus on special tank container leasing. In this, the company's global service network is critical. At present, the business is fairly balanced, with slightly more volume on the chemical side but with increasing demand for specialised solutions for the food industry. The split is helpful in that the ups and downs in demand from the two sectors can often balance each other out.

Geographically, TWS operates around the world. "Key regions are our home base in Central Europe and the still fast-growing market in China, where we set up a base in Shanghai three years ago," says Mr Stübchen. "We also see a big and expanding market in South America, particularly Argentina and Brazil, for special foodstuffs. We have acquired new industry customers leasing our special tanks in key regions in South America and Asia. Our strategy is to provide our customers with our special equipment worldwide and in that we will continue to expand."

Growth at NTC

A full-service multimodal tank container hub has developed in the Netherlands

NTC Tank Container Services opened the new location in Botlek in the Netherlands five years ago. Since then the company has grown substantially in the number of cleans and repairs.

Last year NTC cleaned over 36,000 tank containers and repaired 16,500 units and, in the depot, there are approximately 80 locations where the company can repair and test simultaneously.

The depot offers a state-of-the-art cleaning stations with eight positions for chemicals,four for cleanings accompanied with the driver and two for food products. In 2017 NTC added extra wax heads on four positions to give a total of five per position.

Eric van Halewijn, Managing Director and founder of NTC, states: "The washing heads save a lot of time for tank trucks and compartment tanks."

At NTC the motto is 'Reducing idle time' and customers appear to value this. In order to improve fast and reliable service NTC is investing in two extra positions for chemicals accompanied with the driver. Since March 1 the depot has offered 10 positions for hot steaming and five for hot water cleaning while in the coming years NTC will expand the number of cleaning positions to meet the demand of the market.

After cleaning, tank containers can immediately be brought to the next customer.

In addition, NTC has four positions equipped with a latex unit. In general these cleanings are more difficult and labour intensive to clean but with a two-shift operation NTC is able to clean a reasonable number of tank containers with residual latex or resins. The cleaning agent is pumped through the tanks until the tank is fully clean. Clients can also come to the depot for MDIs and TDI cleaning.

"We love taking on more difficult cleaning and we happen to be good at it", says van Halewijn.

Barge quay

"Together with our neighbour RBC we offer a water-bound solution. Tank containers can be delivered by barge to RBC and will be shunted to our adjacent location. This is a unique proposition within the port of Rotterdam and the cooperation with RBC is flourishing. Their ADR storage is highly rewarded by our clients.

"Units that need to be delivered to clients are shunted to NTC, heated and trucked directly to the site of the client. In the current tight trucking market the barge solution has proven to be a reliable alternative. NTC can reposition tank containers via barge and road all over Europe.

"NTC has a go-getting mentality and has a keen eye on trends and developments. The markets we serve are growing and NTC wants to remain competitive. With the expansion of our site by 6,000sq m at the end of this year our location will grow to 56,000sq m in total. A part of the site will be made available as a parking place for chassis.

"NTC has made drop-and-swap arrangements with some customers; they can leave their chassis, so that we can clean their equipment during off-peak hours. This working method saves a lot of waiting hours".

When asked if NTC will start offering own transport services, van Halewijn answers: "We will focus on our core activities. At NTC we love to do what we are good at and for complementary service offerings we like to work with the best players in the market, in this case trucking companies. At this moment we get a lot of transport related questions from (industrial) clients.

"If we look at the chemical industry in a radius of five or 10km around us, then I think we are better able to use slot times than the carriers themselves. In recent years congestion and traffic jams have become a factor to reckon with. Using our parking and driving containers to clients will lead to efficiencies. At this moment NTC is in talks with some parties to set up this service concept."

