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Tankcontainer

MAGAZINE

Volume 4 | Issue 1 | March 2017



Co-owners Ian Wilson and Ted Fort celebrate Fort Vale Engineering's 50th anniversary



HOYER
goes totally
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Publisher
Duvel Media
www.tankcontainermedia.com

Editor
Leslie McCune
leslie@tankcontainermedia.com

Advertising
Ed Andrews
ed@tankcontainermedia.com

Production Editor
David Badger
david@tankcontainermedia.com

Design
ginko design
hellostudio@ginkodesign.co.uk

www.tankcontainerdirectory.com

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Review 52

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A new B2B platform which can link cargo to tank containers and transportation

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Try on the flip-flops

To truly understand your customer's business, the cliché is that you have to 'walk a mile' in their shoes (although one celebrated motoring personality wryly noted: "By then, who cares – you're a mile away from them, and you've got their shoes").

But one tank container operator is exploring this concept by placing one of its staff in the offices of one of its largest customers in an attempt to shadow the customer's decision-making process as it relates to tank container logistics.

The move is part of programme by the shipper and tank container operator to create a so-called empathy map. Empathy maps are a strategic tool used for capturing key insights into the interactions between customer and supplier. By walking through the customer's decision processes, a map can be built that increases knowledge and consensus between teams.

This deeper awareness can, in theory, improve decision-making, to each party's benefit. In practice, some early results have been useful – the customer, a caustic soda producer, shipped higher concentrations of caustic soda to ensure fewer tank containers were required, leading to lower logistics costs. However, higher concentrations have higher freezing points. A 60% caustic soda solution, for example, needs to be kept above 50°C and therefore requires a costly insulated tank container to prevent freezing. Lower concentrations remain liquid at lower temperatures so, despite more tank containers being required, there was no need for the shipper to pay for them to be insulated. This example of 'walking in your customer's shoes' resulted in a considerable saving being identified and delivered.

The greater understanding of the chemical and food industries by tank container operators and lessors has been instrumental in driving demand for tank containers. In this issue of *Tankcontainer Magazine*, we focus on Europe and report on other examples of the benefits of close customer understanding.

Our headline feature company, Fort Vale, has been providing critically important, precision-engineered valves and fittings to the tank container sector since its inception and celebrates its 50th anniversary this year.

Like Fort Vale, Gröninger Cleaning Systems has been around longer than tank containers themselves and we catch up with the latest developments at the respected Dutch service provider. The recovery of WEW, the Germany-based specialist tank manufacturer, is also examined.

This issue includes the much-anticipated 2016 Review of the Year. Last year saw competition intensifying as many

tank container manufacturers increased capacity and attempted to fill their lines by offering irresistibly low prices to tank container operators and lessors. Many took the opportunity to expand and renew their fleets, encouraged by low-cost finance and pockets of tank container demand strength in an otherwise weak market.

Rates continued their decline in what was said by many to be a 'race to the bottom', accelerated by operators and lessors looking to drive up their fleet utilisation and, for operators, turns per tank.

With low utilisation in the industry, many operators are taking a pause from building-out or renewing their fleets. Any incremental demand will more likely be met by operators using leased tank containers than owned.

The market dynamics of the global tank container market characterise it as a commodity market, with all the implications that has for rates. However, the review highlights that Europe is the most differentiated region – the specialty chemical product range is the most developed in the world and tank container demand is often wrapped within a broader, often outsourced, logistics package.

The review looks back at the M&A scene, now the dust has settled on Bohai/Seaco's acquisition of Cronos, and looks at the motivations behind Den Hartogh's acquisition of InterBulk.

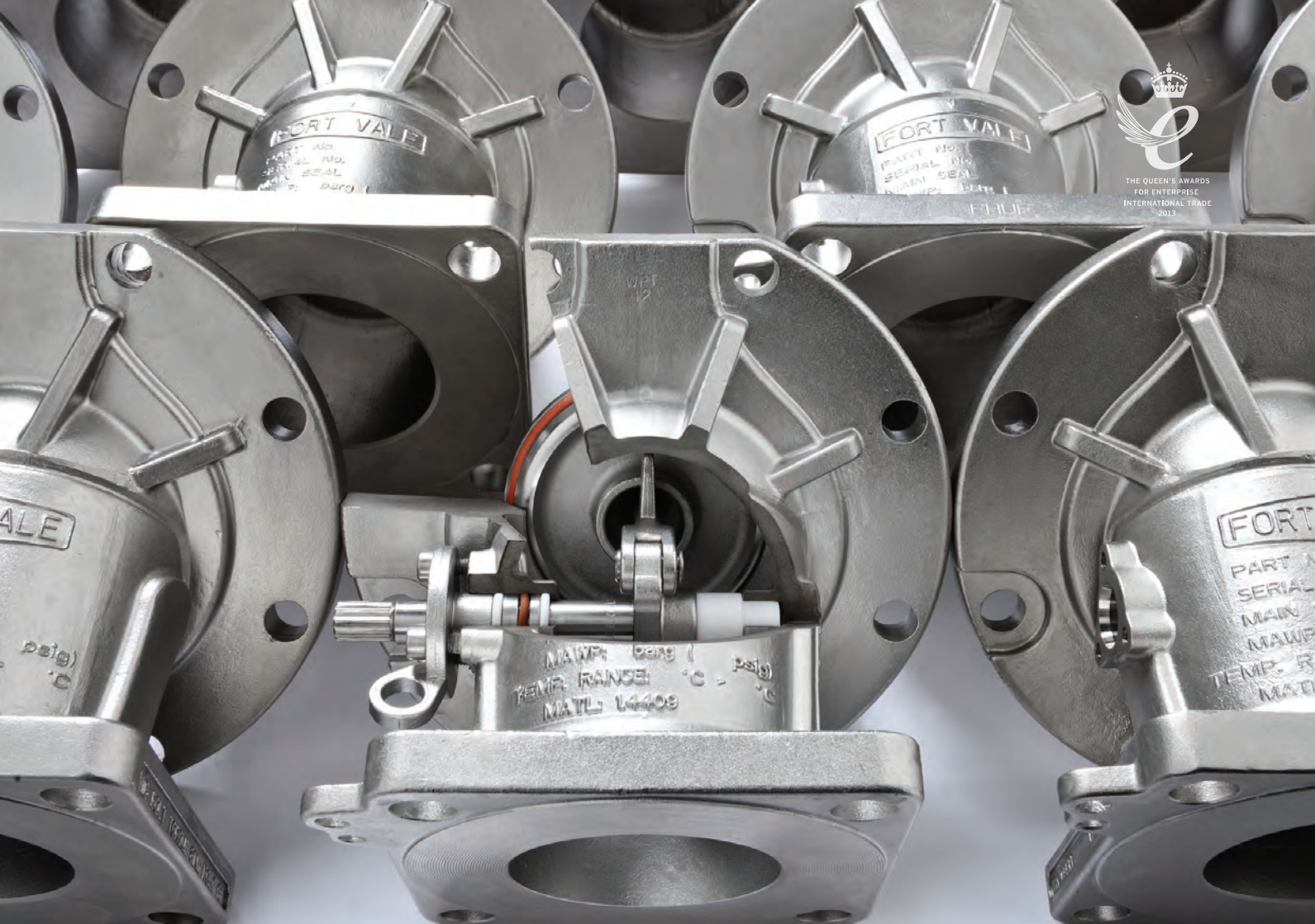
Tank container demand is remarkably robust in some segments of the market and these are highlighted in the review.

Further afield, *Tankcontainer Magazine* sampled the atmosphere at the GPCA conference in Dubai. The plan for tank container demand at the giant Sadara project in Saudi Arabia has been released. Nearly 5,000 tank container movements are planned for the second half of this year – enough to cause a frisson of excitement among the tank container operators that have been patiently building their local assets.

The demand for talent is increasing in the Middle East's petrochemical supply chain sector, where new logistics infrastructure investments and increasing demand for the movement of liquid specialties need specialist expertise. As in the petrochemical sector, Middle East tank container companies offering challenging and well-founded business growth opportunities are actively seeking talented individuals – especially those with a blend of local and international expertise – from more constrained and less-committed competitors.

In this issue then, something for everyone: macro-trends, micro-opportunities, a review of 2016 and mentions of Ferraris, communism and Albania. Enjoy.

Leslie McCune, Editor



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50 YEARS 1967-2017

Perolo's new factory is something to crow about

About 18 months ago, Perolo moved its Chinese subsidiary from Langfang to Rudong, a city near Nantong and Shanghai where most ISO tank manufacturers are situated.

This marked the next exciting chapter in the development of Perolo and its strategy for growth of the company in China. The new location, called BIP Perolo Jiangsu Engineering Ltd, manufactures the latest range of Perolo products to service tank manufacturers around the world.

Key facts about the new Perolo Rudong factory:

- The first complete factory outside of Europe to offer the full spectrum of tank container equipment incorporating in-house foundry, machine shop and finishing shop

- Prime location within 1 hour of Nantong and 2.5 hour Shanghai

- Production follows globally acknowledged standards of Perolo factory in France

Established in 1919, Perolo SAS is a worldwide company specialised in the design and manufacture of the finest tank safety and fluid transfer equipment for oil, chemicals, powders, liquefied gas and foodstuffs.

The company headquarters are located in Blaye, near Bordeaux, France where the 6,000 m² premises house product design and engineering, manufacturing, quality control as well as the customer support department.

Perolo SAS is part of the BIP GROUP which also has subsidiaries in Belgium – Perolo Distribution



BVBA – China - BIP Perolo Jiangsu Engineering Ltd - United Kingdom - Alltec Solutions Ltd - and a network of expert representatives all over the world.

Perolo SAS has invested through BIP group Rmb15m in BIP Perolo Jiangsu to maintain its position as word leader as manufacturer of tank container valves. The factory has been established to specialise in manufacturing valves for tanks used in the transport of dangerous goods, oil platforms, chemical tankers and rail tanker cars.

The factory will also offer development, sales and service, for industries involved in oil and gas, chemicals, logistics and other fields.

The company which has Research and Development centers in France, offers product design using international advanced standards. Furthermore, BIP Perolo Jiangsu establishes a strict quality control process monitoring each stage of production from casting to assembly to achieve the quality of the entire production process with full traceability necessary for

globally operated tanks.

As such Perolo ensures that each valve is tested strictly according to international standards and documented in line with ISO 9001 V2015 practices adopted by Perolo France.

The Perolo casting shop utilises a lost wax investment casting process to achieve high quality castings for valve bodies and components which are then transferred to the machining shop where skilled machinists and technicians turn raw castings into high precision valve bodies, working with the latest specification lathes, milling machines and CNC machines.

Production then flows smoothly to the Finishing shops where valve bodies are inspected prior to final assembly, calibration and thorough testing of valves. Finally all completed assemblies must go through the quality control department for final inspection.

Perolo China's current annual capacity is 12,000 sets of valves, 150 tons of casting, with the aim of doubling this volume in the near

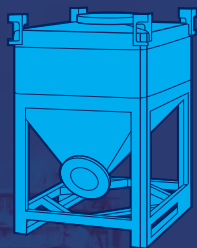
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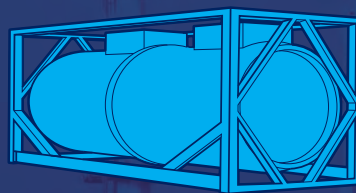
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future. According to the company's booming development in the market, we are planning to expand production capacity to meet domestic and international market's needs, to fulfill our customers' trust and expectations for Perolo.

BIP Perolo aspires to provide better products and services to customers around the world and contribute more quality products to the modern logistics industry in the world!

Latest report on cryogenic tanks

Research and Markets has added the 'Global and Chinese Cryogenic Liquid Tank Container Industry – 2016' report to its offering. The report is an in-depth study on the current state of the global Cryogenic Liquid Tank Container industry with a focus on the Chinese market.

The report provides key statistics on the market status of the Cryogenic Liquid Tank Container manufacturers and is a valuable source of guidance and direction for companies and individuals interested in the industry.

Firstly, the report provides a basic overview of the industry including its definition, applications and manufacturing technology. Then, the report explores the international and Chinese major industry players in detail. In this part, the report presents the company profile, product specifications, capacity, production value, and 2011-2016 market shares for each company.

Through the statistical analysis, the report depicts the global and Chinese total market of Cryogenic Liquid Tank Container industry including capacity, production, production value, cost/profit, supply/demand and Chinese import/export. The total market is further divided by company, by country, and by application/type for

Van den Bosch and MTG open pioneering tank cleaning station



Logistic services providers Van den Bosch and MTG have opened a tank cleaning station in the port of Tema, Ghana – the first of its kind in West Africa.

Built to Western European standards, the tank cleaning station is a step forward on the African market for Van den Bosch.

"A growing number of companies chooses to ship their liquids to Africa as bulk freight instead of small packaging," said Paul van de Vorle, member of the company's Team of Directors.

"With the start of the tank cleaning station, we are able to link inbound and outbound cargo flows more easily and to support companies in making the switch to bulk transport. This will provide many advantages in terms of handling, heating and savings in packaging costs."

The ability to have tank containers professionally cleaned in West Africa – an option that has not been available up until this point – opens up new options for shipping and transport companies, which should create a better balance between inbound and outbound cargo flows and reduces the number of empty transport movements.

The cleaning station is operated by MTG, which also owns the container depot in Tema where the cleaning station is located.

Managing Director Bas de Vaal said: "We can now provide a full logistics concept to all importing and exporting companies of liquid bulk goods. Moreover, tank containers can also be used to transport liquid bulk goods to various landlocked countries, such as Burkina Faso and Niger."

the competitive landscape analysis.

The report then estimates 2016-2021 market development trends of Cryogenic Liquid Tank Container industry. Analysis of upstream raw materials, downstream demand,

and current market dynamics is also carried out.

The report has proposals for a new project of Cryogenic Liquid Tank Container Industry before evaluating its feasibility.

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Sun Chemical links with Den Hartogh for customised tanks

Global inks manufacturer Sun Chemical and logistics service provider Den Hartogh Logistics have collaborated to design customised tanks to transport Sun Chemical's flush product for the publications industry.

Sun Chemical has worked with Den Hartogh for more than 15 years to transport product, so when Sun Chemical looked to review the design of its equipment, Den Hartogh was the obvious choice of partner. Luis Pereira, Publications Supply Planner Europe at Sun Chemical explains: "We were looking to move from road only to intermodal transport, to increase efficiency and improve our environmental footprint. However, our current fleet was not suitable for the intermodal service."

"We worked with Den Hartogh on a customised design for the tanks that would be suitable for either intermodal or just road transport, giving us more flexibility when choosing which mode of transport is most appropriate for the job we're working on."

Initially Sun Chemical looked at replacing the fleet of eight tanks, but having identified the requirements for use of the tanks in another supply chain, eventually increased the number of replacement tanks in the new fleet to 16. Specifically tailored for flush product, the newly designed tanks, are an improved version of the standardised ISO tanks, which include the latest conical outlets and on board heating. Specific efforts were also made to ensure the tanks are correctly insulated according to the latest industry standards.

During transportation the base product has to be kept at a consistent temperature because of its viscous properties. Whereas the temperature in Sun Chemical's previous tanks was controlled



by a generator, the design improvements in the new tanks includes extra insulation, which delivers an increased insulation value of 15%, compared with the initial eight tanks, as well as a self-heating system, resulting in lower electricity consumption. The new fleet also has an increased payload of at least 19%, allowing Sun Chemical to transport more product at once, which in turn reduces the frequency of transporting product as well as their carbon footprint.

Since Sun Chemical has moved to intermodal transport, it has decreased its road mileage for transporting flush product by 72%, resulting in a reduction of their CO2 emissions. The new fleet has also enabled Sun Chemical to reduce its impact on EU road congestion. The increased demand in Europe for drivers also impacted Sun Chemical's decision to use intermodal transport as they are now less dependent on the availability of drivers and have more flexibility when looking to transport product.

The bulk transport system also provides a number of safety benefits as Arturo Caton Moliner, Commercial Manager at Den Hartogh, comments: "At Den Hartogh we place the same high

(from left to right) Luis Pereira, Sun Chemical Publications Supply Planner Europe; Arturo Caton Moliner, Den Hartogh Commercial Manager and Esteve Bosch, Sun Chemical General Manager Badalona Pigments & Operations Director Pigments Iberia

degree of importance on safety as Sun Chemical does, so it was a top priority for us both in the design process. The specialised tanks reduce manual handling in factories for both the loading and unloading of the product. They are also operated entirely from the ground, so there are no requirements for drivers to climb on top of the units to unload product."

