lanay 4 **LESSOR EQUIPMENT LESSOR PORT** Our 5-Forces analysis of the DP World unveils the latest Peacock Container MD Jesse A focus on Brianza Plastica, a leasing market looks at the Vermeijden reflects on the version of 'Where's My leading manufacturer of GRP power of tank manufacturers company's emphasis on Asia laminates for tank containers Container?' P33 Volume 5 | Issue 3 | September 2018 Sue Cassell, Operations Director at Cassilon, describes how a smaller operator successfully competes against larger competitors

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inside Volume 5 | Issue 3



NEWS



After two relatively challenging years, demand

5-19

for tank containers surged in 2017, and Stolt Tank Containers' results reflect this increased demand. Full-year revenue rose by 7.8%, accompanied by a 13.1% increase in operating

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EPCA 2018 Preview

Front Cover Interview

Tankcontainer Magazine discusses with Sue Cassells, Operations Director at Cassilon, how the tank container operator competes with the best.



Cover photo courtesy of London Gateway and Hapag Lloyd

LESSOR

Editor Leslie McCune continues his analysis of the leasing sector, using a well known competitiveness model.

LESSOR

23

33



This year, Trifleet Leasing expand its fleet by over 2,000 tank containers, its largest ever annual increase, reports Jan van de Nes

LESSOR



In the past two years, Peacock Tank Container Leasing has doubled the size of its fleet and relocated its HQ

PORT



With 70 million TEU across its estate, DP World could be forgiven for overlooking tank container traffic

EQUIPMENT



Angelo Scorza reports on Brianza Plastica, the leading manufacturer of GRP laminates for tank containers

OPERATOR

26

31



Forwarding specialist Cryologistics has expanded operations with a new facility in Algeciras, Spain

TANK CONTAINER MAGAZINE

38

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TOMORROW'S SOLUTIONS TODAY





The past is a foreign country

"The past is a foreign country: they do things differently there". So said Leo, the hero in *The Go-Between*, L.P. Hartley's best-known novel. Much the same could be said of China – its rise to become a global economic superpower is a modern-day reality.

In the tank container industry, the exponential growth of Chinese tank container manufacturers is well-charted, with the spark said to come from a single UBH design in the dim and distant past. Today, China's domination of tank container manufacturing is total, accounting for four out of every five made in the world. Well-respected Welfit Oddy in South Africa has increasingly focused on more specialised tank containers – which support a price premium – and invested in higher-efficiency production processes, while European manufacturers retain their own specific niches. This year will see record numbers of tank containers produced.

China's manufacturing capability is growing inexorably and is increasingly sophisticated, with NTtank – the second largest manufacturer in China after CIMC – recently opening a highly-automated production line near Shanghai. Production numbers will increase; unit costs will fall. Cryogenic tank manufacturing is broadening, with companies such as Bewellcn serving customers such as Fluor, Messer and Praxair.

Both lessors and operators have gorged on the low-cost tank containers produced in China, helped by the easy availability of China-sourced first cargoes which provide an immediate revenue opportunity for newly-purchased tank containers as equipment is positioned into an operator's global network.

So how different was the past? Global tank container production was 20,000 in 2009, compared with 48,500 in 2017. Sinochem and NewPort – which had a good global position but was weak in Asia – had just established a pooling arrangement whereby Sinochem found US-bound cargoes in China while NewPort found backhauls from the US (usually far quicker than Sinochem found outbound loads). NewPort only had T11 tank containers in its fleet, which was all that was required for US-China traffic (although the transatlantic trade lane needed a broader range of tank types).

In China, tank containers were only allowed to remain for three months if operated by a foreign owner; total domestic tank container movements were said to be 6,000; the top tank container cargoes were BDO, sorbitol, refrigerants such as R134a, epichlorohydrin, polytetrafluoroethylene, T20-type UN1809 and T7-type

UN 1810 products for companies such as Sandhua, Excel Industries and Xinyichem; some consignees could only get trade credit if product was shipped by Stolt, closely associated with food grade movements; per diem lease rates were, for lessors, a happy Rmb100 (\$14.63 at today's exchange rate); BASF paid for the tank containers only when used and would only offer their MDI isocyanate cargoes to Suttons and Stolt, while Dow Chemical leased tank containers for use by its transporters; and China did not outsource logistics.

Today, China has not only cemented its position as the world's leading tank container manufacturer but is also fuelling demand for them, accounting for most of the anticipated growth in demand this year, not least because of the increasing demand for swap bodies. This growth comes amid a wholescale re-location of many thousands of hazardous chemical enterprises to designated areas as part of China's Guiding Proposal initiative.