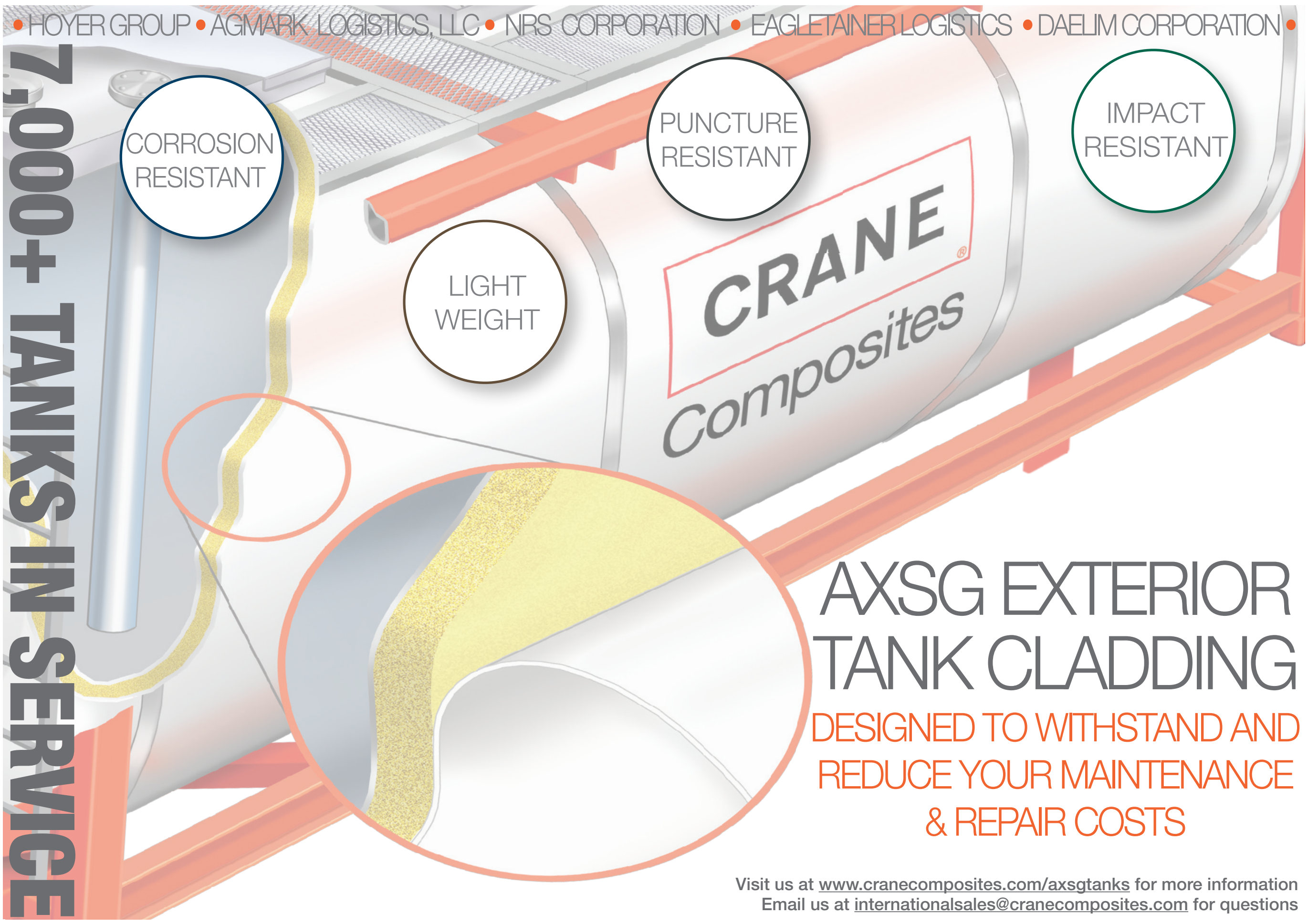
NTC has decided to move a part of its storage services to the Maasvlakte and works closely with D&R depots, which has a 160,000sq m depot in the heart of the Maasvlakte. The first group of clients is already using this depot and, if demand increases further, NTC will start a workshop to facilitate the leasing market. The port of Rotterdam authority has planned to build a Container Exchange Route. This is an internal lane connecting all deepsea terminals and depots at the Maasvlakte. In the near future NTC will shunt tank containers from the terminals directly to the depot.

Asked to look a few years

MD Van Halewijn sees a future in which NTC offers full-service depot activities at both Maasvlakte and Botlek

ahead, where do you think NTC stands?, van Halewijn replies: "If we look at the share of leasing companies in our depot , we see that this is declining, partly due to the growing demand for tank containers. The average utilisation is above 90% and this means fewer units in depot. A few years ago, we saw problems arise with the returns because all the depots in Rotterdam were full. Assuming that most tank container operators have bought thousands of tanks in recent years, then you see that it is going to be difficult to deal with the large numbers of off-hires in terms of storage. Therefore, expansion of depot space is a top-of-mind issue at NTC."

Van Halewijn sees a future in which NTC offers full-service depot activities at both Maasvlakte and Botlek. "We want to be the one-stop-shop for all parties active in the tank container industry. My own personal goal before retiring is leaving a depot company behind with two full-service cleaning and repair locations in the hotspots of the port of Rotterdam."



Will there be new tank container lessors?

Editor Leslie McCune describes a well-known competitive strategy model to see if new market entrants are likely

Professor Michael Porter is a Harvard-based academic with a worldwide reputation as one of the foremost authorities on the global competitiveness of industries. He is the author of a compendium of books and articles on competitive strategy and is said to be the most cited business author.