Luis Pereira concludes: "Since moving to intermodal transport, we have experienced a number of significant safety, environmental and wastage benefits, resulting in more efficient transportation. This investment highlights our continued commitment to the publications business, where we continually look not only at ways to improve our products, but also at the logistics of how we operate to ensure we provide the best service right across our supply chain. Our partnership with Den Hartogh is another example of how we are innovating in this business."



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Leschaco – 40 years of tank container logistics

November 13, 1976 was a special day for the Leschaco group of companies. On this day the logistics service provider shipped for the first time ten 20' tank containers on MV "Tillie Lykes" for its voyage from Bremerhaven to Houston.

In those days Leschaco was already an internationally operating forwarding company, which was prepared to meet the challenge of shipping chemical goods, and even then stood for "the" forwarder of chemical goods. "The idea of tank container shipments matured through months of preparation with customers and tank container manufacturers" remembers Mr. Jörg Conrad, owner and managing shareholder of the Leschaco group.

The tank container traffics for USA were the decisive factor in 1978 for the founding of Leschaco, Inc. in New York, and the start of the internationalisation of the company group.

Today, 40 years later, the Leschaco group employs more than 2,000 employees worldwide in more than 19 countries. The field of tank containers is one of the core fields of business of the Leschaco group, along with sea and air freight and contract logistics. With approx. 4,000 Tank Containers, which are employed exclusively for overseas traffic, Leschaco cannot only offer its customers "port-to-port" transport services, but also organises a lot more complete transport and logistics solutions right around the Tank Container.

This starts with consultation, particularly with the transportation of IMO classified goods, from pre-carriage and sea transport up to customs clearance, and the on-carriages in the countries of destination. Hereby order processing is performed by our



own IT applications, which include a tracking and tracing module as well as different possibilities for KPI demonstrations. Our globally integral IT structure guarantees an optimum flow of data. The forwarder can accurately follow up the status and the location of his shipments via the tracking system at any place and any time.

Leschaco had already developed a state-of-the-art IT fleet management system early on. Meanwhile this system is also employed by customers for their own fleet, whereby the transport order processing is done by Leschaco.

"In addition to Tank Container Management, which is located at the headquarter of the group of companies in Bremen, the regional Tank Container Competence Centers in Houston, Tokyo and Bremen are responsible for the operative employment of the fleet" explained Mr. Holger Warnecke, Director of Lexsau, Scharbau, and responsible for the business field of Tank Containers worldwide. The Leschaco group with over 40 companies in more than 20 countries in the world as well selected agents at other locations can fulfill the local requirements and perform the proper handling of the transports together with additional services.

Safety and quality have top priority

in all fields of business at Leschaco. Our central Quality Management Department in Bremen is responsible for setting targets in these fields for the entire company. Continuous improvement processes are essential for the success of our company.

Although the tank container market has been under an increasing pressure of competition for some years, which has developed from the influence of an overcapacity of equipment and an increase in new providers, Leschaco will not make any compromises when it comes to safety and quality. Thus the Leschaco group of companies holds on to for example its HazMat teams located at different locations, so as to be able to advise its customers in an expert manner and to support them in damages' claims.

When the Tank Container was introduced in the 1970s as a new and universal means of transport, nobody knew if it would be accepted by the market. Today we cannot imagine transports without it, and it has established itself as a safe, flexible and universal transport solution for liquids of all kinds and pressurised and cryogenic gases.

Despite the difficult market situation we at Leschaco are convinced that Tank Container transports, especially in the field of chemical products, will continue to grow.

Reg Lee elected President of ITCO for a second time

Reg Lee has been elected to the position of President of ITCO, the International Tank Container Organisation (www.itco.org) – the association representing the tank container industry worldwide.

Mr. Lee was previously President of ITCO from 2004 to 2010 and has been President of @TCO, the Asian Tank Container Organisation, since 2011.

His term of office as ITCO President will run until the end of 2018. "I'm looking forward to two years of challenging, but rewarding, work for ITCO and the industry that the organisation represents," Mr. Lee commented.



"I thank the ITCO Board for its support and trust in me to lead ITCO forward on a path towards development of better membership services and promotion of best practice in the tank container industry. Over the coming months, we will be working to bring ITCO and @TCO closer together, to

ensure benefits for the global liquid supply chain."

ITCO is governed by an elected board, comprising a President and Vice-President. The primary task of the President is to represent ITCO internally and externally, drive key initiatives, and manage the overall strategy that has been developed by the board. Established in 1998, ITCO, the International Tank Container Organisation, represents the international tank container industry to the public and to governmental bodies, with the aim of promoting the industry with its main players: operators, lessors, manufacturers, service providers, inspection, surveyors.

New head for TALKE logistics in Germany

TALKE has appointed a new head of its German logistics business.

Holger Papendick, who held various posts at Imperial Chemical Logistics for ten years, was appointed Head of the business unit Logistics Germany at the beginning of this year. His new responsibilities include eight branches in Germany with a total of 400 employees.

Holger brings extensive knowledge of chemical logistics with him into the company. His previous roles include, amongst others, the management of operational sites and membership of a divisional board of management with responsibility also for business development of the on-site services unit.

Director Logistics Europe, Christoph Grunert said: "We are pleased to have taken on board Holger Papendick, who is an extremely experienced manager, for this demanding post. The step-

by-step handover of responsibility by Manfred Broich means that we will guarantee a smooth transition for our customers."

Manfred will subsequently be responsible for the development of strategic projects of the business unit Logistic Solutions, TALKE's consulting and construction line.

McNally appointed MD of Suttons International

International logistics and supply chain specialist Suttons Group has announced the appointment of Barry McNally as managing director of Suttons International Ltd.

Suttons International Ltd operates globally with operations in the Americas, Europe the Middle East and Asia.

Barry will oversee all activities that the Division provides to its clients in the chemical and petrochemical sectors including international Iso Tanks, fleet management, supply chain management, chemical packaging, warehousing and on-site logistics.

Barry will be based at Suttons' head office in Widnes, Cheshire. Barry has spent the last 18 years working for Stolt-Nielsen, most recently as Director of Planning and Projects for Stolt Tankers. Prior to this, Barry held the positions of Regional Director Europe and Global Marketing for Stolt Tank Containers, leading teams of more than 120 employees in 6 countries.

New deputy at CINS

Ken Rohlmann, Senior Director - Dangerous Goods, Hapag-Lloyd, has been elected to the position of Deputy Chairman of CINS, the Cargo Incident Notification System – the international association whose aim is to increase safety in the supply chain, reduce the number of cargo incidents on-board ships and highlight the risks caused by certain cargoes and/or packing failures.

Mr. Rohlmann has been on the Board of CINS since 2013 and his term of office as CINS Deputy Chairman will run until the end of 2019.

Bertschi invests another S\$35m into Jurong Chemical Cluster

Bertschi AG, one of Europe's leading chemical logistics firms, has held the ground breaking ceremony for its second facility on Singapore's Jurong Island. The Bertschi Jurong Island Chemical Cluster (JICC) is its most advanced in Asia for the safe and efficient handling and storage of specialty & hazardous chemicals.

The addition of Phase Two will bring Bertschi's total land area to 45,000 square metres. (Phase 1 – 30,610 sq. m.). With its expansion, Bertschi AG will invest an additional S\$35 million in its second facility, bringing its total investment in Singapore to S\$80million.

Managing Director of Bertschi Solutions, Singapore, Lieven Vander Elstraeten said: "In the past year, we helped to fill a pent up need in the market, and have established ourselves as a reference chemical logistics company in Singapore, serving the specialty chemical sector on the Jurong Island Ethylene Oxide corridor."

Since its opening just under 12 months ago, Bertschi Singapore has seen an increasing demand for its services and built up a strong sales pipeline. The new facility aims to help meet the increasing demand for specialised chemical logistics services in Singapore and the region. It will feature an additional 25,000 pallet position dangerous goods warehouse, with an expansion of its drumming activities. Targeted for completion in Q4 2017, it will increase its staffing to 100, a 33% increase from its current staff of 75.

The state-of-the-art facility provides safe and sustainable handling and safe storage of specialty and hazardous chemicals, backed by the company's Best-in-Class safety performance.

Executive Director, Energy & Chemicals, Singapore Economic Development Board, Damian



Chan said: "Bertschi's decision to expand in Singapore so shortly after opening its first facility speaks volume of the growing demand for specialised logistics services. This is reflective of Singapore's push to develop the specialty chemicals sector, which has grown by 6.1%

CAGR in manufacturing output over the last ten years.

"To pursue growth areas, we will continue developing Jurong Island's infrastructure and services, such that we remain competitive and provide investors with the confidence to grow their business

RCOG acquires GEM Containers

RCOG Tank Leasing, a business established by Rampart Capital through a joint venture between Rampart Capital Oil and Gas Holdings Limited, has acquired majority ownership of the tank container company Gem Containers, in a private transaction.

GEM was established in 2012 by Managing Director Heidi Sommerville, an experienced manager in the logistics sector. Heidi remains a significant shareholder and will continue to lead the expansion of GEM going forward.

Commenting on the transaction, she said: "We are very excited about the opportunity that this transaction creates for GEM. Our team has built up a robust and scalable platform for acquiring and managing tank containers for lease and I thank them for their valuable contribution in bringing GEM to this point. The access to proprietary capital together with the financial expertise from our new

shareholders will enable GEM to grow the business and offer greater diversity in equipment and lease products. We value the partnerships that we share with our suppliers and look forward to meeting the evolving needs of our customers."

GEM has established a strong industry presence and a good track record as an independent manager of tank container lease portfolios. It has developed a solid platform to support the acquisition and management of tank container assets for several clients and for its own account.

RCOG Holdings' Giles White said: "Heidi Sommerville and her team at GEM have built a very solid operating platform underpinning valuable industry relationships. Tank container leasing represents an attractive and expanding niche within the leasing market and we hugely look forward to working with Heidi and her team to scale up the business and seize the exciting opportunities available."

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The 'Oscar' of telematics goes to... SAVVY Synergy Enterprise

It's the "Oscar" of the telematics sector. And competition in 2016 was especially fierce for the respected award. This year, 276 submissions competed for the prize, awarded for automotive telematics every two years. Of the total submitted solutions - according to the organizer all very impressive in terms of performance - 42 were nominated for the 10 award categories.

The software solution combines management, collaboration and business intelligence functions to control complex logistics company-wide. The jury of top-notch experts presented SAVVY with the Telematic Award at the end of September.

"SAVVY Synergy Enterprise is a comprehensive and especially user-friendly telematics system. It is also the most sophisticated system on the market", says Jury Chair, Prof. Birgit Wilkes.

Within the scope of the evaluation, specialised journalists, users and branch analysts belonging to the jury focus mainly on the respective company, its rationale and background, sales power, reputation, and particularly on important service and support issues. The scientists on the jury are in charge of evaluating the submitted solutions from a technological perspective. Under the supervision of the jury chair, Prof. Birgit Wilkes from the Technical University of Wildau, all of the submissions are controlled, assessed, and evaluated.

As a result, the Telematic Awards is not only a distinction for a specific solution but also for the company itself. The winner is chosen on the basis of how well the system's technology



meets user requirements, and on the ability of the telematics provider to provide high quality pre-sales information and advice to the customer as well as comprehensive post-sales support. Sponsors are excluded from the call for proposals, according to TelmatikMarkt.de,

"We are very proud to have come out as the winner in such a demanding environment. Container logistics is an important target segment for us", SAVVY CEO Paul Kaeser comments on receiving the distinction. "The award confirms both that telematics-based digitalisation is recognised as relevant for logistics companies and that the added value of our SAVVY® Synergy collaboration platform in the logistics sector is undisputed."

There have been repeated complaints – most recently in the telematics study conducted in 2015 by the Baden-Wuerttemberg Cooperative State University, Ravensburg, Germany – that there are no interface standards for telematics applications. But why wait for an international standard when there has been an accepted

technological alternative for some time now?

The key to success lies in using portal systems like SAVVY® Synergy Enterprise which process data from a broad range of telematics providers, turn them into valuable KPIs and display them on user-friendly dashboards in a meaningful way. The portals integrate telematics devices and sensors from different manufacturers to create high-performance systems. The efficiency gains and quickly achieved ROI are a result of intelligent data evaluation combined with information from business IT.

Combining this with a state-of-the-art logistics portal to integrate the systems means that the broad range of telematics providers and the possible heterogeneity of interfaces do not compromise this process. On the contrary, the SAVVY® Synergy Portal makes it possible to use this diversity to optimise fleet and equipment management as well increase resource efficiency regardless of future developments and differentiations in telematics systems (also known as GPS).

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Tel: 86-755-26691130 / 26802076
Fax: 86-755-26862790
<http://www.cimc.com>
E-mail: tanks@cimc.com

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Nantong CIMC Tank Equipment CO., Ltd.
ADD: No.159 Chenggang Road, Nantong, Jiangsu,
China 226003
Tel: 86-513-85066888 Fax: 86-513-85565155

CIMC Enric Tank Container Sales Europe B.V.
Middenweg 6 (Harbour nr.397-399) 4782 PM Moerdijk
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CST and Tank Service Inc partner for hazmat safety training

Tank Service Inc., the leader in quality, high end repair and modification of new and used portable ISO tanks, was recently presented with one of its more unusual requests – to bring life back into a second-hand ISO tank that would train emergency responders at one of the world’s largest, most dangerous container ports.

SSA Marine is one of the world’s largest privately held marine and rail terminal operators in the world. After a tank container carrying yellow phosphorous caught fire in 1995 and no one locally could contain the mishap, operators at SSA’s Manzanillo International Terminal (MIT) in Panama realized that they would need a dedicated hazmat team on-site at every port to keep their employees and customers safe.

MIT reached out to Brian Heinz, founder of Chemical Safety Training (CST), who specializes in nationally accredited instruction in hazardous material handling and emergency response procedures. Knowing that he needed a hands-on training device that simulated real life emergency hazmat scenarios in a container handling port, Heinz set out to find a way to incorporate virtually every tank container feature available, all in one condensed training aid.

His search brought him to Houston-based Tank Service Inc. (TSI). After the first discussion, Russell Harrison, owner of TSI, knew that he wanted to be a part of this unique and important project. “This was an endeavor that we knew was really going to save lives,” said Harrison.

Heinz worked with Tank Service to modify a standard 24,000 liter ISO tank container within a 20’x 8’x 8.6’ ISO frame, to demonstrate both liquid and gas types of chemical transport. The tank gives participants an introduction to the



two main types of ISO tanks that are used globally and the main culprits for bulk chemical hazards. One side of the tank represents a low pressure liquid tank, also known as a T11 tank, while the other simulates a high pressure liquefied gas tank, also known as a T50 gas tank.

The liquid side of the tank includes all of the standard valves, as well as a dip tube with a sump to demonstrate top-only discharge functionality and a custom fabricated leak detection wall. The gas side also includes typical valves for gas transport – PRV, liquid, and gas valves, and a level gauge, as well as internal piping that is commonly found on gas tanks.

The tank is equipped with an interior access door allowing trainees to get a walk-in view of all of the external tank attachments from inside. It also features Tank Service’s unique Bolt-On Safety equipment, including full walkway coverage, safety handrails and a safety ladder to access the top of the tank, which can easily be removed during a simulated emergency exercise.

The first mission for MIT’s training tank was to provide hands-on training to port workers from various South American countries as part of its 160 hour Hazardous

Materials Technician program in Panama.

Trainees were introduced to scenarios of common problems on ISO tanks and how to correct them, as well as International Maritime Dangerous Goods (IMDG) emergency response training tactics. Everything from what to do if a valve is leaking to how to handle an explosive device on a tank are addressed in MIT’s hazmat program, conducted on-site by Heinz and Dean Faina of SSA.

“The more emergency responders can become familiar with these tank types; their markings, specifications, common fittings and how they are designed to function under normal operating conditions,” says Heinz, “the better they will be prepared to deal with them during real-life emergency situations.”

Odyssey acquires AsepTrans business

Odyssey Logistics & Technology Corporation (Odyssey) announced today that it has acquired AsepTrans, an asset-based food-grade ISO tank transportation, tank cleaning and ISO tank depot services company.

AsepTrans is the only aseptic ISO tank operator in the world and has

been developing and refining the technology for more than 10 years (aseptic means free of any living organism).

AsepTrans utilizes a large fleet of super-insulated and refrigerated ISO tanks. The business and operations will merge into the Odyssey FoodTrans LLC unit, doubling both Odyssey's fleet of intermodal ISO tanks dedicated to food-grade liquids and its ISO tank chassis fleet.