Leading operators include China Railways, which is now using significant numbers of swap bodies and third-party tank container operators to complement China Railway Tielong Container Logistics (CRT), its own tank container division. According to *HCB*, CRT's tank container fleet is expected to be 30,000 by the end of this year (up from 20,879 units in January, when it was approaching fourth-placed Bulkhaul's fleet of 22,000). This will make it well-placed to meet the demand in 2020, when 20% of all liquid rail freight in China is anticipated to be moved in tank containers. This will need a substantial build-out of the tank container infrastructure in China, which is underdeveloped inland.

China's massive 'One Belt One Road' initiative will create direct access to 65 countries that make up 65% of global GDP through a network of ports, roads and railways. It will inevitably boost tank container demand, as will China's strategic re-positioning in oil/petrochemicals. The lack of oil resources is a major economic disadvantage and China's refining and petrochemicals sectors are under-developed. The problem is being solved by importing Saudi Arabian oil into new grassroots refinery and petrochemicals complexes in China. This gives Saudi Arabia a guaranteed outlet for its oil, reduces the need for China to buy oil on the open global market and reduces the need for China to import many petrochemical products, including some imported in tank containers.

Leslie McCune, Editor



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Demand for tank containers surged in 2017 and is expected to continue

After two relatively challenging years, demand for tank containers surged in 2017, and Stolt Tank Containers' (STC) results reflect this increased demand.

Full-year revenue rose by 7.8%, accompanied by a 13.1% increase in operating income.

Total shipments for STC rose by 5.5% to nearly 127,000, with foodgrade shipments climbing by 13.3%. Fleet utilisation rose by four percentage points to 72.5%

"While the increase was consistent across all regions, the main driver was China. We have seen some rather deliberate efforts by the Chinese government over the last few years to bring their economy back into balance. So, they had capped consumption, but at a certain point you must refuel and 2017 was the year when things started to rebound," said Michael Kramer, President of STC.

The number of depots in STC's global network rose to 21 in 2017, with the opening of two new facilities, in Laem Chabang, Thailand and Vado, Italy.

Construction also began on two new depots in Saudi Arabia – in Jubail and Dammam – with a third depot planned for Jeddah. In addition, STC's depot in Kobe, Japan was renovated and expanded, while the Houston and Singapore depots added new loaded storage capacity.

Every depot in the network posted improved operational results in 2017.

Michael also noted that safety for people and the environment remained STC's first priority in 2017. STC is currently transitioning globally from the ISO 9001-2008 quality management standard to the ISO 9001 2015 standard, with its greater focus on



risk management. During 2017, STC also recertified and improved the CDI-MPC assessment scores of its European offices and completed a major audit of its facility in Moerdijk, the Netherlands.

STC's deployment of information technology, systems and solutions continued in 2017 on multiple levels.

Actions included new modules to streamline key billing processes, the completion of STC's new 'paperless office' initiative and expanded use of mobile technology for more effective depot management.

In addition, mySTCtanks.com, the online tool that allows STC customers to better manage their tanks, reduce costs and drive supply-chain improvements, continued to add users in 2017.

Michael Kramer noted that demand for tank containers is expected to strengthen in 2018. "STC continues to focus on delivering superior customer service at lower cost by leveraging its global scale, by using technology to drive continuous improvements in operational efficiency, and by operating in a manner that is safe for people and the environment," he said.

Correction: CS Leasing

In the June issue, we stated that CS Leasing was created by box container companies. CS Leasing has asked us to correct this. The company "was formed by the former Cronos management team when Cronos merged with Seaco. The original investors were management, TCG. Ltd and CARU Containers, a box container trading company which no longer has a stake in CS Leasing".



Crowley adds 40 ISO tanks to meet growing customer demand

In response to high customer demand in Puerto Rico, Crowley Fuels has acquired 40 additional ISO tanks for its Caribbean group that will be used to supply, transport and distribute U.S.-sourced liquefied natural gas (LNG) to customers on the island.

The addition of these tanks brings Crowley's total equipment fleet to 75 cryogenic ISO tank containers, giving the company the capacity to ship over 20 million gallons of LNG annually to customers via a world-class logistics supply chain.

The new 40-foot tanks feature technological improvements that increase the offload rate, allowing for faster fuel transfers to customers.

"Adding new ISO tanks to our equipment fleet not only allows us to meet heightened customer demand in Puerto Rico, but also to continue to deliver an uninterrupted supply of LNG to the Caribbean," said Crowley Vice President Greg Buffington.