Porter created the so-called 'Five Forces' model to analyse an industry's attractiveness and likely profitability. The model is a simple but powerful way of understanding the competitiveness of an industry sector, and for identifying the potential profitability of a company's strategy. It has become one of the most popular and highly regarded business strategy tools and is a favourite in company board rooms.

In this issue and the next we explore what the model reveals for the tank container sector and, specifically, for tank container lessors.

The model encourages tank container lessors to look beyond the actions of their competitors and examine what other factors impact the business environment. It identifies five forces that make up a market's competitive intensity - these either erode or enhance the profitability of a company operating within the market. The five forces are:

Force 1: Threat of new entrants
Force 2: Bargaining power of buyers
Force 3: Threat of substitute products or services
Force 4: Bargaining power of suppliers
Force 5: Rivalry among existing competitors

Force 1: Threat of new entrants

This 'force' addresses how the position of a tank container lessor is affected by a new entrant's ability to enter the market. The fundamental question it poses is: will there be new global tank leasing companies?

The threat is defined by a number of factors such as how easily new lessors could enter and establish themselves in the global tank container leasing market. This in turn depends on a variety of issues such as how much it would cost to do so; is market expertise essential and how quickly can it be gained; are the returns attractive; how generic are the management skills needed to run a leasing business?

The following list of factors is not exhaustive but a conclusion is reached on whether the threat of new entrants in the tank leasing market is High, Medium or Low. The remaining four forces will be analysed in future issues. When each 'force' is analysed, a conclusion can be reached on the overall competitiveness of the tank container leasing sector.

The threat of new global tank container lessors is HIGH because:

* the finance required to buy large numbers of tank containers for lease is freely available and priced at historic lows.

* with tank container prices reduced because of manufacturing over-capacity, the cost of buying a fleet of tank containers is at an all time low.

* rates of return on leasing tank containers are high, relative to other asset classes. Two years ago, the return on equity on the balance sheet of a mid-size global lessor was 25%.

* leasing companies attract investment support from financial players seeking long-dated, stable income streams generated by tangible assets. This appeal is supported by the 15-20 economic life of tank containers, their normal long-term operating lease term of five years or more and the relatively high utilisation rates for tank container over their economic life cycle. By definition, tank container lease rates are linked to interest rates, simultaneously providing investors with interest rate leverage and useful protection against inflation. Finally, investment positions in leased tank containers also provide indirect exposure to commodities via the stainless steel required for their manufacture (the stainless steel price is the single largest determinant of the terminal value of a leased tank container at the end of its economic life). Other attractions for investors include the diverse customer base which has low purchasing power and covers

multiple sectors (chemicals, food, gas, etc).

* as an asset class, tank containers can be easily liquidated - there are many willing buyers of surplus stock and there is a low risk of obsolescence with size being as likely to render a tank container obsolete as technical obsolescence.

* market demand for leased tank containers is relatively high. Many tank container operators have taken advantage of the historically low tank container prices over the past couple of years and renewed their fleets. For most, this process has been completed and any additional needs will be met by taken on leased tanks, rather than purchasing new units. While operators are usually a leasing company's largest category of customer, operators essentially provide a guaranteed demand for leased tanks. The outsourcing trend in chemical logistics further fuels market demand for operators which, in turn, fuels demand for leased units.

* potential new-entrant leasing companies are attracted by the trend towards leasing and away from ownership. Leasing is a lower risk, limited liability operating cost with no balance sheet impact while ownership involves the purchase of the asset with company's funds (from reserves or debt). The periodic cash flow associated with a leased tank container is easy to determine (periodic fixed payments and an optional one-time terminal payment, payment of insurance, etc) and come with an associated tax shield as they are tax-deductable. Ownership, on the other hand, entails an initial cash payment and other cash flows associated with beneficial use of the asset, including the tax shield on depreciation, M&R costs, insurance, etc.

* for customers, the cost to switch between different lessors at the end of the lease is low, providing many new entry opportunities for new entrant leasing companies

* many tank container leasing companies are stand-alone companies which can be bought outright or carved out of larger corporate entities. Several tank container lessors are part of, or have strategic relationships with, much larger General Purpose (GP) box dry freight container lessors. The tank container leased market offers significantly higher returns than GP leasing and so is of interest for new entrants from the GP leasing sector.

* the vital depot infrastructure for leased tank containers, which is essential to provide Maintenance & Repair work and statutory testing during - and at the end of - a tank container's lease, has improved and expanded around the world. Europe, the US and Asia have been well-served for several years but new depot facilties in Africa and the Middle East have enabled leased tank containers to be off-hired in these regions. Previously, the cost of repositioning off-lease tank containers from, say, the Middle East (where there were no full service M&R capabilities) to either Singapore or Europe materially impacted the financial return of a leased tank container over its economic life.