"We have just acquired the world's only aseptic ISO tank operator," said Bob Shellman, president and CEO, Odyssey. "This acquisition provides Odyssey with a highly skilled team, state-of-the-art equipment, additional liquid food-grade capacity and ownership of strategically located tank cleaning and ISO tank depot services."

"This exciting acquisition gives Odyssey and its customers a clear advantage in handling temperature-sensitive products. Not only does aseptic transportation help ensure product quality, it can be cost-effective, eliminating the need for shippers to have additional aseptic or pasteurization processing/storage facilities," said Greg Snyder, president, Odyssey FoodTrans LLC and Optimodal, Inc., subsidiaries of Odyssey.

"It is also a clear testament to Odyssey's commitment to the North American citrus industry with the addition of a large number of super-insulated and refrigerated ISO tank containers to service this important and growing market."

The acquisition is a part of Odyssey's overall growth strategy and is consistent with the company's successful record of identifying and completing market-leading acquisitions that add value to its customers.

In August 2016, Odyssey acquired Linden Bulk Transportation, a top 25 tank truck carrier with full service intermodal ISO tank capabilities in the chemical sector.

EXSIF invests in high-spec T20 and T22 fleet

Anticipating changes in the dangerous goods regulations restricting certain hazardous products from being transported in standard tank containers, EXSIF Worldwide, Inc. has invested in a high-specification fleet of T20 and T22 UN Portable Tanks to meet the demand of its global customer base.

On January 1st 2017, the second step of the transitional provision in accordance with the ADR / RID special provision TP37 ends.

As a result, thirty additional products will be added to the list of chemicals that can no longer be stored or transported in standard UN Portable Tanks.

The stricter rules will require these products to be shipped in Portable Tanks meeting the technical requirements of T20 or T22 classification.

With its commitment to continuous investment in the tank industry, EXSIF Worldwide, Inc. is making new T20 and T22 tank containers available for lease in several key locations. In

order to integrate our service with customers' requirements and to maximize supply chain efficiencies, several specifications of T20/T22 tank types will be offered: 20,500, 22,500, and 25,000 litre capacities.

Tanks will be available with or without baffles.

Stefan Heesen, EXSIF's new European Chemical Division Manager, commented that "adding these highly specialized tanks to our already extensive fleet mix enables EXSIF to demonstrate its unique supply capabilities and ongoing support to the chemical industry".

With a fleet of more than 46,000 tank containers, EXSIF Worldwide is the world's leading tank container leasing company.

It offers a comprehensive fleet of standard and specialized intermodal tanks ranging in capacity from 7,500 to 35,000 liters.

Additionally, it supplies gas tanks, cryogenic tanks, off shore tanks, reefer tanks, and lined tanks dedicated to specific chemicals.

ITCO launches tank container e-learning course

ITCO, the International Tank Container Organisation, has launched its first tank container e-learning course, developed with the specific aim of providing measurable learning on the safe, competent and efficient use of tank containers.

It offers general awareness about the operation of portable tanks, as prescribed by the International Maritime Dangerous Goods (IMDG) Code.

In addition, it gives users the knowledge to progress to function-specific training.

The course has been developed by ITCO and produced by Exis Technologies, a leader in online courses for the transport industry.

The course comprises four modules:

a background to the tank container industry; components of the tank and their use; regulations appertaining to the tank; tank operations and depot services (including inspection, cleaning, repair and testing).

Each module is divided into elements that provide guidance on the different aspects of the safe operation of tank containers.

Each element is designed to meet specific learning objectives and is maintained, so far as is applicable, in line with the latest IMDG Code Amendment concerning the operation of portable tanks.

Further information and course purchasing is available at: <http://www.international-tank-container.org/online-learning/>

Fort Vale celebrates

As Fort Vale marks a half-century of precision engineering, Editor Leslie McCune explores the secrets of its success with Managing Director Ian Wilson

LM: Fort Vale celebrates its 50th anniversary this year. As one of the two owners of the company, what do you consider have been the most important factors in its success?

IW: Fort Vale's success stems from the dedicated team of engineers who have been involved with the business from the early days.

LM: What are the company's core values?

IW: We aim to provide our customers with high quality innovative products, delivered on short and reliable lead times. Furthermore, we provide security for our employees, operating in a clean and safe working environment.

LM: What are Fort Vale's assets?

IW: Fort Vale owns the majority of its factories and offices – our total worldwide footprint covers an area approaching 70,200 m², which comprises manufacturing capabilities, inventory of finished parts and consumables, and office space. However, we consider our biggest asset to be our 480 employees!

LM: What accolades has the company won?

IW: Fort Vale was awarded the prestigious Queen's Award for Export in 1981 and 1986, and the Queen's Award for Enterprise: International Trade in 2008 and 2013.

LM: What benefits does a family business have over a public company?

IW: Operating in a family business environment has given us the



possibility of reacting quickly to opportunities that we have seen in the market without the need to seek decisions through layers of management and shareholders.

LM: What is the company's growth strategy?

IW: Whilst growth has never been top of the list of our strategic objectives, our success in the industry and the natural growth of the market has led to the company expanding exponentially.

LM: What have been the company's most significant innovations?

IW: We have a department dedicated to innovation and continuous improvement and - as a company - we believe that whatever we are doing today, we must seek a better way of doing it.

LM: What has been the focus

of recent investment?

IW: In 2008 we moved the company to a new 13,500 m² factory adjacent to our local motorway. Since then we have expanded by a further 45,000 m² with the addition of a Research & Development facility, an Apprentice Training Unit and a 3rd Party Approved Test Laboratory.

Recent changes to the EN norm regulations have given us the need to further develop and test our products. Our test facility is second to none in this industry and has enabled Fort Vale to make a significant contribution to the safety of tank containers. We can conduct air and liquid flow tests as well as cycle and endurance testing and have the ability to test at both high and low temperatures.

We have just completed the addition of an end-of-line deflagration test facility designed to BS EN16852:2010. Fort Vale is

the only component manufacturer that can provide certified flow rates for relief valves using our in-house full flow testing system. We currently have some 550 products certified by Lloyds, ASME, PED and AAR. All certifiable products that we supply conform to the latest regulations and are certified by the appropriate regulatory body.

During 2017 we will be re-locating our nearby lost wax investment casting foundry to a larger purpose-built unit on site. This move will allow us to increase our capacity and will streamline and improve our efficiencies.

LM: How vertically-integrated is Fort Vale's manufacturing and is the manufacturing of any components outsourced?

IW: We have always operated with the philosophy of manufacturing whatever we can in-house, only sub-contracting specialist processes such as lining and coating. In order to do this, we run with many processes such as laser cutting, casting, pressing and of course welding and machining. We only purchase specialised components such as springs, seals, bursting discs etc. This gives us control both of quality and also of the vitally important deliveries to our customers.

We have built close partnerships with a core group of suppliers who are committed to the development of their products so that they are manufactured to our exact specifications and tolerances. This is the main reason why we only advocate the use of genuine spare parts and consumables which have been supplied via our authorised distribution network. The practice of fitting non-validated consumables could seriously compromise the safety and function of our valves and put the tank container, its cargo and personnel at unnecessary risk.

LM: To what extent can robotic welding replace manual welding?

IW: We have run with robotically-



loaded lathes for more than 20 years now, and have more recently installed two high speed robots with the latest welding technology to produce our manlid/neckring assemblies.

Robotic welding is ideal for the manufacture of high-volume standard parts and it gives a more consistent product quantity. In some instances, such as for intricate processes, we would use a manual welding process instead - Fort Vale is an ASME code stamp accredited facility (U).

LM: Where has most progress been made from Fort Vale's continuous improvement philosophy?

IW: Our continuous improvement programme extends to all areas of the business. In design and engineering it has led to reduced costs and to improvements in the performance of our products. This offers direct benefits to our customers in terms of lower M&R costs.

We are currently in the design phase of installing a new ERP system where we intend to provide access to significant amounts of our data online through a customer portal. This will lead to considerable service benefits to customers in terms of improvements to our response times and the flow of information.

LM: How does the company continue to attract engineering talent?

IW: We have both a need and a duty to train young people and currently have 28 apprentices at various stages in their formal training programme. Our apprentices

can, for example, specialise in mechanical engineering, welding and fabrication, electrical or mechanical maintenance or toolmaking.

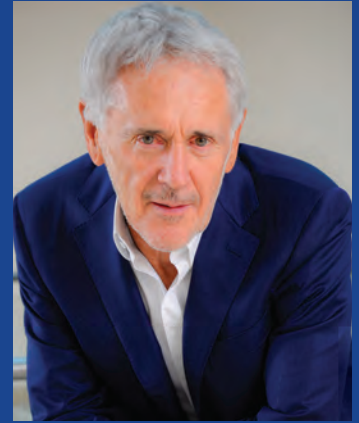
We have an excellent retention rate, with many apprentices serving the company for a long number of years and advancing through the company. Indeed, three of our current directors began their careers as Fort Vale apprentices.

LM: How will Brexit affect Fort Vale?

IW: Obviously we have seen the initial drop in sterling and that has had an effect on our trading as our materials are sourced in non-sterling currencies. However, it's still early days and we have yet to see the full effect of whatever trade agreements can be reached with Europe, where we have important customer relationships. We are also watching developments in America at this time.

LM: The company focuses on precision valves and fittings for the transportation of chemicals and foodstuffs in tank containers, road tankers and rail. How are the customer demands different between these sectors?

IW: The tank container market has always been one of component standardisation. In contrast, whilst the genre of products is similar for road tankers, there is much more of a requirement for our products to be customised to individual customer specifications. Valve systems tend to be more complex and remote actuation is more prevalent.



Ian Wilson C.V.

Ian Wilson has been the Managing Director of Fort Vale Engineering Ltd since 1982, after joining as General Manager in 1978. In the interim, the company has grown from 38 employees to its present level of 480 worldwide.

The company is a world leader in the precision manufacture of manways, valves and ancillary equipment for the transportation of bulk liquids and liquefied gases by road and rail. He has a Higher National Diploma in Production Engineering.

The ISO tank container market demands shorter lead times than the road tanker and rail car markets. Recently, this has resulted from builders having very short order books. The order cycle for road tanker builders is generally longer, with forecasts up to a year ahead. For rail cars, this gestation period can be as long as 18 months.

LM: Is there much overlap between the sectors?

IW: As far as vessel builders are concerned, there is not much overlap as manufacturers tend to keep to their area of expertise. However, from the point of view of lessors and operators, there can be a considerable amount of overlap.

LM: In terms of tank containers, which trends are shaping your product development?

IW: We supplied our first product to the container industry in 1976 and in the last 40 years the development the tank container has been focused around price, weight, capacity and of course safety. I believe that the next leap in product development will be centred around a 'smart' tank container, feeding back real-time data such as pressures, temperatures, impact loads, whether tank container is loaded, the status of valves and obviously location, which is currently being used on many tank containers. We need the available technology to provide an economic solution to this before we will see its wide introduction

LM: How is the company meeting shorter lead times?

IW: Reducing our lead times has been a focus of ours in recent years and we are flexible enough to deal with this in a number of ways. We can utilise our new machine technologies to allow completion of components in one process - our target is to go from raw material to finished component in one operation wherever possible.

We can also adapt to the running of our manufacturing facilities on a 24 hour basis. The combination of these factors ensures that we continue to maintain our customer service levels.

Also, the use of rapid prototyping enables us to go from a drawing to a prototype casting in four days, which has significantly speeded up the rate at which we are able to develop new products.

LM: How are Fort Vale's sales supported in the remote global locations where tank containers operate?

IW: The tank container is somewhat unusual in that, regardless of where the tank is manufactured, it has to be serviced throughout the world. We achieve this global coverage by a combination of our own warehouses and third party distributors. We service the main regions in the world with our own facilities, these being the US, Europe, Russia, Singapore, China and Australia. Having our own operations gives us the ability to control stock levels and local pricing, and also enables us to provide local engineering support on our products.

LM: How prevalent are counterfeit equipment and parts and how does the company combat these?

IW: Like most manufacturers, we face the copying of our products, with China being the region where this is most prevalent. The only way to compete with this is to provide a better overall package to the customer, and their customer in turn.

LM: In which market segments does Fort Vales have its highest market share?

IW: Fort Vale became involved in the ISO tank container market in 1976 and we have remained the driving force in the components industry. This is still the main focus of the business and is the area where we have the biggest market share. We have a vast and diverse range of products and are currently supplying many different markets around the world from our UK factory. These include road and rail in the US and Europe, offshore, static plant and petroleum transfer.

LM: China must now be one of Fort Vale's largest markets

- how is it serviced?

IW: In 2000 we saw the strong possibility that China could become a major player in the manufacture of tank containers. I started our company in Shanghai in 2002 - beginning in a small way with some office space in Pudong. This enabled us to keep in contact with the changes that were taking place there.

Fort Vale China has now grown to two factories, employing a total of 140 people. You cannot beat being close to your customer. Although this is not possible everywhere in the world, it certainly made good sense to do it in China, as the potential that we saw there in the early days is now a reality.

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Smarter operations the key to efficiency

Janny Kok spotlights software focusing on operational processes at container depot yards and tank cleaning stations

The Netherlands maritime industry is known for innovations that decrease paper flow and limit mistakes in data interchange. It is no surprise that innovation also comes from the software houses serving the sector.

The latest is DEPOT for Mobile, software which focuses on the operational processes at tank container depot yards and cleaning stations.

The apps on the DEPOT for Mobile platform digitise particular work processes on a site. This can be checking in a container, time registration or creating repair estimates. Data is uploaded straight into DEPOT Software. Data can be shared, is searchable and the paper flow can be limited. Communication manager Gerjan van der Giessen, of the Dutch software house, is convinced the dedicated software is cost-efficient and time-saving.

The software house started 20 years ago and developed the initial version for the tank container industry in close collaboration with firms in the sector.

The software package supports all the diverse operational processes at a tank container depot yard and cleaning station and can be applied to all activities involved for a specific company itself, lease companies, transport firms and their shippers; in fact all the parties in the supply chain.

The DEPOT Software can indicate

the period of dwelling time of a particular tank container. This enables users to monitor their tank containers worldwide and provides an insight into the end of dwelling time. Depot owners can provide updated information to owners of tank containers, lease companies, transportation businesses and others involved in the supply chain.

Lucrasoft is convinced that the market will increasingly respond to DEPOT Software, which in effect a tailor-made ERP (Enterprise Resource Planning) solution. Van der Giessen says it is all about tailor-made software.

“One of our consultants will visit the customer to decide which additional applications are required and how these can be implemented in the work processes. It involves a number of aspects, such as proper certification of workers, safety measures and other work that is done on tank container depots and cleaning stations. After this, research work has to be done and the software implemented, further required data can be uploaded.”

The cost-effectiveness of using DEPOT Software is cited as a selling point. The software house knows from experience that the tank container industry is a highly competitive low-margin business.

In its website, the software house mentions the need in the tank



container industry for costs to be controlled and processes to be lean. The industry is in need of solutions that improve processes and lower costs. It also states: “Depot repairs and maintenance are significant cost factors in the tank container transport process but most depots have developed a fragmented approach towards the depot management processes. Tank container depots miss out by having a check-in process that fails to assess the current condition of incoming containers. Because not all damage is assessed by the inspector, depots are held responsible for the damage. The damage has to be repaired, but depots cannot invoice them, due to the fact they are liable.”

This situation drives tank container depots to employ systems that increase productivity and throughput, enhance their capability to accurately track inventory and relieve present and future bottlenecks. With implementing new innovative tools within the depot workflows not only old problems are solved, companies are ready for the future. Allowing them to adapt fast in a rapidly changing market.

Review of the Year 2016

Leslie McCune reflects on last year's market dynamics, M&A initiatives and the industry's key trends

Students of communism and those living in Albania at the start of 1967 (admittedly, a small minority of *Tankcontainer Magazine's* readers) will be familiar with the wise words of Enver Hoxha, Albania's communist leader for 41 years. In his address to the nation at the start of that year, he said, "This year will be harder than last year. On the positive, it will be easier than next year".

In a way, this sums up the tank container market at the start of 2017. Last year saw competition intensifying as many tank container manufacturers increased capacity and attempted to fill their lines by offering irresistibly low prices to tank container operators and lessors - many took the opportunity to expand and renew their fleets, encouraged by low-cost finance and pockets of tank container demand strength in an otherwise weak market.

Rates continued their decline in what was said by many to be a 'race to the bottom'. Rate declines were accelerated by operators and lessors looking to drive up their fleet utilisation and, for operators, turns per tank.

Weakness and uncertainty

Revenue weakness exposed the vulnerability of weaker tank container operators, leaving them little option but to capitulate to the mergers and acquisition (M&A) ambitions of healthier competitors.