The threat of new global tank container lessors is LOW because:

* the management of leased fleets requires specific expertise than cannot easily be quickly replicated by a new entrant. This expertise - together with the weighted average cost of capital - is a key factor dictating a lessor's profitability.

* to take advantage of business opportunities, global lessors require a global network of available tank containers. This requires lessors to invest in fleets that have sufficient numbers of tank containers to create the critical mass required to serve customers around the world. This critical mass also generates substantial economies of scale, leading to increased purchasing power for lessors and lower operational costs.

* lease rates for tank containers have been at all-time lows in real terms, with little likelihood of a substantial recovery in the short to medium term due to global oversupply.

* the leasing market is far less fragmented now - last year, the top three global lessors accounted for 68% of the world's leased fleet, with only 19 other significant lessors in the market.

* residual values at the end of a tank container's economic life are currently at historic lows.

* global interest rates are set to rise, increasing lessors costs, and significant investment is need in a globally-competitive fleet.

* there are relatively little regulatory obligations or proprietary knowledge, making it more straightforward for rivals to quickly enter the leasing market and weaken the position of incumbents.

Conclusion

While there are no strong and durable barriers to entry into the tank container leasing market, the conclusion of the above analysis indicates that there is a LOW threat of new entrants.

In the next issue of *Tankcontainer Magazine*, we will look at the remaining four forces that shape industry competition. These are the bargaining power of buyers (i.e. the customers of the lessors, such as tank container operators), the threat of substitute products for leased tank containers, the bargaining power of suppliers (i.e. tank container manufacturers) and the rivalry among existing tank container leasing competitors.

Leslie McCune is an independent tank container market expert and has worked with several tank container lessors and operators to analyse their individual competitive positions using Porter's Five Forces model

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Entering a new arena

Some of the world's largest shipping companies have their tanks lined with Interline 9001. Now it has been launched as a liner for ISO tank containers. Felicity Landon reports

When talking to AkzoNobel Linings Product Manager Matthew Fletcher about the decision to launch Interline 9001 as an internal lining for ISO tank containers, the first question that comes to mind is this: what took you so long?

Interline 9001 is already well established around the world as a lining for ships' tanks. After ten years in development, Interline 9001 was launched into the marine market and patent was granted for 'superior chemical resistance and cycling capabilities'. Over 500 ship tanks a year are protected with Interline 9001 across the globe.

Fletcher explains: "The tank container market takes safety and protecting the environment very seriously. Interline 9001 from our International® range is a proven performer in the marine industry and we are confident in the product's performance – but we wanted to take the time to prove both its quality and the benefits it provides also for the tank container market."

Fletcher claims Interline 9001 will add security of supply and also give a wider choice to customers, as it is joining a market with a limited number of linings suppliers. "AkzoNobel has gained a share of the market with Interline 9001 for the chemical cargo tanks of ships," he says. "But applying the same product to tank containers is stepping into a different arena altogether.

"ISO tanks tend to carry more aggressive chemicals than those of ships' tanks and also operate at higher temperatures, which can increase how aggressive the chemicals are. ISO tanks travel halfway around the world and the operators need to be sure they are securely holding their cargoes. Taking a cargo such as sulphuric acid, the consequences of a leak could be catastrophic to the environment."

Naturally, chemical manufacturers and shippers do not take risks with the transport of potentially dangerous chemicals, so to get this into the market AkzoNobel needed to have very strong technical data that proves the quality and reliability of the product, says Fletcher.

During 2017, AkzoNobel set up trials working with ISO lining applicator HÜNI + CO in Germany and this was an important step forward. "HÜNI + CO is a respected applicator in the ISO tank market – they liked the way Interline 9001 applied and they are happy to work with it. That is important for us."

Fletcher points out that when it comes to lining selection in ISO tanks, the decision is not always made by the same people; the chemical company may recommend a lining or leave the selection to the tank owner, operator or the applicator.

"Most companies will only trust proven applicators to apply the internal lining to their ISO tanks. As a leading global paints and coatings company, AkzoNobel prides itself on working with safety, integrity and sustainability as its core principles. Major chemical companies are looking to partner with established companies with sustainability-led goals and ethics, which complement their same business principles. AkzoNobel ticks all of those boxes. We can offer a sustainable partnership which has synergistic values to the product owners and shippers."

As a global company, AkzoNobel manufactures Interline 9001 in the UK, China and Korea, and it is also setting up production in the US. As with the ships' tanks product, Interline 9001 for tank containers will be a 'class zero' product. This means that the product is subject to the same stringent quality controls and will perform exactly the same wherever it is made in the world. "We have the capacity and factories around the world and scaling up is no problem to ensure we can meet the demands of the global tank container market," says Fletcher

He adds: "Being a truly global supplier, AkzoNobel has sales and technical service representatives (TSRs) located in areas where it's important to our customers. Our local TSRs support the application of Interline 9001, providing fast reaction times with local language support and understanding of the project requirements.

"Should any issue arise with Interline 9001 whilst the ISO tank is in service, AkzoNobel's global network of TSRs will be able to inspect the ISO tank, regardless of location, and assist with any warranty queries."

What are the key advantages of Interline 9001? Fletcher says: "The product is based on patented bimodal technology, which produces a lining highly resistant to a wide range of aggressive chemicals. The lining itself is the result of ten years of development and has been successfully used in the marine industry since 2011. It is applied using standard equipment at ambient temperatures, by conventional air spray or airless spray. It requires only a single post cure heating cycle after application, instead of multiple heating between layers, achieving optimum properties

Product Manager Matthew Fletcher

while saving time for the applicator."

Using Interline 9001 also allows flexibility in supply chains, he says. "It is very low absorption. In ship tanks, that gives the owner a very wide choice of subsequent cargoes to maximise profitability. When applied as a tank container lining, Interline 9001 is very smooth and easy to clean and would offer the same flexibility in follow-on cargoes."

And it comes with guarantees. To ensure correct specification and suitability for use of Interline 9001 in ISO tanks, all cargoes must be signed off by the AkzoNobel technical department first. This reduces the risk of Interline 9001 being used with a cargo it is not suited for, ensuring high levels of quality and safety for the customer.

"Safety is our number one priority," Fletcher emphasises. "We are making sure that all applicators receive the AkzoNobel Interline 9001 product training and agree to work within the AkzoNobel guidelines. This ensures the safety of the applicators and highest quality levels of application, which in turn ensures performance in service. We also have dedicated technical teams offering expert customer support and quick response to chemical resistance enquiries."

Once there is technical confirmation of resistance to the chemical cargo being proposed, AkzoNobel will offer a warranty for the performance of Interline 9001.

"The introduction of Interline 9001 creates a more competitive ISO tanks lining market," says Fletcher. "AkzoNobel entering the ISO tank market with the high quality Interline 9001 will increase security of supply of linings for the market whilst giving customers the option to work with a truly sustainable partner who works to the same values of integrity, diversity and sustainability as the global chemical companies do.

"The overwhelming message is high quality – this is our best lining for a very specific end use, and we have done extensive testing."

As to the future, innovation is the key priority for AkzoNobel. "We want to be the most innovative company in the paint and coatings market and we have numerous R&D projects in the background.

"For tank containers, we will continue to work to increase chemical resistance and technical performance in the tank. We will also focus on ease of application, to make it even easier to apply and to reduce any danger or risk associated with application or service. We have recommended practices and work closely with applicators – ensuring those practices are followed is part of our sustainability and safety commitment.

"The tank container world is a strong community and, as I said, safety and the environment are key, so it can take a time to convince people to change to another product. But AkzoNobel's credibility and global technical support, along with Interline 9001's wide chemical resistance and availability, are convincing arguments for change."

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- Commissioned by the Gulf Petrochemicals and Chemicals Association (GPCA) to produce the seminal study of the Middle East petrochemical supply chain
- Produced the world study of the tank container market and players
- Identified Middle East partners for world leading tank container operators and leasing companies
- Identified tank container acquisition targets
- Produce the quarterly ‘Middle East Tank Container Market Review’

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Is the bottom behind us?

Tankcontainer Magazine looks beyond the numbers as ITCO's annual fleet survey shows signs of a rebound