Faced with poorer quality and more uncertain revenue streams, many tank container companies sought to bolster margins by

reducing expenses, seeking out economies of scale and improving efficiencies (not least by improving often out-dated IT systems, many of which were incapable of delivering the end-to-end visibility cherished by customers).

The latest results from the leading tank container operator, for instance, show a revenue decline of 7% in Q4 2016 compared with Q4 2015, with shipments in 2016 only 2% above those of 2014. However - as for all operators - profits were boosted by lower freight costs, which brought Q4's EBITDA back to \$21m, just below the five-year quarterly average of \$21.9m. Despite the currently low utilisation of under 70% for its 34,564 fleet, Stolt Tank Containers has therefore remained a consistently solid business since 2012.

A commoditised industry?

As an industry, barriers to entry remain low, leading to increased participation in the traditional tank container operator market by freight forwarders (typically operating on a pier-to-pier basis) and other intermediaries. These players have increasingly assumed an intermediary role between shipping lines and tank container operators.

All the above market characteristics are consistent with a commoditised market, a perception held by many chemical shippers about the tank container sector.

Europe, however, is the most differentiated tank container region in the world, due to its wider range of specialty chemical products (which require more

specialist tanks than generic T11s) and the more widespread bundling of customers' tank container requirements into a broader - often outsourced - logistics package.

M&A activity

Commodity markets are more prone to M&A activity and 2016 saw consolidation among both operators and lessors.

In the tank container leasing sector, Bohai Leasing, parent company of SeaCo, the world's sixth biggest container leasing company, celebrated the anniversary of its purchase of Cronos and the \$30m of synergies that have been realised by the elimination of office locations and IT rationalisation.

Seaco was acquired by China's HNA Group - which owns a portfolio of transportation finance and leasing companies - for \$1.05bn in 2011. Seaco was placed under the control of the equipment leasing division of Bohai Leasing, the largest container leasing service provider in the world. Bohai Leasing controlled a fleet of around 2.2m TEU - the world's third largest container lessor, behind Textainer and Triton.

The combined tank container fleet of Seaco/Cronos matched Exsif, the market leader. The top four lessors - which include Eurotainer and Trifleet - now account for approximately two-thirds of the global tank container leasing fleet.

In July 2016, Triton and TAL completed their combination to form Triton International Ltd (TIL). The newly formed company expects to achieve \$40m in annual cost synergies.

More corporate action might follow in the tank container sector in the form of management buyouts among smaller players with disinterested or distracted

corporate owners or, conceivably, a financial player acquiring and aggregating smaller tank container lessors to build an entity of sufficient scale that it can be repositioned for a subsequent flotation or sale to institutions or pension funds.

In the operator segment, Den Hartogh absorbed its acquisition of rival logistics provider InterBulk following the announcement in December 2015 of the agreement on the intended acquisition by Den Hartogh of the issued share capital of InterBulk.

Den Hartogh offered shareholders a 125% premium to the closing price on 22 December 2015 and a 109% premium to the average closing price over the past year.

The transaction's consideration was approximately £42.1m for InterBulk's entire issued share capital, making the enterprise value £95.3m (including net debt of £53.2m).

The strategic rationale was that, following the integration, Den Hartogh would be better-positioned 'to facilitate customer demand with its worldwide presence and dense European network. In particular, it should be able to benefit from InterBulk's relationship with Sinotrans, one of China's largest logistics companies' which has a 35.28% stake in InterBulk'.

The new company had combined assets of approximately 25,800 liquid, gas and dry bulk containers, 550 trucks, 400 road barrels and offices in 23 countries.

InterBulk's activities spanned both dry and liquid bulk supply chains. Liquid bulk accounted for 62% of sales but revenue declined 9% to £139.6m in its final year. On the dry bulk polymer side, the results were worse: revenue collapsed 17%, made worse by a weaker euro/sterling exchange rate.

The extent to which InterBulk was exposed to the painfully weak European dry bulk polymer logistics market was unique among tank container operators. Low regional

demand and imports from more cost advantaged regions has led to numerous polymer plant closures. This, combined with tough dry bulk competitors - more focused on the dry bulk market - and a weakening euro/sterling exchange rate, made the dry bulk business a liability rather than an asset.

Where InterBulk's dry bulk business fits into 'Den Hartogh Liquid Logistics' - which focuses on liquids and gases - remains to be seen.

The combined fleet of 18,450 tank containers catapulted Den Hartogh into fourth position, behind Bulkhaul's 20,500 tank containers but ahead of NewPort/Sinochem's fleet of 15,000 units.

More important is what happens below the headline tank container numbers. InterBulk's deepsea tank container fleet was said by industry sources to be 2-3 times the size of Den Hartogh's. The resulting increase in global tank container density is one of the key drivers of the transaction since this should lead to lower repositioning costs for empty containers, stronger marine freight and tank container purchasing power, a greater ability to respond to opportunities and lower maintenance and repair costs. The other key driver is the leverage Sinotrans gives Den Hartogh in Asia, especially in China.

Other acquisitions in the operator sector were driven by companies looking to extend their 3PL credentials, move into attractive logistics segments or develop geographic footprint and fleet density.

Unexpected cash calls

Some tank container operators have been faced with additional and unexpected cash requirements from some of their Asian acquisitions, forcing them to scale back investment plans in other regions.

Others are completing their positioning in Asia and are looking to strengthen their Middle East assets as new large scale specialty production comes on stream in the region.



ITCO's 4th annual tank container fleet survey revealed that the world's tank container fleet grew by 7.2% compared with 2015, with the additional 30,640 units bringing the global fleet to 458,200 units.

While the global fleet increased by 30,640 units, the number of tank containers manufactured was 43,780 units. This was 9% down on the 48,200 units manufactured in the previous year – small wonder then that some of tank container manufacturers based their prices on marginal cost economics.

Much of the fall in manufacturing was attributable to CIMC - the world's largest tank container manufacturer - where tank container volumes dropped back to those in 2013 and revenues were 16% behind those in 2014.

Poor global market demand for dry freight general purpose box containers led dry box/tank container manufacturers to prioritise the manufacture of tank containers, thereby adding to the over-supply.

Anecdotal evidence suggests that Chinese manufacturers were busy with demand stimulated by breakeven prices of below - some say well below - \$15,000 for generic T11s, according to industry sources. A weak renminbi yuan/US dollar exchange rate made Chinese-made tank containers more competitive, as did low interest rates and cheaper slot rates on liner shipping. Weaker steel and energy prices reduced input costs and enabled further price reductions.

The top five manufacturers accounted for 90% of all global production, with the top three being CIMC, Welfit Oddy and Singamas.

Among specialist tank container manufacturers, WEW registered for insolvency, following a slump in military orders and a late payment issue by a Middle East client. More positively, WEW has since been bought by Thielmann.

The operator fleet accounted for 72% of the global fleet of 458,200 units. Two-thirds of this fleet was owned by operators, with the remaining third leased-in.

The fleet share of the top seven operators is Stolt (11%), Hoyer (10%), Bulkhaul (9%), Den Hartogh (6%), NewPort (5%), Bertschi (5%) and China Rail Logistics (5%).

The top 10 operators accounted for just over half of the global operator fleet of 329,080 units, suggesting the operator segment has significant scope for consolidation.

60% of the leased fleet was leased to operators with 10% of the leased fleet designated as being idle, although ITCO acknowledge that the idle leased fleet might be larger - and the nine-high canyons of empty tank containers in Europe's major hubs would suggest this.

The survey identified a leasing fleet of 201,750 units with the top ten lessors accounting for 85% of the total leasing fleet. The top three leasing companies - Exsif, Seaco and Eurotainer - account for 58% of the leased fleet, indicating a high degree of consolidation.

Notable trends

In terms of notable trends, the outsourcing of chemical logistics continues to support tank container demand growth.

Anecdotal evidence suggests the gas tank container market delivered particularly strong growth in 2016, the intra-Asia and transatlantic tank container trade routes were very active (buoyed by a strong US dollar) and there was strong demand for more specialised tank containers. These include tank containers for temperature-sensitive organic peroxides, fluorhydric acid, halogenated organic acids and liquefied gases - such as LNG,

industrial gases and cryogenic products.

Demand in Europe for swapbodies was robust, benefiting from rail tariff economics and their higher maximum gross weight.

According to a survey of managing directors conducted by *Tankcontainer Magazine*, the main challenges for tank container companies in 2016 included new players entering the market, and a perception that quality and safety awareness is deteriorating among service providers and shippers.

The crucial depot infrastructure developed well in 2016 with more European depots, Asian standards being improved and a wave of new depots in Saudi Arabia and the UAE.

From an industry association perspective, 2016 saw the election of a new president of ITCO, the tank container trade organisation. Reg Lee, President of ITCO from 2004 to 2010, was elected to a two-year term from January 2017.

Following his 'ousting' (according to *HCB*) in 2010, ITCO put more emphasis on developing the industry's corporate social responsibility and sustainability credentials under its next president, Heike Clausen.

Lee will place greater emphasis on Asia, where the majority of tank containers are manufactured and where there is increasing demand for tank container use. He plans to bring ITCO and the Asian Tank Container Organisation closer together and participate more actively in chemical industry associations.

How then to summarise 2016? It was a year of successes for some and problems for others. Best then to remember that successes make you clever but only your problems make you wise.

Leslie McCune is Editor of Tankcontainer Magazine and is a market expert (lm@chemicalmanagement.co.uk)

Revolution from Finland

Polymer composites are making one firm happy – or, as the Finnish say, ‘smiling like a sun in Naantali’ reports Mike Wackett

Esa Hiltunen, the CEO and founder of Valkeakoski, Finland-based Admor Composites Oy, has a passion for the development of polymer composite tank containers and that passion spans three generations of his family.

Mr Hiltunen’s five-year plan for Admor Composites is to ramp up the production capacity at the current factory with the aid of automation, along with the development and launch of new products.

But he also has aspirations to expand his business around the world and is not fazed by the prospect of taking his niche business global.

Valkeakoski, is situated 150km north of Helsinki and lies in the centre of Finland’s Lakeland region. The area is known for its paper industry (and perhaps better known as the home of one of the most successful soccer teams in Finland’s history, FC Haka).

The roots of the company can be traced back to 1955 when Esa Hiltunen’s grandfather, Gunnar Hiltunen, who worked at the internationally renowned Sateri viscose fibre factory in Valkeakoski as head of maintenance, was seconded to Germany to study the use of plastics in the manufacturing process.

Chemicals used in the production process at the fibre factory were causing corrosion in the traditional lead-coated steel pipes. The question was, could plastic pipes be used instead?

Gunnar’s study bore fruit and Sateri began replacing the existing pipes with PVC materials, thus mitigating the corrosion problem. Later on Sateri would use fibre reinforced plastic (FRP) and dual-laminate composites.

Motivated by the exploits of his father, his son Matti founded



CEO Esa Hiltunen (left) with Production and Design Manager Olli Timlin

Muovityo Hiltunen Oy in 1969 to manufacture custom-made plastic industrial products, which they still do successfully today.

Then in 2010 the entrepreneurial instinct in the DNA of the Hiltunen family was triggered again when Matti’s son Esa founded Admor Composites.

“The first tank was developed by Muovityo,” explains Hiltunen, “but later, when demand for transport tanks began to grow, we decided to establish a separate company for this business.”

The first prototype transportation tanks were manufactured in 2002 and there followed 10 years of what Mr Hiltunen describes as ‘extensive development and research’ - including both factory and road tests.

Factory testing was initially carried out the Muovityo site and, at the end of 2010, a new production facility was opened adjacent to the existing factory to accommodate Admor

Composites as a separate entity.

This 3,500sqm site now employs around 30 people and is equipped with ultra-modern facilities.

“During the past 10 years we have done a lot”, says Hiltunen, “We have developed five products: a truck tank, trailer, semitrailer, a 20ft demountable tank and a 20ft ISO tank container.”

“Transport containers based on polymer composite materials have become an interesting topic recently”, says Hiltunen. “In the unrelenting pursuit of bigger payloads and better corrosion resistance the composite material option becomes a natural choice.”

“A typical composite material consists of fibre reinforcement and plastic matrix which gives us the common abbreviation, FRP. The most common reinforcements are glass fibre and carbon fibre and matrices epoxy or vinyl ester resin,” he explains.

The advantages of using composite materials in the manufacture of tank

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containers include weight (a composite swap body tank container has a typical capacity of some 31,000 litres but weighs only 2,230 kg, over 40% less than traditional tank containers), fuel saving of 3% per cubic metre of product transported, higher tensile strength and better fatigue strength, a much greater resistance to acids and alkalis and 40% better thermal insulation.

These same advantages, explains Hiltunen, make composite materials essential in many everyday uses such as: aircraft, cars, boats, wind power, sports equipment and pressurised gas tanks. The properties of the materials can be modified and optimised according to their use by combining fibre reinforcement layers with various directions and thickness which form the laminate.

The biggest benefit comes from applications which, in addition to lightness, require also special strength in different directions of the material. Local reinforcements can also be performed easily as the material is constructed layer by layer.

Chemical resistance can be influenced by the resin type, reinforcement material or special thermoplastic lining.

These materials have been used for decades in industry for, storage tanks, pipes, reactors, chimneys and flue gas scrubbers.

"The new challenges in the use of transport containers is the changing nature of chemical cargoes, use of many different type of chemicals, quick temperature changes, higher operating pressure and the washing process of the containers," says Hiltunen.

He continues: "ADR (the European agreement on the carriage of dangerous goods by road) specifications set requirements to the design, construction and testing of the containers. The containers are designed for 0.2% strain limit where there are no fatigue implications and, as a consequence, the structure of the tank container has a very long service life."

He added that in addition to a

structural layer there must be a separate non load-bearing chemical resisting layer.

According to Hiltunen the biggest stress is caused by the change in chemical, quick temperature changes, collisions and impacts.

ADR sets certain requirements to transported chemicals: permitted classes: 3, 5.1, 6.1, 6.2, 8 and 9; maximum vapour pressure 1.1 bar at 50°C; if the flashpoint is below 60°C the container must be made of conductive material.

Current IMDG regulations do not allow composite materials for tank containers that are shipped by sea.

However, if and when tank containers made from composite materials are approved for shipment by sea the potential advantages could be "huge" according to Hiltunen.

And not just for tank containers but for standard dry van containers, where the advantages also include improved transparency for x-ray scanning, the imbedding in the container skin of RFID and GPS tracking systems.

But there is a significant downside: standard shipping containers made from composite materials are around three times more expensive than the steel equivalent.

Composite materials offer a competitive alternative for many applications with production procedures and materials being continually developed.

"We can expect new solutions, especially in the transport sector," enthuses Hiltunen. "We want to continue in the forefront of the development of technical devices and production as well as innovative product development."

In its first full year of production last year, Admor Composites manufactured 50 units, including road tanks and containers, for customers in northern Europe and Russia and had sales of approximately €2.5m.

According to Hiltunen, Admor Composites has already built up a portfolio of "dozens" of returning

customers and adds, "We are expecting to form new business relationships this year.

"Our target is to expand step-by-step, all over the world," he says, but accepts that Finland "is not the best place for large scale serial production".

Pushed on how the expansion could work Hiltunen says that licensing and joint ventures are a possibility and admits that discussions with interested parties have already taken place. Nevertheless, Finland has been good for the development of Admor Composites. He says that Finnish workers have the engineering and automation 'know how'. Moreover, the government is proactive in its support of new business, especially export business.

"Finland has been an excellent environment to develop composite road tankers," says Hiltunen, "Transport companies are relatively small and therefore the advantage of using tank containers made with composite products is significant and noticeable even with a few units."

Hiltunen believes that Admor Composites' products are "unique" in that the tank containers are fully composite with thermoplastic liner options and have a very wide chemical resistance.

Moreover, he says that there are still only a very few manufacturers of composite tanks in the world.

For Hiltunen and his workforce it is important to be as eco-friendly as possible in the manufacturing process. "In our production facilities, we use natural gas for heating and the air conditioning operates according to the amounts of styrene and carbon dioxide in the air," he says. He added that more than 90% of the production waste is reused.

But will his son follow him into the business, to make it four generations of Hiltunens?

"Unfortunately, at the moment, my son only has eyes for ice hockey," sighs Admor Composites' founder.

Is small always beautiful?

It has proved so for logistics operator Liquid CONcept, but, as Felicity Landon reports, some growth is now on the agenda

Staying close to the customer, having the flexibility to meet demands and building long-lasting relationships – joint MDs Eycke-Christian Dörre and Ulrich Schnoor say there is no great secret behind Liquid CONcept's approach.

The Hamburg-based operator focuses on holistic logistics solutions for liquid bulks.

"We consider the whole team entrepreneurs – it is all about customer service," says Dörre. "I think customer awareness is much easier when you are smaller and don't have a lot of hierarchy or levels of responsibility."

There is, perhaps, one little secret to be revealed: chocolate.

The majority of Liquid CONcept's business is foodstuffs, which isn't as volatile as the chemical sector, he points out. "Volumes are quite stable, people still have to eat, and we are big in the chocolate business," he says.

"People either eat chocolate when they are unhappy or when they are happy – so it is very stable!"

Schnoor has a background in liquid bulk logistics, latterly with Hoyer when he decided to set up Liquid CONcept. Given that this was the end of 2007, to describe the times as 'challenging' seems a bit of an understatement.

Fortunately, the new venture had strong financial backing from a shareholder who believed in both the concept and the people, says Schnoor.

"Yes, 2008 was very difficult and growth was slower than we anticipated in our business plan. But we knew what we were going



to do, we just had to get through it. By 2009-10, it took off like a rocket and it hasn't stopped since."

Eycke Dörre, who also has a liquid bulk logistics background and was also with Hoyer, joined Liquid CONcept in 2011 and became joint MD in 2014.

The company has seen growth rates of 20-25% every year, although Dörre admits: "It is easy to grow 20% when you are small, and it will be more difficult to keep that growth ratio in the coming years."

In 2007, the focus was solely on IBC logistics. "The company did rental and logistics for stainless steel IBCs and then grew into tank containers and transport," says Dörre. "It was the same customers and products, but bigger quantities required. With IBCs we are moving up to 1,000 litres - in tank containers and tank trucks, the volumes are up to 30,000 litres depending on

the product. So we gained new services in the past few years."

In the past year, Liquid CONcept has focused on delivering a package of services, including drumming, defilling, storage and transport concepts.

"Our customers want one solution provider," says Schnoor. "We ask questions and develop various solutions for the customers. We have lots who are renting IBCs from us and who also order bulk transport and tank containers for intermediate storage; we fill the IBC from the tank container."

The company's fleet is made up of 4,000 stainless steel IBCs, 75 tank containers, used for transport as well as storage and special projects, and 35 tank trucks that transport liquid foodstuffs throughout Europe.

Although Liquid CONcept operates just one site in Hamburg, it has a depot structure through various

partners, covering Europe. "These depots are certified according to our customers' needs," says Dörre. "We don't have our own workshop or cleaning stations but we make sure our partners are performing in the way we ask."

A key development last year was being awarded the International Featured Standard Logistics (IFS-Logistics 2.1) certificate from the DEKRA testing organisation. This guarantees transparency along the entire supply chain by performing tests based on a globally uniform rating system.

Dörre says: "The certificate also covers intermediate bulk container logistics. We are the first company to receive IFS certification for small container transportation services."

The company rounded off 2016 by being named one of the 500 German companies with the biggest growth in turnover between 2012 and 2015. The 'Growth Champions' ranking, created by Focus-Spezial and Statista, put the company in 12th place among German logistics companies with the biggest growth.

The two MDs believe a key factor behind the success of their business model is the decline of in-house expertise in the industry. "Many big companies have changed their habits a little, from thinking they have to know all about logistics to focusing more on diversifying their product range," says Schnoor. "Everybody is reducing overheads and increasingly the logistics know-how may not be there. Also, expertise is being lost as key people come up to retirement age."

For Liquid CONcept, the holistic approach necessarily includes innovation. Among solutions are tank containers fitted with agitators to prevent liquid chocolate from getting stuck, and the development of a new aseptic handling solution for tank containers carrying food.

In this latter development, the company is working with partners in Scandinavia and



the first trials have been successful.

"Always, our focus is on finding a solution. For example, a customer might want to deliver a special product at a special temperature and in a special IBC but isn't able to fill it. We do all the planning and time scheduling; we will pick up the product in a tank container, bring it to a defilling station and defill in smaller quantities to IBC.

"We will also provide road transport in temperature-controlled trucks."

What's particularly important is presenting a single face to the customer, says Schnoor. "There is always one face from sales and operations dealing with the customer. And that covers onsite logistics for customers moving liquid products between two facilities, cleaning in between and special equipment to ensure that any loss of product is absolutely the minimum. We are talking about very sensitive and expensive products."

Customers are always surprised that they can get everything out of one small company, he says. "But we are highly professional and they like it. Our solutions can be very complex but once you have the project and concept up and running, if you do an excellent job and your customer trusts you, usually you have a long-lasting relationship."

IFS certification was really important, he adds. "The foodstuff customers we work with prefer to work with a logistics company that has IFS because they want to guarantee the quality of the product they are bringing to the manufacturer. In the early days we decided to focus more on the food sector because the chemical business was very volatile,

and this has proved successful for us. However, 10% of our current business is in the chemical sector, and we could expand that."

And so, to growth. If small is beautiful and Liquid CONcept – current team 16 – continues to grow, what happens next?

Dörre says: "We have both worked for very big companies in the past. We don't want to lose contact with our customers and we don't want to lose a grip on our staff – that is always going to be the basis for our business.

"Yes, we want to grow and we are asked to grow by our customers, but we are not going to be 100 people next year. It is organic growth we are looking for, nothing that is going to appear overnight."

At present the company is focused mainly on Germany, Austria, Switzerland, Belgium and the Netherlands, with business developing in Poland and a first project under way in Russia.

"We can only sustain our philosophy if we are careful with our growth," says Dörre. "Of course there are disadvantages to being small – we don't have a massive network or lots of staff and we don't lease tank containers. But our fleet is big enough to service requirements and what we do have is flexibility.

"Our staff are hand-picked and we look at exactly who is going to represent us. We specialise in solutions; we are in a niche and we are happy there."

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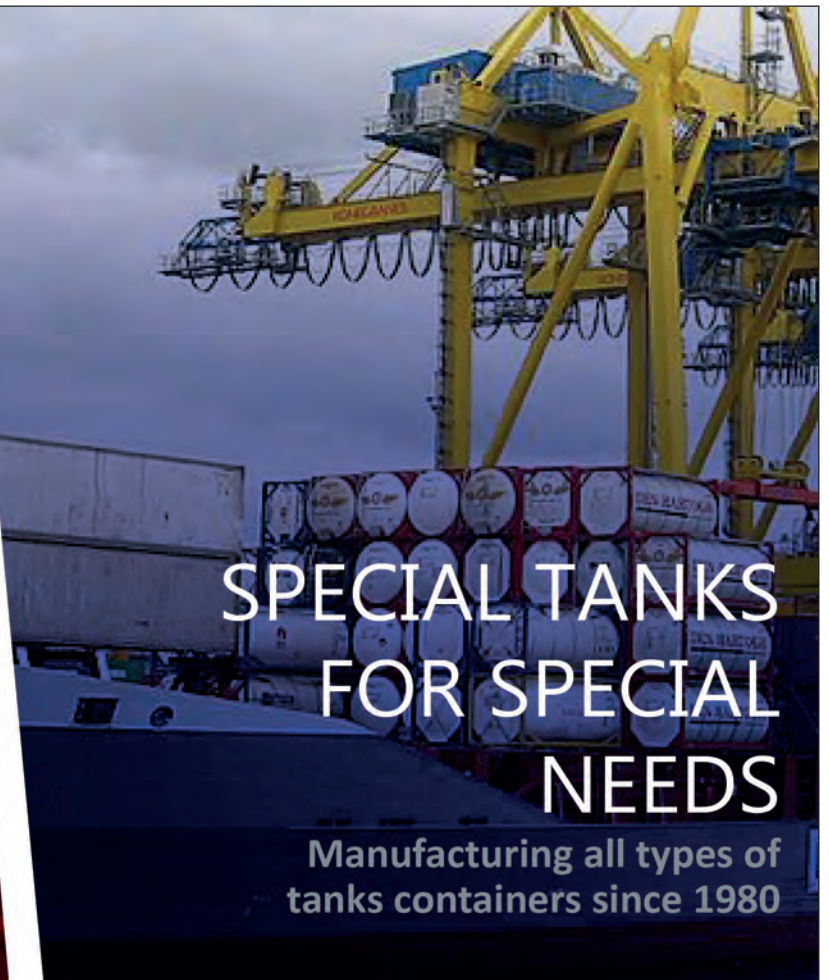
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A customer's wish is Contargo's command

Janny Kok discovers that the trimodal combination of barging, railways and road haulage is both cost-effective and sustainable

This must be music to the ears of planners of tank container transportation, who usually call a road haulier to carry their tank containers. Contargo Network Service cited the favourable characteristics of trimodal logistics when launching its Trimodal Transport Solution in which the customer calls the shots. Contargo's sales people in the Zwijndrecht, The Netherlands are attracting future customers with the proposal: "Design your own trimodal transport".

Contargo has developed the project on back of the real requirements of a customer who wanted to have about 60 IMO cargoes in tank containers per week moved within the Neuss, Germany region. Tank containers had to move from a Moerdijk depot, between Antwerp and Rotterdam, to Neuss, followed by a return leg to Rotterdam or Antwerp.

Contargo suggested that empty containers could be barged from the Moerdijk depot to Neuss, then transported by truck to the customer for loading. When loaded, the containers could go directly to Rotterdam or Antwerp via barge or railways.

Contargo offered additional services by opening an IMO depot in Neuss for checking and drying tank containers, prior to loading at the customer's premises and deploys trucks dedicated to tank container transportation. Drivers are trained for the transport of IMO cargoes and fill tank containers on the customer's site.

The logistic service provider can organise daily transportation in the Neuss region and sets up a shuttle service system to guarantee every time of loading. It says that flexible export transports can be arranged by barge or rail, or directly per truck.

"The trimodal solution offers the client the advantage that all operations are concentrated in one hand. Containers can be planned to be carried by barge, truck or railways, and will be transported within 24 hours to Rotterdam or Antwerp by barge or rail, or straight away by truck", sales people say.

Contargo Waterway Logistics Operational Coordinator Jasper van Dongen observes that the volume of containers carried from and to Rotterdam via waterways has grown substantially in the past few years. They carry all kinds of goods, including hazardous cargo, electronics and spare parts of motorcars.

Tank containers and reefers are also carried by the fleet of Contargo Waterway Logistics and 15 of the 40 barges of the fleet call at Rotterdam. If needed, alternative transportation can be arranged.

The company's trimodal project is viable through the network of Contargo GmbH & Co, an internationally active logistics service provider in trimodal transport between European seaports and their hinterlands. The company provides additional services



throughout the whole supply chain, including Customs documentation, terminal handling, availability of empty container depots and container repairs.

Its network comprises 24 terminals, four inland shipping lines and several railway lines along the river Rhine and its main tributaries up to Switzerland. These provide the proper facilities to make trimodal services suitable to the customers' needs. Contargo transports about 2.3m TEU a year in this network.

Recently it stopped operations at the Gernersheim terminal but has increased its participation in the Rhein-Waal terminal in Emmerich. Today, it operates under the name of Contargo Rhein-Waal-Lippe GmbH. When the terminal in Voerde-Emmelsum becomes operational, both terminals will operate under just one Contargo management. Contargo Road Logistics offers direct trucking from its Hamburg base.

In it for the long haul

Gröninger has been around longer than the ISO tank container, but today it supplies leading-edge cleaning equipment, discovers James Graham

Dutch tank cleaning equipment manufacturer Gröninger Cleaning Systems was created in 1947. The Rotterdam-based business celebrates its 70th anniversary with expanding orderbooks and a recent move into new Asian markets, reveals CEO Berthold J Schaap.

Schaap says: "Gröninger tank cleaning facilities are known for their reliability. Many of them have been in operations for decades. In recent years, Gröninger has expanded its activities to other parts of the world and also enlarged its product range in order to be able to provide turn-key tank cleaning solutions.

"Many of these have been in operation for years. Therefore it is really worth to retro-fit existing facilities to bring them up to the current technical standards. Especially in the area of automation, energy savings, operational software, food safety and cleaning quality management, many improvements can be achieved."

"Of course, a greenfield operation brings additional benefits, like the possibility to set up the logistics in the most efficient manner and to maximise the available space."

Gröninger constructs seven to ten large scale turn-key projects a year. In addition, there are many on a smaller scale.

"We have various on-site project teams that give us the flexibility to work at various locations at the same time," said Schaap.

The company provides three main

types of cleaning depot: basic, a total solution for clients and a containerised tank container depot. The selection of which model is appropriate will be a reflection of capital investment obtainable, lead-time available for the project, likely throughput of ISO tank containers and cleaning requirements.

The 'basic solutions' tank container depot is suitable for small-scale operations, remote depots, trial markets and new factories. The basic Gröninger system is a ready-to-rinse system that needs only water, electricity and drainage. The remaining ancillary equipment is provided by Gröninger. Erection of the basic model takes only a few days.

Cost advantages

According to Schaap, the advantages of these units are savings in on-site construction costs, reduction of the on-site construction time and that the entire system is delivered on site fully tested.

The full tank container cleaning depot solution, supplied to clients such as Tank Cleaning Europoort (TCE) in Rotterdam, sees Gröninger assist in the modelling, feasibility studies and conceptualisation of the proposed tank container depot. Gröninger brings together parties, assists in permit requests, runs the overall project management and ensures the final implementation of the project.

Gröninger's third solution is an

immediate option and comes in a container or, more accurately, a number of them. Customers such as MLT in Saudi Arabia and Saigon Newport in Vietnam will save on on-site construction costs and reduced construction time. The equipment is easier to lease, being a moveable asset. "The entire system is delivered on site fully tested," says Schaap.

The development of the service department remains a top priority for Gröninger. "The service department is one of the most important, if not the most important, mainstay of Gröninger's after sales activities," says Schaap.

"The first steps have been taken with the addition of extra field service personnel and the establishment of a control room in a new building. The remote monitoring of installations from this control room can be supported more efficiently by the ICT engineers, enabling them to address any issue remotely."

He adds: "A lot is happening with regard to systems. Gröninger's Relyon service system will soon offer further possibilities, such as reporting, checklists in multiple languages and a portal for customers with information on each system (drawings, manuals, etc.), the last orders, spare parts, service calls and so on."

Design elements

Key design capabilities in Gröninger tank cleaning equipment include high-pressure pump technology, water preparation systems such water softening, physical and biological waste water treatment systems, energy recovery systems and air purification technology.

Local construction work rules and ordinances for securing the right permits often lengthen the process



A Gröninger Cleaning Systems depot

but an average system requires six to nine months for completion.

“We have built cleaning systems for the top six tank container operators, by tank container fleet numbers,” says Schaap. “They are usually striving towards a global standard for safety and cleanliness. As each location has its specific conditions, such as climate, permits, waste water regulations, we are able to modify our systems accordingly.”

Customers

The company boasts extensive experience in the field of tank cleaning equipment and systems and has an impressive reference list, which includes many important international company names in the logistics, waste management, food, non-food and chemical industry, says Schaap. Applications range from simple one-spinner systems to full-featured one-stop shop depot solutions.

“Besides the standard cleaning, Gröninger has developed systems for cleaning latex and MDI/TDI tanks as well as solutions for heating laden tanks,” he says.

In addition, Gröninger offers mobile and stationary high-pressure cleaning systems, IBC cleaning systems, drum and barrel cleaning systems, in-plant cleaning equipment, chassis cleaners, parts cleaning equipment and custom-built cleaning systems.

Expansion

Gröninger has supplied equipment to facilities in all major EU countries. In the last decade Gröninger has expanded to Eastern Europe, the Middle East, India, South-east Asia and China. “In it for the long haul”

was the commitment Gröninger made when it commenced operations in Singapore in May 2011.

Nearer to home, in May 2015 Gröninger played a key role in the establishment of a new tank container depot for Stolt Tank Containers (STC) in Moerdijk, Netherlands. The depot provides support for STC’s 35,000 units, the largest fleet of tank containers in the world.

STC operates tank container depots throughout the world for the cleaning, storage, heating and repair services of these containers. The depot in Moerdijk is considered a flagship tank container facility.

The depot has three drive-through wash lanes for driver-accompanied vehicles, one lane specifically for food products and two lanes for chemical products. Containers from the depot are lined up in rows of six and are water-cleaned under high pressure at 100 or 200 bar in a separate cleaning bay. The site also has a bay for interior works (polishing and grinding), two additional bays for circulation cleaning (latex and resins) and two bays for outside cleaning.

The loaded container temperature is maintained using steam, hot water or electricity. The temperature is measured inside the tanks and can be monitored in the operations office.

Schaap says Gröninger will continue to drive its business forward, based on a clear “innovate and expand” strategy. Further innovations and developments will strengthen Gröninger’s core capabilities, which is a prerequisite to meeting future customer demands.