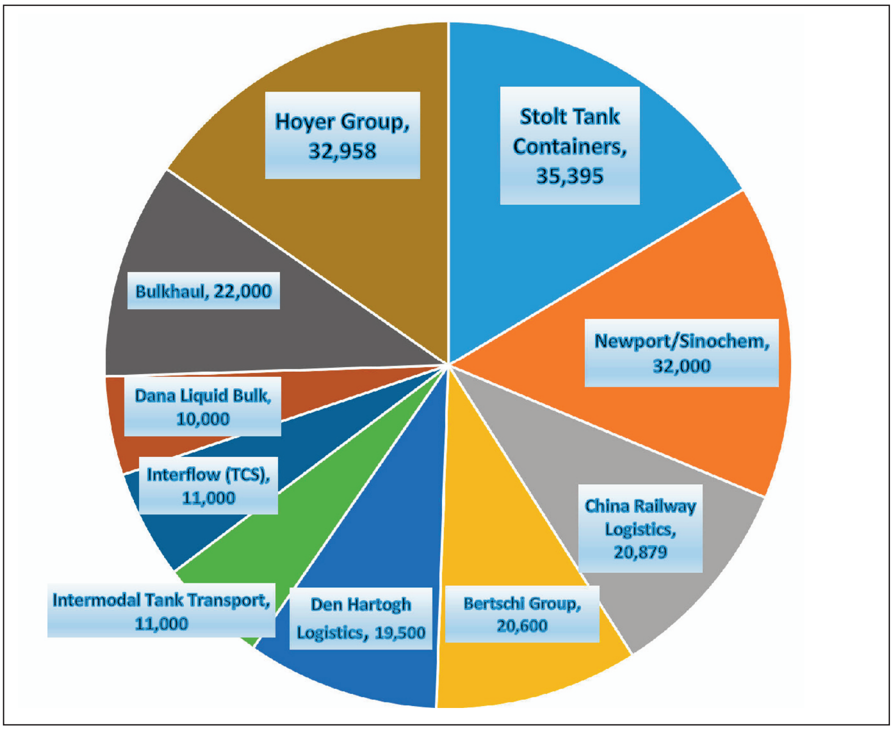
ITCO's 2017 fleet survey was released on 27 February and shows industry growth – defined as the number of tank containers in the global fleet – of 8.7 per cent in 2017.

According to the survey, in the second half of 2017 and the first two months of 2018, the tank container business 'benefited from a general increase in trading conditions'.

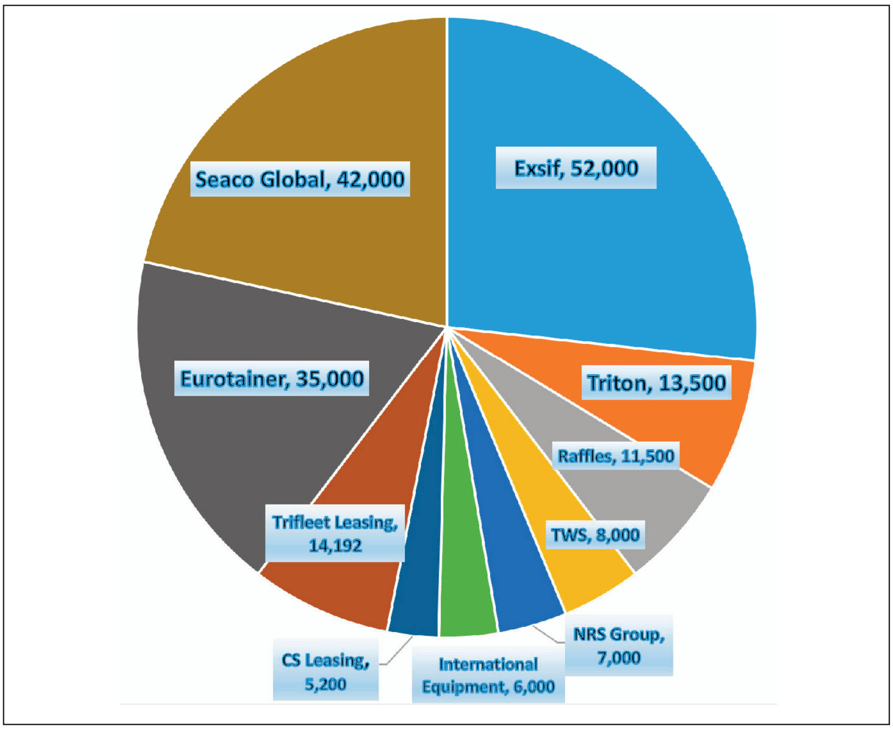
Demand 'was reflected in higher equipment demand and utilisation. In turn, this has led to an improved contribution to the "bottom line" of tank container operating and leasing companies'.

At the beginning of this year, the global tank container fleet was 552,000 units, up 44,000 units from 2016. Much of the industry's growth was driven by Asia, with penetration accelerated by a wider recognition of the acknowledged safety, economic and reliability features of tank containers. More prescriptive regulations in China, combined with a more diligent policing of them, have fuelled demand for tank containers ahead of other forms of hazardous chemicals transport. Older tank trucks, for instance, have been substituted by tank containers at some small trucking companies.