The company has “over 40 employees that form a dedicated team with only one goal in mind: to maximise customer satisfaction,” he says. Last year the company added five staff members, evenly spread over different corporate functions.

“Growing our business cannot be done by just adding staff. It takes a long time to get new team members fully equipped and trained to handle the complexity of ISO tank cleaning facilities. Therefore we follow a gradual ‘innovate and expand’ strategy in order to be able to meet all technical, service and quality requirements from our customers,” says Schaap.

Outside ISO tank container cleaning activity, Gröninger Cleaning Systems supplies equipment for railcar tank cleaning, shipping and offshore, truck wash for vehicles/equipment, mobile box container washing, plant such as tanks/silos and barrels, wheelie bins and mobile waste containers.

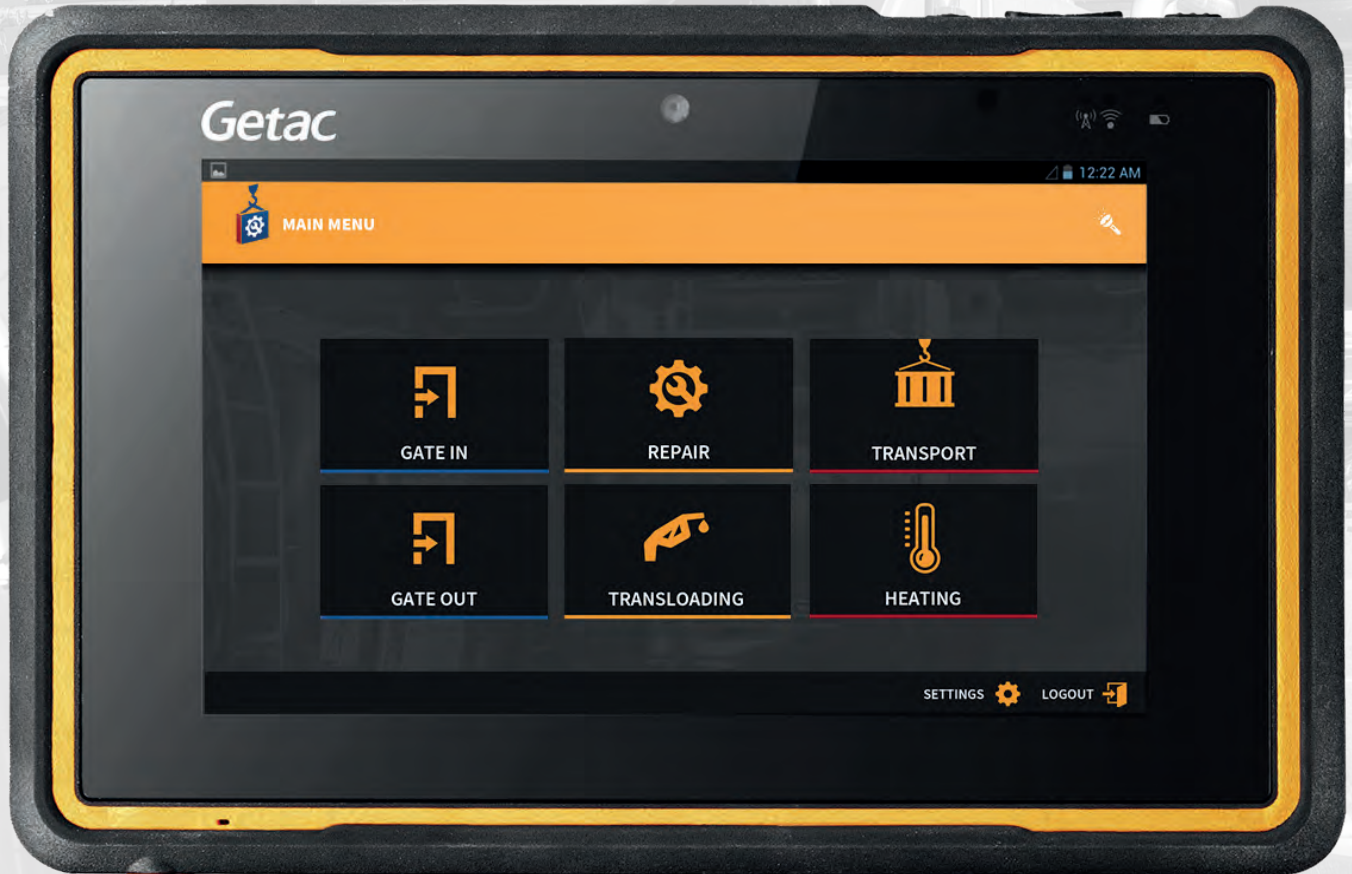
RSA-Talke’s ‘milestone’

Gröninger client RSA-Talke’s chemical hub is a milestone in state-of-the-art chemical logistics services in



the UAE, claims the company. Offering a full range of logistics and logistics-related services for hazardous and non-hazardous chemicals, it complements the sophisticated storage and handling solutions provided at the company’s Dubai South warehouse complex.

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ITCO Tank Container Village at *transport logistic* keeps on growing

With 66 members exhibiting, this year's ITCO Tank Container Village will be bigger than ever



This year's ITCO Tank Container Village - organised as part of the transport logistic 2017 exhibition taking place in Munich, Germany, in May - is set to be the biggest one

so far arranged by the association.

Comprising 60 exhibition stands and over 66 ITCO members in total, the 2017 Village represents a

10% increase in size over 2015, which in turn was 15% larger than in 2013.

Located in Hall B4 of the New Munich Trade Show Centre, the 2017

Tank Container Village will again offer ITCO members, exhibitors and visitors an important opportunity to meet their customers and partners in a dedicated and professional environment.

ITCO members exhibiting in the Village will be displaying a wide range of equipment and services, with the majority of the world's leading tank container operators, leasing companies, manufacturers and component suppliers taking part.

In addition, there will be tank container surveyors and inspection companies, together with a number of leading tank cleaning and repair facilities. Health, safety, quality and environmental concerns are top priorities for ITCO members. Technical innovations and improved operational efficiency support those priorities.

The growth in the size of the Exhibition reflects the growing range of products and services that ITCO is offering to its members – and also the increasing membership of the Organisation. ITCO will be show-casing a number of initiatives that it has been developing over the past year. These include the development and launch of a Tank Container “E-learning” course (launched at the end of 2016) and the recent publication of “Recommended Guidelines for Tracking Systems on Tank Containers”.

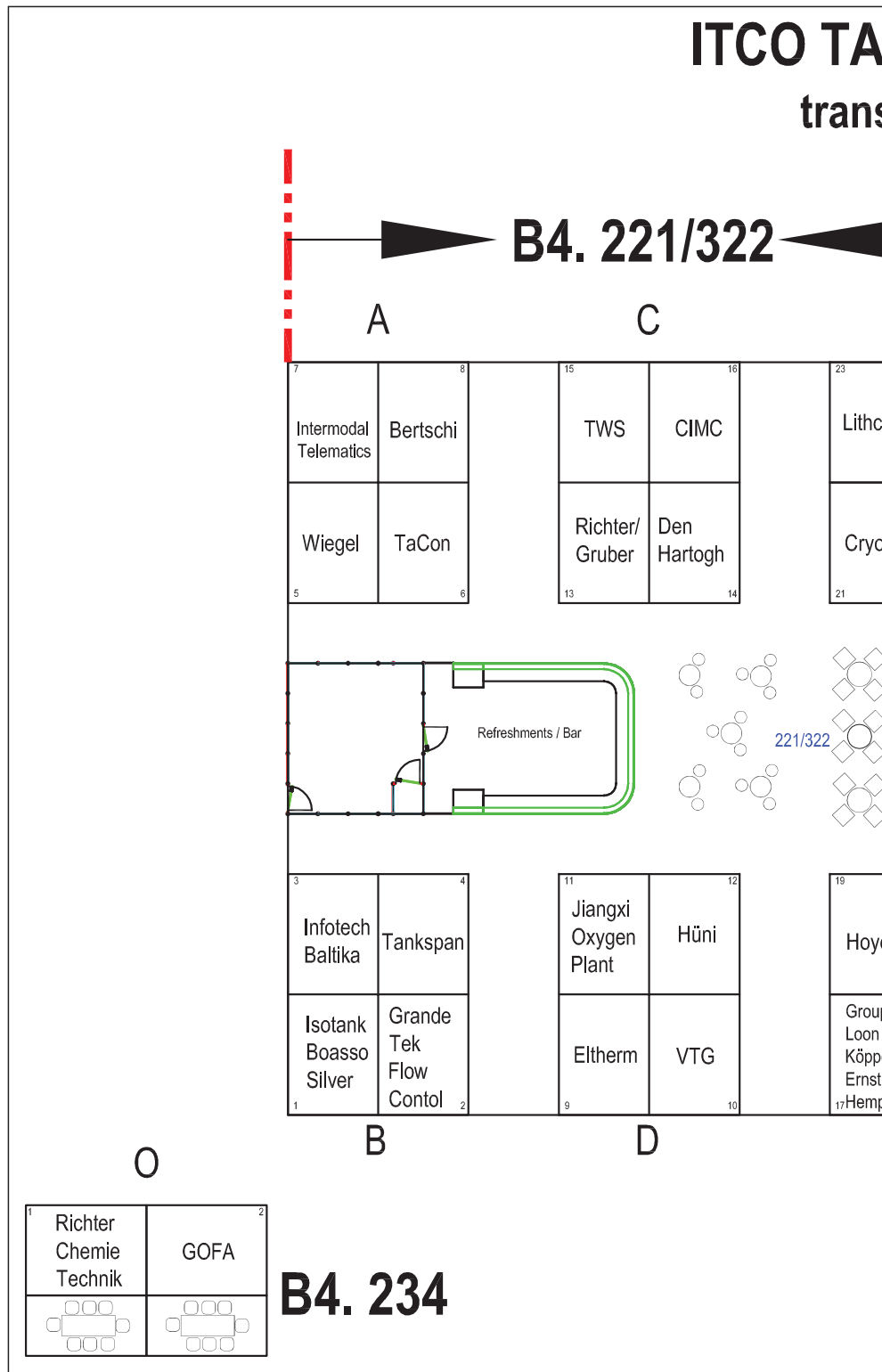
Also, ITCO is working on the publication of a revised and updated version of the ITCO ACC (Acceptable Container Condition) industry standard document. The purpose of ACC is to establish a basic minimum tank condition

throughout the industry and to assist in maintaining the excellent safety record of the tank container in operation worldwide. It is designed for use where tank containers are transferred from the care and custody of one party to another,

such as between owner, operator, lessee, shipper, depot and carrier, and to give clear guidelines to the contractor responsible for repairs.

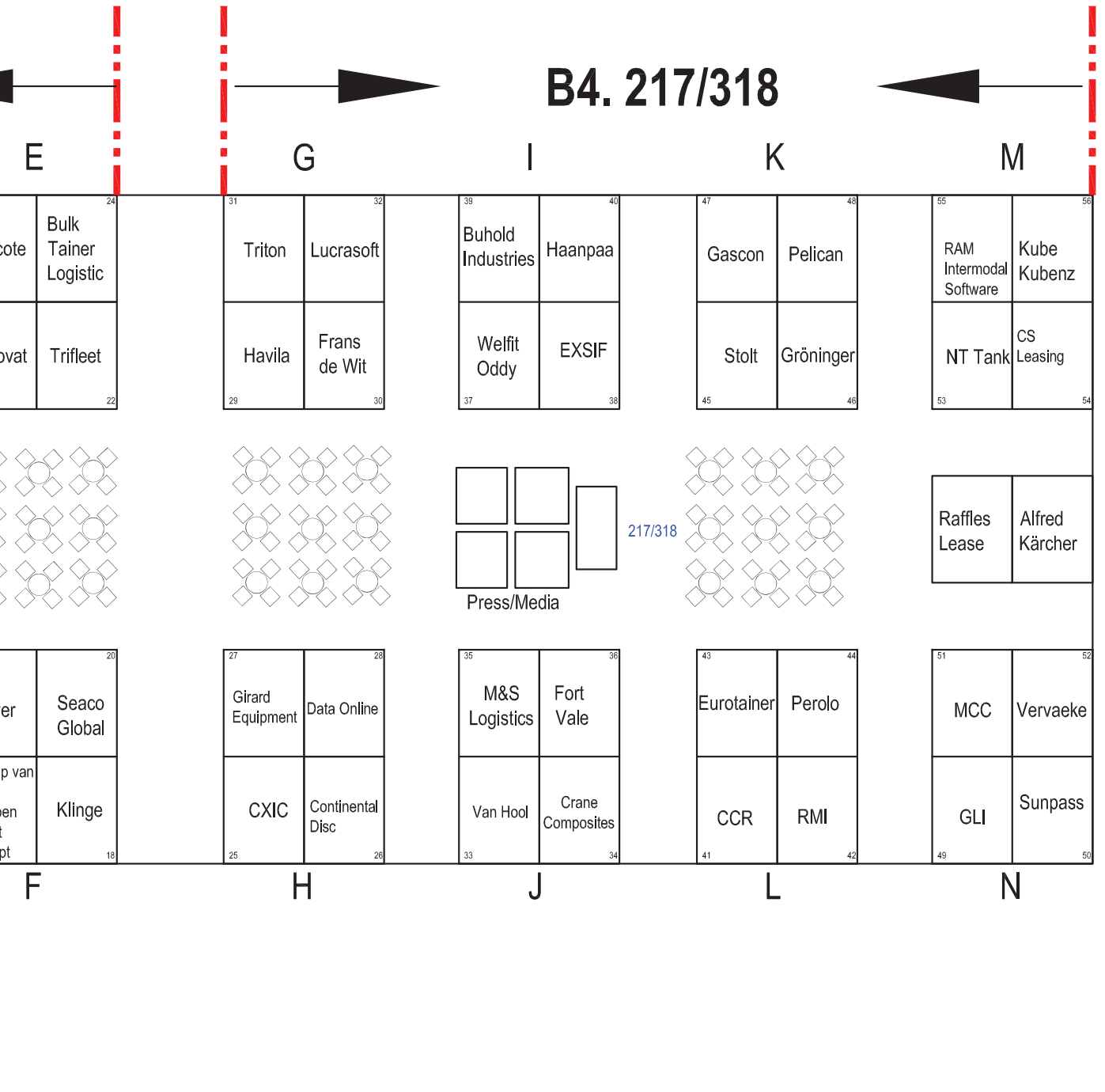
Commenting on the ITCO

ITCO TA trans



TANK CONTAINER VILLAGE

transport logistic 2017, Munich



Tank Container Village, Reg Lee, President of the International Tank Container Organisation notes: "With 60 exhibition stands and a total of 66 members exhibiting, this year's ITCO Tank Container Village at transport logistic will

be the biggest so far. The Tank Container Village has established itself as the most important global meeting place for tank container operators, lessors, manufacturers and service suppliers to meet their industry colleagues and discuss

issues of common interest."

The Tank Container Village at transport logistic offers plenty of opportunities for customers and exhibitors to meet – either at the

exhibition stands, or in the central bar and meeting-lounge area.

Two evening receptions are being organised: the traditional ITCO Welcome Reception on Tuesday 9 May

at 18:00 – which is being sponsored this year by NT Tank, as part of its 10-year anniversary; and the Wine-Tasting Evening, sponsored by Perolo, which is on Wednesday 10 May.

Visitors are warmly invited

to both events.

Visitors to transport logistic 2017 will find the Tank Container Village in Hall B4 (Stand 221/322 and 217/338).

Further information on www.itco.org.

ITCO members exhibiting

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 Group van Loon
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 Intermodal Telematics
 Isotank Services
 JOPM International
 JSC Infotech-Baltika M
 Klinge Corporation



Köppen GmbH
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 Lithcote Europe
 Lucrasoft Solutions
 M&S Logistics
 MCC TianGong Equipment
 Nantong CIMC Tank Equipment.
 Nantong Tank Container
 Pelican Worldwide
 Perolo
 Peter Hempt
 RAM Intermodal Software
 Raffles Lease
 Richter Chemie-Technik
 RMI Global Logistic Services
 Seaco Global

Silver Inspection
 Stolt Tank Containers
 Sunpass International
 TaCon
 Tankspan Leasing
 Tianjin Xinhuachang
 Int'l Containers
 Transports Vervaeke
 Trifleet Leasing
 Triton International
 TWS Tankcontainer - Leasing
 Van Hool
 VTG Tanktainer
 Welfit Oddy
 Wiegel Transport Equipment
 Wilhelm Ernst

Made in Germany

ISO tank container manufacturing may be concentrated in China and South Africa, but after a reboot, WEW is flying the flag for German engineering, reports James Graham

German engineering is internationally synonymous with quality manufacturing. The 'brand' promises dependable performance and reliability, and these values are the bedrock of Europe's most important economy.

Reliability is also the watchword for WEW, the Weitefeld, Rhineland-based tank container manufacturer that is coming up to the first anniversary of its buyout by THIELMANN Container Systems GmbH in May 2016. According to Falko Pfeuffer, WEW Sales Director, this strategic acquisition not only saved the 78-year old manufacturer from disappearing completely but created synergies between WEW and the THIELMANN group.

Pfeuffer cannot hide the enthusiasm that the company felt on its survival. "WEW is hard to kill! There were many in the market who were glad to hear that we had survived".

THIELMANN acquired WEW from insolvency. This move was a strategic acquisition as WEW's range complemented the Portinox and UCON's factories which had previously specialised in food and chemical storage, and transport containers up to 3,000 litres. WEW's capabilities in highly specialised ISO tank containers, as well as integrated tank/pumping systems, were naturally of great interest to THIELMANN.

"The companies complement each other very well in terms of tank volume and production capabilities. WEW brings to the group a deep understanding of integrated pumping, preservation and mixing systems, as well as a



'systems engineering' approach and experience in project management and excellent communications skills."

With the acquisition, THIELMANN saw opportunities to expand WEW's business and manufacturing operations. WEW remained in Weitefeld and has been joined by UCON's sales office which was in Haiger, Hesse.

War and peace

THIELMANN/WEW's tank containers serve five main industry sectors: chemicals and chemical logistics; oil and gas; defence and government; emergency services; and nuclear. The tank container systems are designed to operate worldwide and withstand the harshest handling conditions associated with road, rail, sea and

extreme climate operation. Its products are delivered to military and civilian operators.

THIELMANN/WEW supply all levels of the defence chevron; the majority of systems are for high mobility operations in forward areas and are equipped to be used by a full suite of military handling systems. Almost all THIELMANN/WEW military solutions incorporate in-house-designed or third-party pumping, purification and preservation systems, suitable for refuelling vehicles and aircraft.

In terms of supply civilian businesses, THIELMANN/WEW contracts either directly with the end chemical, pharma or foodstuffs customer, or through lease and operating companies. "We occasionally work through agents for

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certain special chemicals customers," Pfeuffer says.

THIELMANN/WEW products do not typically include food and drink grade container production but the company's products are used for the transport of potable water for military personnel.

He says: "Some of the largest orders WEW has received in the last 10 years were for food-grade tanks containers [to deliver] fresh potable water for military applications in austere environments. About 2,000 of these have been fielded in this period. A number of ultra-finished and aseptic ISO units have also been delivered for pharmaceutical applications."

However, the food industry has become a target since THIELMANN's purchase. The acquisition has brought both Portinox and UCON, which are deeply ensconced in this area, into the mix.

He says: "We have good plans for this sector, including capitalising on the new client connections delivered from elsewhere in the THIELMANN organisation. We intend to deepen our capabilities in integrated pumping, preservation and delivery systems for both fuels and chemicals."

Because THIELMANN/WEW is a major player in the 'special' tank containers sector, it is hard to determine market share. THIELMANN/WEW estimates this niche market to be no more than 1,000 units a year, of which the company will produce 150-200. However, in value terms, the market share may well be greater due to the greater focus on highly-specified bespoke equipment.

Most orders are delivered directly to chemical clients; some of these clients, but by no means all, are based in Germany.

THIELMANN/WEW also works with German-based 3PLs such as Hoyer and Chemion, particularly when special tank container solutions are required.

In the summer of 2015, WEW launched its new bromine ISO tank container to transport some of



the most highly corrosive liquid chemicals. The 8,350 litre/2,205 US gallons bromine tank is based on a 20' ISO container footprint and is manufactured from pressure vessel quality steel, SA 516 GR 70N. It is lined with lead which is resistant to the corrosive properties of bromine.

"We have over 40 years' experience of designing high integrity tanks such as the 8,000 litre bromine tank," says Dr Ulrich Bernhardt, WEW Chief Executive.

Bromine is used widely as a flame retardant, as fuel additive (though this is reducing), in oil exploration and in a variety of chemical compounds.

Follow the money

This year should see a bullish return to fortune after last year's financial problems, predicted Pfeuffer. "We anticipate a turnover of between €15 – 20 million in 2017, a strong recovery from the post-insolvency turnover of less than €10 million in 2016. The goal is to grow turnover to €25 – €30 million in the coming two to three years. This is both achievable and sustainable as a baseline for the long-term," he says.

This turnover is helped by industry-leading skills in design and production at Weitfeld. Apart

from Autocad and Solidworks, THIELMANN/WEW has the latest technology production equipment including CNC water-jet cutting equipment, CNC bending and forming equipment, CNC submerged-arc, MIG and TIG welding suites and extensive blasting and paint facilities suitable for both standard 20' ISO and oversized containers.

Pfeuffer says: "Most important, however, is THIELMANN/WEW's skill in working and communicating with the client to ensure that they receive a solution that meets and exceeds their requirements with complete confidence and punctuality."

The money difficulties that almost caused the demise of WEW were due to internal and external financial pressures, according to Pfeuffer.

The difficulty was prompted by a move to buy out the decade-long majority shareholder. He says: "WEW's position substantially weakened when it returned equity to buy out the former majority shareholder using bank debt. The (then) management team were unable to find a substitute equity investor and became heavily reliant on the banks."

WEW's problems were then

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compounded by Saudi Arabia's much publicised efforts in 2016 to rein in a budget deficit that reached about 15 per cent of gross domestic product. The German company was exposed on a very large Saudi contract as Riyadh undertook a review that saw hundreds of contracts rescheduled or amended as authorities rolled out a package of austerity measures.

At this point, one of the banks lost confidence in the administrator's turnaround plan for WEW. This left the company with no alternative other than to file for insolvency.

Pfeuffer says: "The receiver was rapidly approached by five shortlisted potential investors and THIELMANN was generally judged by the administrator as giving the company and its employees the best chances for a long-term future."

WEW's significant exposure to the oil and gas industry as the price of a barrel fell also caused problems. Pfeuffer says: "WEW was working on a very large project with a large offshore oil major and contractor. However, this project was regrettably put on ice in late 2014".

"We do expect the industry to return as the supply-side tightens. Therefore, we intend to stay in touch with the market, whilst not expecting a dramatic turnaround for the next 12-18 months, particularly in offshore," he says.

When THIELMANN took the reins on May 2, 2016 it was able to widen its range of industrial customers and gain new access to further industries, such as defence and government, emergency services and nuclear processing, while strengthening its activities in chemical and oil and gas industries.

Staff wanted

Before the insolvency phase, Pfeuffer revealed staff levels at WEW had been at around 120 highly skilled people. All WEW manufacturing staff had completed a three year apprentice education at the company. However,

Four into one will go

WEW is one of four companies in the Thielmann group – the other companies include PORTINOX, UCON and COMET. To combine the brands into an overall corporate image, WEW will be rebranded as part of the group over the next two years.

The new logo will include the WEW brand until 2020.

Pfeuffer says: "The whole group just went through a re-branding exercise and all the companies will fly the same flag soon. We are up for a logo change within the next month or so. We will still fly the WEW flag for 2 – 3 years but the logo will be somewhat THIELMANN-ised."



the difficulties created by the insolvency saw staffing levels drop to less than 80 employees.

Last year, THIELMANN/WEW embarked on a recruiting drive and has substantially increased its design capability to service current and future contracts. Apart from new hires in the factory, a new Managing Director for WEW Container Systems - Björn Stolz - was appointed by the Thielmann Group effective January 1, 2017. The company is also planning to increase its sales and project management capacities in the first half of 2017.

Even through difficult times, WEW maintained its commitment to apprentices and has an apprentice school as part of the factory. THIELMANN/WEW normally enjoys a very low staff turnover with an average service length of 12 years. This naturally results in the development of deep practical expertise in the field of tank, frame and ancillary system manufacture.

THIELMANN/WEW's quality manager, for example, has a PhD in welding. Pfeuffer says: "Although this is somewhat unusual for the tank container industry, it does yield



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Leslie McCune, Chemical Management Resources Limited

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advantages of a deep knowledge in the area of metallurgy.”

Loyalty

As is happening elsewhere, Germany is experiencing changes in terms of job tenure times but THIELMANN/WEW has been fortunate to retain the loyalty of its core manufacturing team.

Pfeuffer says: “THIELMANN/WEW is a project-based company - no single market takes preference. In terms of marketing effort going forward, the emphasis is likely to be split equally between government - that is defence, disaster/emergency - and highly specialised tank containers for fine/sensitive, ultra-hazardous and radioactive materials to complement THIELMANN’s activities in food and pharmaceutical. WEW has also developed integrated tank/pumping solutions for certain offshore applications and will recommence activities in this field when the market returns.”

A survival strategy for the new company has been the move away from being solely a manufacturer to become a manufacturer, service provider and project manager.

Pfeuffer considers it important to emphasise that WEW’s greatest capability lies in smaller batch-production of highly specialised units. This usually leverages skills in exotic materials such as 309ti, hastelloy, duplex, inconel and titanium. He says: “WEW also leads the world in delivering EPA-approved self-bunded ISO tanks for all types of fuels, up to and including hydrazine rocket propellant.”

WEW’s range extends from food grade, through T2 up to T50. For the chemical industry, most units produced in Weitefeld are T22, T23 and T50, usually from special materials or requiring special on board sensing and conditioning equipment. WEW has also developed a reputation for linings ranging from soft rubber to enamel and other more specialist lining systems.



Origins

The WEW identity recalls the origins of the company when it began forming iron components for the German market in the late 1930s. It is an acronym for Westerwälder Eisenwerk - Westerwald is the region and Eisenwerk relates to an iron factory. The full name has not been used for over three decades and WEW has grown to be the name synonymous with special tank container designs.

While many manufacturing companies, even in Germany, consider ‘offshoring’ – the relocation of activities to lower-wage foreign markets – this is something that WEW will not consider unless there is a compelling economic business case.

“Offshoring is a particular speciality and does not easily fit THIELMANN/WEW’s specialised range, where the ramp-up time, particularly in Quality Assurance, could easily absorb any cost benefits for such orders,” says Pfeuffer. “However, we have had in the last two to three years, and continue to have, dialogue with potential offshore partners in Turkey, East Europe and further afield and would consider it if the economics work. Watch this space.”

WEW had a number of licence agreements in place, most recently with CIMC (China International Marine Containers) for a special gas-

tank design. THIELMANN is very familiar with globalised production and has had good experience within its own production facilities in Mexico.

Over-engineering

As a manufacturer, WEW engineers its products for profitable and productive life for its containers. It is hard for managers to know how long a WEW container will be in service. However, it is aware of 45-year old WEW containers still in regular traffic today with the same foodstuffs customer. It continues to receive parts and service enquiries for units manufactured in the 1980s.

Pfeuffer says: “Second-hand WEW containers are much sought-after because of their longevity and original build quality. So, over-engineering the original product yields benefits all through the ownership lifecycle!”

The next decade is likely to see major consolidation between tank container manufacturers as the market’s oversupply of equipment. This is especially likely to happen between the many Chinese companies.

For WEW, Pfeuffer predicts: “We have a number of exciting plans within THIELMANN for 2017 and beyond. Watch this space!”

An industry first for HOYER

Editor Leslie McCune explores how IMT telematics are being used to create 'smart' tanks and the first digitally-managed fleet

Creating a genuine step-change in competitive advantage is rarely achieved in the tank container industry, where gains are often incremental and short-lived, but in an industry-first, HOYER - a global market leader in moving liquids by road, rail and sea - will deploy IMT's proprietary telematics throughout its global fleet of 37,000 tank containers.

This digital transformation will raise the benchmark for the tank container sector, improve asset management for both tank container owners and customers, and fundamentally reshape customer expectations.

To date, many tank container players have managed their businesses with outdated IT systems based on multiple software packages that have been bolted together over time. These often rely on manually-entered information from integrating production, logistics, transport and pricing modules onto a spreadsheet.

Telematics drives new ways of thinking

In terms of asset management and customer service, telematics offers a Technicolor alternative to the industry's historical black and white operational reporting which, in its most sophisticated form, only extends as far as basic track-and-trace and invoices. Telematics is driving new ways of thinking, both within tank container operators and customers.

HOYER's entire fleet to become 'smart'

IMT's telematics package will, essentially, make HOYER's entire tank container fleet 'smart' and have many benefits for both HOYER's customers

and the company itself. Information from different systems and data bases is combined to highlight instantly observable critical events or operational deviations.

First, though, some background. Intermodal Telematics BV (IMT) was set up in 2013 by Dethmer Drenth, who is the Managing Director and the only operationally-involved shareholder. The company is based in Breda, The Netherlands, and develops, produces and commercialises generic and bespoke GPS monitoring and telematics systems for assets used for intermodal transport, such as tank containers, railway wagons and trailers.

Prior to setting up IMT, Drenth developed GPS-based anti-theft systems for the cost-sensitive automotive sector, where customers included the VW and PSA groups. The proven experience of meeting two of the critical success factors of the intensely demanding automotive industry – low cost and a stable hardware and software platform – have proved vital for IMT's growth.

IMT has a team of 24, of which seven are developing and producing standard or customised industrial intelligent sensors, or hardware, which generate tank container status data for transmission. IMT is the only company building active online sensors for the tank container market.

Around 15 software specialists are continuously developing the generic IMT software platform which is then tailored to customer needs and preferences. The platform reads data being sent by both IMT's sensors and other specified devices, such as logistic databases and on-site data pools.

All sensors are ATEX-certified

The sensor hardware portfolio is said to be the best in the industry with several patents pending. Importantly, all sensors are ATEX-certified (Zone 1, T4). A tank container's location is monitored, as is ambient temperature, cargo temperature and cargo pressure. It is also possible to adjust the settings of the heating system remotely via the IMT platform and to view how long, where and at which temperature the tank container is heated by a third party. In addition, IMT developed exclusively for HOYER a patent-pending sensor which digitally measures liquid level, density and the weight of the cargo.

Data from an individual tank container, or the entire fleet, can be aggregated and data mining tools can be used to visually highlight previously hidden trends buried in the data.

Telematic costs have fallen dramatically

According to Drenth: "While interest in telematics devices and sensors has undoubtedly risen in the past few years, it has been driven by one-off customer situations and has rarely been addressed as a company-wide strategic initiative. This is strange, not least because the cost of telematic products and services have fallen dramatically in recent years.

"That said, top management vision, and a well thought out and executed telematics fleet strategy – of the sort being demonstrated by HOYER – is still a rarity."



IMT sensors on a HOYER tank

Heiko Rumfeld, Director Business Unit Netlog at HOYER Group, the world's second-largest tank container operator, says: "HOYER has 20 years of experience with GPS solutions with different suppliers, but three years ago we wanted to move from simple GPS solutions into far more informative telematics solutions. There were a very limited number of suppliers but one of those was IMT, which has proved to be the most reliable and innovative, in everything from technical hardware development to building intelligent software platforms.

"HOYER has integrated telematics within customer-dedicated fleets for the past 18 months and, importantly, both we and our customers have benefited from all the options available in IMT's telematics. We want our entire fleet to have this capability, not least because our customers tell us that GPS location information alone has only very limited use."

At a management level, the activity and idle time of a tank container, or as an aggregate covering a customer's tank container pool, can be analysed over any time period. This leads to better quality management decisions i.e. are additional tank containers - which may require an investment - really needed, or can the existing ones be used more effectively?

Alternatively, data may reveal that fewer tank containers could be used. While some operators may see this as talking themselves out of business. HOYER's Rumfeld stresses: "We see it differently - if we show customers how to be more efficient - even if it means using fewer tank containers - we believe they will be more likely to be loyal to us.

"The sensor hardware has been in heavy-stress tests in our daily operations worldwide over the past three years and has been intensively quality tested by external audits. It is our intention to equip our whole tank container fleet with IMT hardware. We see this commitment as an essential pre-condition to support HOYER's digitally-managed operational activities."

The largest 'smart' fleet in the world

HOYER currently has 5,000 of its 37,000 tank container fleet fitted with IMT's telematics sensors. As part of a five year programme, approximately 8,000 tank containers a year will be fitted with IMT's telematics. By the end, Rumfeld says, HOYER's total fleet of roughly 40,000 tanks containers will be equipped and completely digitally managed, making it the world's largest fleet of smart tank containers.

"For HOYER, it is a matter of quality assurance and that's why we have already taken steps to combine transport-related information with the digital data delivered from IMT's telematics

system. A platform has been created where information out of different systems or databases are combined to best serve customer needs."