Some 48,500 units were manufactured in 2017, up 10 per cent on 2016. Chinese manufacturers built 40,100 new tanks with another 5,400 coming from Welfit Oddy in South Africa, which reduced the number of tank containers manufactured while maintaining the number of processing hours at the factory. This suggests that Welfit Oddy are



Top ten tank container operators at 1st January 2018. Source ITCO survey



Top ten tank container lessors at 1st January 2018. Source ITCO survey

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- Tank Container Operators
- Tank Container Lessors
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Each section has a geographic listing at the front followed by a comprehensive alphabetical listing.

To order your copy please visit: **www.tankcontainermedia.com** producing a greater number of more specialised tank container, a fact consistent with the industry view that the average selling price of Welfit Oddy's more specialised tank containers is approximately 20 per cent above those of generic T-11s from Chinese manufacturers.

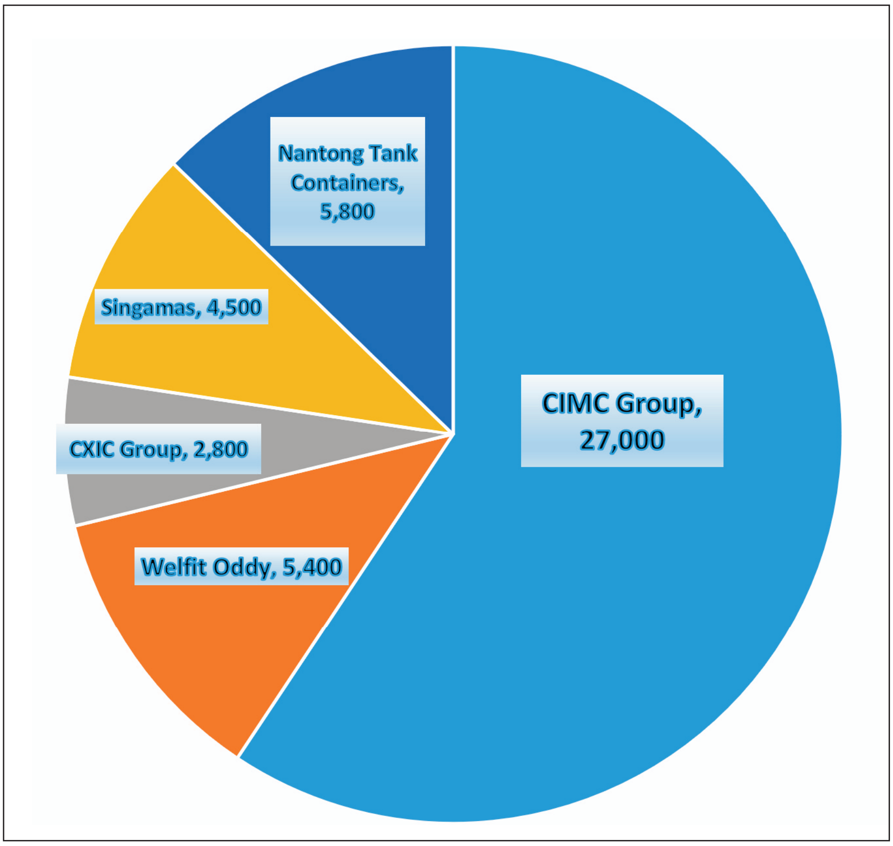
The industry has become relatively concentrated with a small group of tank container leasing companies and operators dominating the global fleet. The top three leasing companies – Exsif, Seaco Global and Eurotainer – account for 59 per cent of the leased fleet of 245,000 units. Raffles, Triton/TAL and Trifleet make up a second tier with TWS, NRS, International Equipment and CS Leasing having minor positions.

The top 10 leasing companies account for 75 per cent of the total leased fleet.

The top three tank container operators, Stolt, Hoyer and Newport/Sinochem, account for 27 per cent of the operator fleet of 365,000 units. New joint ventures and acquisitions are being considered and, for those following the financial press, the interest of a large Asian conglomerate has been evident.

The collapse in the price of tank containers (to a historical low of under $12,000 for a generic T-11 tank container) has enabled smaller, more specialist or regional players to enter the market. The survey notes that the service life of tank containers has, in the past, been extended by remanufacture (refurbishment) but with the price of new tank containers at current levels, this activity is not currently viable.

The top five tank container manufacturers account for 94 per cent of global manufacturing. Four of the top five manufacturers are based in China with Welfit Oddy, focusing on higher growth and added-value specialised units, being the only large volume manufacturer outside China. More manufacturing capacity is planned to come on stream in China and Eastern Europe in 2018, according to the survey.



Global tank container manufacturers in 2017. Source ITCO survey

Companies with tank container fleets of less than 1,000 units are not named individually in the survey but an "educated estimate" was made for the combined fleets. To that extent, the old ITCO global fleet survey, which identified the size of fleets below 1,000 units, was superior.

The *quid pro quo* was the extra time needed to compile the greater detail resulted in a later publication date. All in all, the quicker release of perhaps slightly less detailed analysis is preferable.

More generally, freight rates have recently strengthened and most players had a markedly better year than 2016, despite several major disruptions in the north-south rail corridor for European operators.

Anecdotal evidence suggests that utilisation rates have improved and the chronic over-supply that characterised the industry has ebbed away slightly.

Demand from China will improve as the necessary tank container infrastructure becomes more widespread and authorities have been far more active at closing down non-conforming chemical sites and depots.

Transatlantic routes into New Jersey and out of the US Gulf Coast were also particularly busy in 2017.

The general market context includes some changes in trade lanes. Although it is of less significance for tank container players, there has been a marked increase in the movement of commodity chemicals being moved from Asia to Europe. Conversely, trade volumes of speciality chemicals from Europe to Asia – which are more dependent on tank containers – have increased significantly.

GPCA 2018

Tankcontainer Magazine looks forward to the Middle East's leading petrochemical supply chain conference

The much-anticipated Gulf Petrochemicals & Chemicals Association (GPCA) Supply Chain conference takes place from 8-10 May in Dubai with the theme being 'Collaboration for growth: a cultural transformation'.

Topics will include organisational health and culture, and collaboration as a key driver of growth and a cornerstone of supply chain transformation.

As usual, this leading event in the GCC (Gulf Cooperation Council) petrochemical calendar will cover address global trends, technology disruptions, collaboration, business optimisation, procurement, organisational culture and will feature regional and global case studies.

The GPCA voices the common interests of more than 250 member companies which together account for over 95% of chemical output in the GCC (Saudi Arabia, Qatar, UAE, Kuwait, Oman, Bahrain). The petrochemicals industry is the second largest manufacturing sector in the region with annual sales of $108 billion.

The event offers an opportunity to meet top decision makers at a time of company restructuring and whole scale job rotations among many GCC petrochemical producers.

Yousef Al-Benyan, Chairman, GPCA, and Vice Chairman and CEO, SABIC, commented: "Long-term success requires increasing product differentiation, downstream diversification that captures the full value of hydrocarbons, groundbreaking technologies, pursuit of industry consolidation and asset integration, enhancing our international footprint, upgrading our operations, and supporting a corporate culture focused on innovation and commercial excellence.

"In a global economy that is increasingly competitive and customer-focused, chemical companies can no longer depend on volume to drive growth, but given our region's advantaged feedstock we are still better placed to diversify into value-added products. The supply chain of the future will also change correspondingly."

This should signal opportunity for tank container players, from operators and lessors to tank cleaning depots operations. Those companies which have won a slice of the tank container business at Sadara in Jubail are finally enjoying the much-touted step change in volumes and rates have risen, albeit from unsustainably low levels.

Notable too is change in the lanes of the tank container operators, which has created tank container shortages in some areas.

The conference's first day will feature a 'Human capital and talent management in the supply chain' workshop and will include a presentation on supply chain organisational design by Kim Winter, founder of the Australian-based Logistics Executive Group. The group has built close ties to the UAE and represents the Dubai Government's Jebel Ali Free Zone in Australia, New Zealand and India.

Other topics will include 'Realising value from digital transformations for supply chain organisations' and 'Recent global trends in business continuity for supply chain organisations'. The latter is particular germane given the currently isolated position of Qatar within the GCC.

If this persists, Qatar as a whole - and Muntajat from a petrochemicals perspective – may be driven to become more self-sufficient. However, the requirement for Muntajat to take a dominant equity position may dissuade many potential outside joint venture partners.

Muayad Al Faresi, the Procurement Director of Equate, will present on vendor procurement.

The final day will feature presentations on China's One Belt One Route initiative and on change management from Mark Benzahia, S.A.TALKE's Deputy Managing Director in Saudi Arabia.

The discussions on the sidelines will no doubt focus on the large Asian conglomerate that is analysing the tank container industry and its potential joint venture and/or acquisition targets. Interest will also focus on Hoyer's enlarged operating activities in the Supply Chain Solutions division of its Business Unit Chemilog, which acquired 51 per cent of a Saudi company.

Further participants in the joint venture, trading under the name Hoyer Middle East Ltd, are Petrochem Middle East FZE and Al Fahdah Al Arabia Trading Company Ltd.

The business is currently building a new filling plant in Jubail on an area of around 10,000 m2, with operations starting later this year. The filling plant's capacity will be 30,000-50,000 metric tons per year.

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