Cheaper insurance?

Whether or not the addition of a telematics device, which reports a tank container's operating condition as well as its location, can reduce insurance premiums is a moot point. According to Rob Thacker, a director of tank container insurance broker Pound Gates, the industry has been slow to pick up on telematics, not least because the devices are more visible than those on other transport assets.

According to Thacker: "Cost has also been an issue, particularly for leasing companies, but in other industries where fleets of vehicles are used, there is no doubt that telematics has been hugely effective."

He adds that if the use of telematics improves the claims history - as it has in other sectors - insurance premiums could well reduce.

However, for tank container players, the message is clear: if your IT system is creaking as a result of years of bolting on endless new modules, bespoke 'tweaks' and short-lived upgrades, you'll soon be struggling to meet your customers' expectations in terms of their much-cherished end-to-end visibility and real-time reporting needs.

To stay in business, be prepared to standardise systems and procedures, decommission legacy software, standardise data and improve reporting by leveraging smart tank container telematics.

HOYER and IMT are, together, raising the benchmark for the industry and creating real competitive advantage. The gap between leaders and followers is about to get bigger.

It's a match made in heaven

A new B2B platform can link cargo to tank containers and transportation, reports James Graham

The industry's first B2B (business-to-business) 'dating site' – where cargo shippers in need of tanker capacity can meet tank container owners and lessors – has been launched, with considerable interest from the industry.

Founders Léon de Bruin and partner Jeroen Koppenaar's established TankContainerFinder.com, based in Rotterdam, The Netherlands, to match supply and demand for the containerised transport of liquids, gases, food and feed worldwide. The founders came up with the idea of starting up a marketplace for tank containers thanks to their contacts in the sector.

Cargo and tank containers are matched via a user-friendly online platform, which will "result in a higher level of efficiency, substantial cost savings and more sustainability", says de Bruin. The site also produces potential leads for new tank container business for its users.

The spark for the creation of this form of marketplace for tank containers was the need to move an unlikely liquid cargo – chicken fat. De Bruin reveals that the founders came up with the idea after learning of the experience of a US shipper.



Co-founders Léon de Bruin (left) and partner Jeroen Koppenaar

"We heard of a shipper in Houston that had telephoned a lessor in Rotterdam to have a specific type of tank container sent over to transport chicken fat. That lessor rang around its network and found the required tank container 700 metres from the shipper's location in Houston. We then realised that a world of opportunity, using an intelligent logistics matchmaker, awaited us," he says.

The 'dating site' does not act as a broker. Instead, as a platform for parties to meet, it is designed to be neutral and transparent. If it acted as a broker to work with lessors or owners, conflicts of interest could arise if the site took an active role in the transaction.

All relevant data is entered and a match is found via a simple menu on the website. The first deals have already been concluded during the beta phase and the number of parties participating from all over the world is growing rapidly. De Bruin, vice-president of growth

and marketing, notes: "That has exceeded our expectations. There is great interest, not least among the major players."

New users

The website gained nearly 200 new users in the weeks following its launch in the first week of February 2017. This resulted in more than 35 enquiries and 50 lead connections between the website's active users.

According to de Bruin, TankContainerFinder.com maintained a fast growth rate in the first weeks after the launch, which pleased the founders.

He says: "We've partnered up with TRUE, a leading Dutch hosting company, to maintain a reliable technical infrastructure." The servers were upscaled in February. After listening to client and user feedback, technicians implemented a range of key platform updates to provide a better service and create value for users and clients. These

updates include a blog and added functionality to see what colleagues are doing on the site.

After the upscaling, administrators of registered users can now define exactly which colleagues can see each other's activities on the platform. An option has been added to set hazardous cargo as an option; another option is it to be able to select flexi-tanks. Users are now able to filter on destinations and specific destinations can be excluded.

Better readability of automated emails is now possible. Selection of multiple tank-codes to combine searching for various T-numbers with just one filter is also possible.

Contact and compare

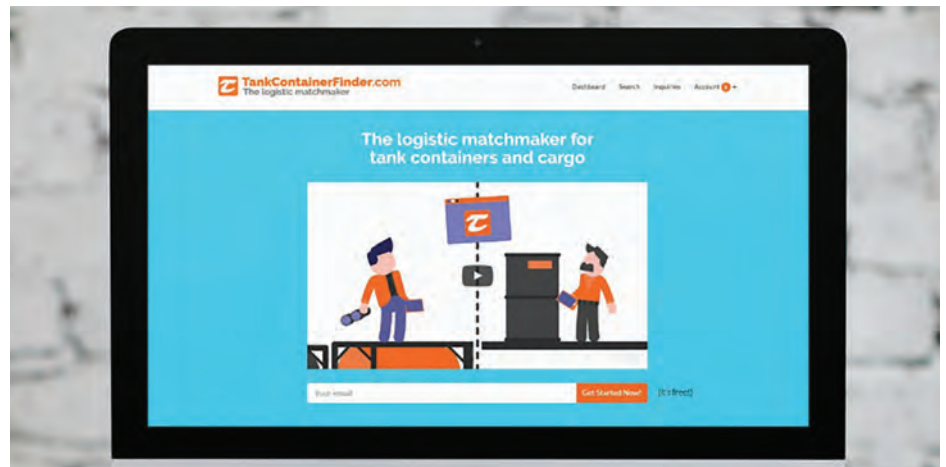
The website has been developed to allow registered users to search, make contact with suppliers and compare offers.

Users can enter search parameters such as product description, UN-number or T-code. They are invited to enter the required capacity and whether the search applies to equipment only or with transport. The location of departure and destination is then entered in a given period of pickup and delivery activity.

The search query is then viewed by a range of tank container and transport suppliers. Once a suitable company is found to meet the user's needs, the user will receive a notification by email. At that point, the user can decide from which party they want to receive an offer for their request.

Once the search is completed, it is possible to compare the various offered prices and then get in direct contact with the chosen supplier. This saves time and money and helps shippers find the right tank container in the right place at the right time.

As the site does not act as a broker or sell on the margin, its income is created from monthly subscriptions that range from US\$49 to \$399, depending on the range of parameters, including number



of searches, user numbers and frequency of filter results.

Once a company or individual has registered using the simple registration form, enquiries can be made using a straightforward enquiry form. To encourage clients, an 'early bird' offer gives registered users three months free of charge before fees commence.

The basic supplier level of access costs \$49 a month and allows unlimited searches. It is limited to a maximum of five users. The next level, Bronze, has a wider range of benefits and a major price tag hike. For \$199 a month, users get unlimited leads, unlimited matches, unlimited searches for operators and forwarders, an automatic filtering of results every four hours, with a maximum of five users.

The next level is Silver. It costs \$299 a month and offers unlimited leads, unlimited matches, unlimited searches for operators and forwarders, automatic filtering of results every hour with a maximum of ten users.

The top level of access is Gold, which costs \$399 a month and features the same benefits as Silver, except the filtering is undertaken every 30 minutes and access to the website is limited to a maximum of 25 users.

The founders are convinced they are acting as disrupters in the tank container industry with a neutral

platform that facilitates contracts that might otherwise not be made.

De Bruin says: "Finding a tank container is no easy task. Despite the fact that, according to the International Tank Container Organisation, there are around 458,200 units in circulation, not every tank container is suitable for every cargo. There are also many different types, all designated with a individual T-number, suitable for specific cargoes of chemicals, gases, oils and other liquid and solid bulk products.

"On average, between 50,000 and 80,000 units lay idle. This is not only because of the many different types but also because there has to be one available in your vicinity."

Highly fragmented

De Bruin considers that once the platform lifts off, the website will have a noticeable impact on the sector. "There is a lot of secrecy about who has what available. The market is highly fragmented worldwide; there are many suppliers of tank containers with more than 10,000 companies on the demand side."

"Via TankContainerFinder.com participants get into contact with each other in a clever and discreet way. That is only a good thing for all parties concerned. The entire sector ultimately stands to benefit from that efficiency gain, not to mention the importance of the sustainable impact factor."

GPCA conference update

Tankcontainer Magazine identifies the opportunities as Middle East petrochemical producers face harsh new realities

The 11th annual GPCA Forum took place last November in Dubai with 2,000 petrochemical and supply chain professionals attending. Key themes included developing long-term, profitable growth strategies, supply chain optimisation and human talent.

Over the last decade, GCC (Gulf Cooperation Council - Saudi Arabia, UAE, Qatar, Kuwait, Oman, Bahrain) annual petrochemical production grew by 9%. 2015 production capacity was 145 million tonnes - more than double that of 2005 - and annual petrochemical exports grew by over 6%.

Although major new tank container opportunities are imminent at projects like Sadara - the huge Dow/Saudi Aramco joint venture in Jubail - the traditional self-confidence of the event was, however, somewhat muted.

US shale and Chinese coal-to-chemical developments have made GCC producers less feed-advantaged, especially following recent feedstock price increases. Furthermore, the recent oil price collapse devastated government incomes and could undermine investments in the developing downstream speciality chemicals sector. Global economic growth remains fragile and below expectations.

Nevertheless, the GCC's petrochemical sector will remain buoyant, according to a Gulf Petrochemicals and Chemicals Association (GPCA) report. Greater refinery and petrochemical integration will improve economics, as will a focus on the unglamorous - but economically rewarding - task of

improving the region's plant reliability and efficiencies.

Yousef Al-Benyani, Vice Chairman and CEO of SABIC and Chairman of the GPCA, encouraged chemical producers to build local capabilities and to attract the high-end manufacturing operations that the region needs to transform itself, while creating high-quality manufacturing jobs.

Feedstock restricts growth

Feedstock scarcity in Saudi Arabia means that SABIC's growth will increasingly come from Asia and North America. 2015 sales fell 22% compared with 2014, leaving SABIC fourth among the world's petrochemical leaders (after BASF, Sinopec and Dow Chemical). Sales have not grown for four years and although volumes increased by 4% in 2015, operating profit fell nearly 25%.

Tasnee's sales dropped by 19% to \$4 billion in 2015 while Petro Rabigh - routinely viewed as a 'problem producer' by stakeholders - saw sales fall over 40% to \$1.6 billion.

Intra-regional collaboration and the forming of strategic partnerships with global players will play an important role in enabling GCC producers to compete globally, according to keynote speakers.

As well as maximizing feedstock advantage, speakers urged GCC petrochemical producers to explore innovative production routes while focusing on differentiated specialty chemicals to achieve greater competitiveness.

'Product differentiation' spells opportunity for tank containers as many are specialty liquids. Those produced in the GCC - either now or soon - include dimethyl formamide, ethylamines, ethanolamines, butyl glycol ethers, MDI, TDI, acrylic acid, acetates, polyether polyols, hexamine and MMA.

Several specialty products will be produced by the \$20 billion Sadara project, which started production in December 2015. Sadara's Mixed Feed Cracker is the first in the region to crack naphtha (although ethane gas feedstock will also be used) and will have a differentiated product slate with 14 of the 26 products being new to the GCC.

Nexant opinioned that the Royal Commission's huge complexes in Jubail and Yanbu should be fully integrated to attract further investment and should be benchmarked against BASF's verbund complex in Ludwigshafen or Singapore's Jurong Island.

The conference also focused on talent. Michael Jordan once said: 'Talent wins games but not championships, which also need teamwork and intelligence'.

Demand for talent is increasing in the GCC's petrochemical supply chain, where new logistics infrastructure investments and increasing demand for liquid specialties logistics need specialist expertise.

As in the petrochemical sector, GCC tank container companies offering challenging and well-founded business growth opportunities are actively seeking talented individuals - especially those with a blend of local and international expertise - from more constrained and less committed competitors.



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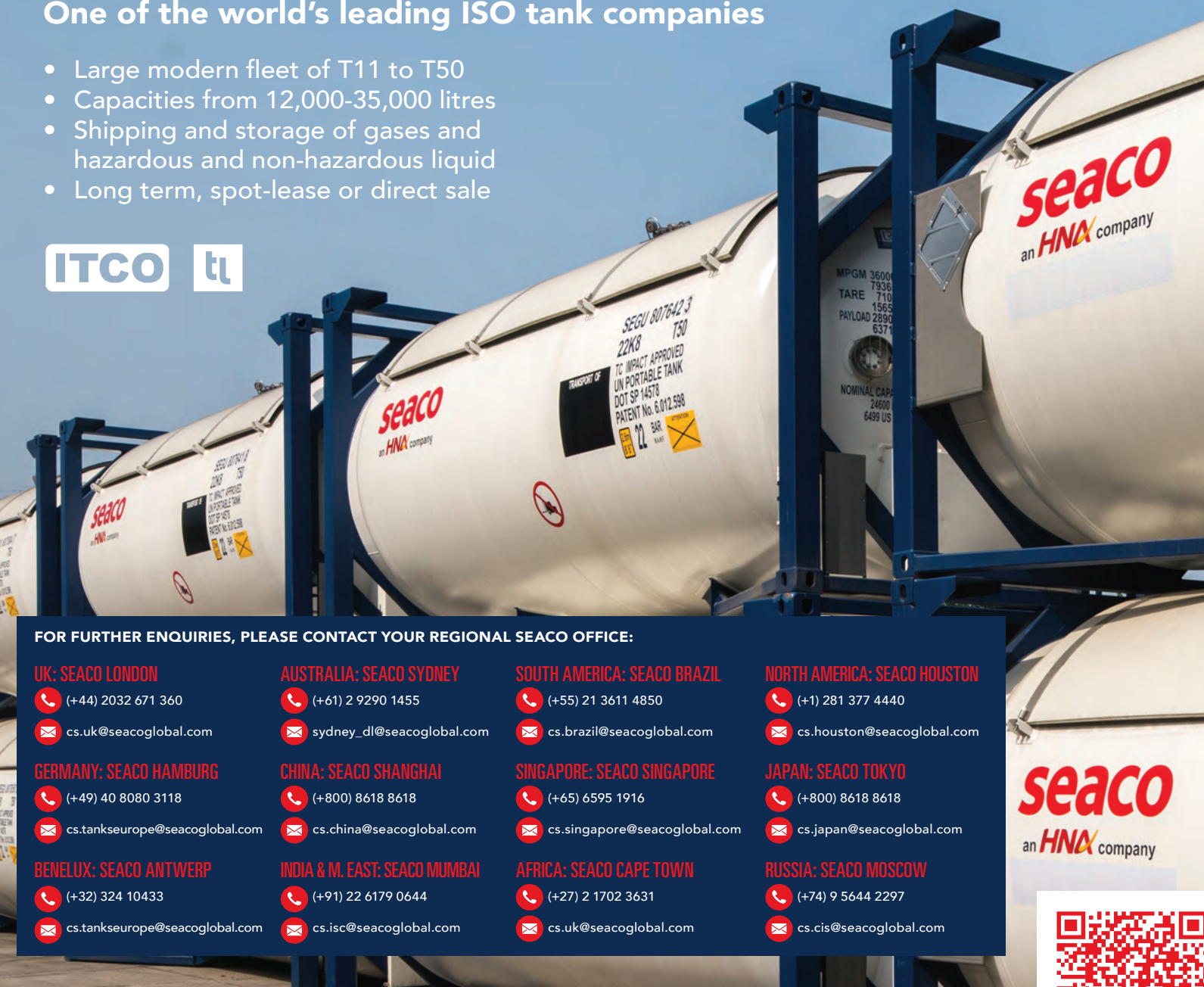
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UK: SEACO LONDON

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cs.uk@seacoglobal.com

GERMANY: SEACO HAMBURG

(+49) 40 8080 3118

cs.tankseurope@seacoglobal.com

BENELUX: SEACO ANTWERP

(+32) 324 10433

cs.tankseurope@seacoglobal.com

AUSTRALIA: SEACO SYDNEY

(+61) 2 9290 1455

sydney_dl@seacoglobal.com

CHINA: SEACO SHANGHAI

(+800) 8618 8618

cs.china@seacoglobal.com

INDIA & M. EAST: SEACO MUMBAI

(+91) 22 6179 0644

cs.isc@seacoglobal.com

SOUTH AMERICA: SEACO BRAZIL

(+55) 21 3611 4850

cs.brazil@seacoglobal.com

SINGAPORE: SEACO SINGAPORE

(+65) 6595 1916

cs.singapore@seacoglobal.com

AFRICA: SEACO CAPE TOWN

(+27) 2 1702 3631

cs.uk@seacoglobal.com

NORTH AMERICA: SEACO HOUSTON

(+1) 281 377 4440

cs.houston@seacoglobal.com

JAPAN: SEACO TOKYO

(+800) 8618 8618

cs.japan@seacoglobal.com

RUSSIA: SEACO MOSCOW

(+74) 9 5644 2297

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