"We are pleased to establish security of supply on the island while playing a pivotal role in offering cost-effective, safe, reliable and environmentally friendly natural gas to customers."

The latest addition of LNG ISO containers to the Crowley fleet will ensure greater supply chain inventory security when coupled with the 520,000 gallons per day of liquification ability and 98 million gallons of LNG storage capacity from Crowley's partners in Florida, Georgia and Alabama.

Additional storage capacity in Puerto Rico is under development. The LNG supply chain will be further enhanced when Crowley deploys its new LNG-powered combination



container/roll-on roll-off (ConRo) ships, which will provide faster transit to Puerto Rico, reducing the turn time of ISO tanks to customers.

These ships will be fueled from a 528,000-gallon LNG storage facility at the Crowley-leased property at JAXPORT's Talleyrand Marine Terminal in Jacksonville.

Crowley has more than 32 megawatts of LNG supply contracts in Puerto Rico and has delivered to customers since 2014.

From LNG sourcing and logistics transportation, Crowley makes the entire LNG supply chain seamless for customers and provides energy resiliency.

The company's transportation from U.S. liquefaction facilities to customers' storage units is managed by its domestic logistics team, which coordinates over-theroad transportation to shipping terminals in Jacksonville or Port Everglades, Fla. Once at the terminal, the containers are loaded onto company-owned vessels and transported to customers' locales.

At the port of entry, Crowley's onsite logistics team delivers the LNG to customers' facilities, where it is re-gasified into pipeline natural gas for power generation.

Crowley Fuels to-date has delivered over seven million gallons of LNG to industrial customers in Puerto Rico, including food and beverage manufacturers, pharmaceutical companies and more.

Additionally, in 2017, Crowley ensured its LNG supply chain was operational and delivered to customers within three days of Hurricane Maria, Puerto Rico's September storm that left most of the island without power.



TANK CONTAINER SOLUTIONS

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Suttons announces new brand identity

Global logistics supplier Suttons Group has updated its brand identity.

The new brand is an evolution of the old familiar gold laurel which has been updated with the chevrons replacing the wreath. The double-S is now modern, and the font is a clean and bold sansserif.

The new branding is being applied to all Suttons current assets as well as all the new vehicles and isotanks being bought in the current £25m investment programme.

The purpose of the brand update is to support the communication of the company's vision.

John Sutton, CEO of Suttons Group, explained:

"As a major logistics supplier to the chemicals industry, Suttons recognises that it needs to provide a service which supports the expectations of the industry.

"Although our strategy, investment plan and people development support this, we felt that the brand identity did not.



"It has been 30 years since we last looked at our brand. Although we are rightly proud of our heritage and are proud to have our name 'over the door', we recognised that the brand appeared to be all about tradition and did not speak to the future. So we have updated the brand but kept it a familiar evolution of the old brand.

"Now, when our customers look at it, we hope that they will feel it portrays the right things about our strategy and vision, which is to use advanced information technology and assets to provide world class service levels to our customers globally.

"It reflects our passion for safety, the fact that we can be trusted to deliver on what we say and our progressive view of the industry. We have a 'Suttons Way', the right way of doing things wherever our customers interact with us and we want a brand that those customers recognise instantly and that reminds them of what they get from us."



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Ermewa/Eurotainer takes over Taylor Minster Leasing

After few months of discussions, Ermewa Group/Eurotainer has reached an agreement to acquire the full control of Taylor Minster Leasing (TML).

With this acquisition, Eurotainer will assume control of TML's tank container fleet and all the contractual leasing activities under TML's management.

TML is a pioneer in the tank container leasing business and one of the largest owner-managed tank container leasing company in the world.

Known as "The Tank Container Leasing Specialists", TML's fleet is made of more than 5,000 owned and managed tank containers, ranging from Standards and Specials tank containers for Liquid products, including tank containers for Liquefied and Cryogenic gases.

"With this acquisition, Eurotainer will strengthen its global leadership in the leasing of gas and cryogenic tank containers, focusing on its long established and recognized strategy of providing the largest specialized fleet of equipment worldwide" says Eurotainer.

For the last 50 years, Eurotainer has been a worldwide leader of the tank container leasing industry, servicing a wide range of customers from diverse industries.



As the leader in international bulk gas and liquid transportation equipment leasing, Eurotainer offers equipment for liquids, liquefied gas and cryogenic liquid gas in the most optimised, safest, state of the art equipment available.

Today, the Eurotainer fleet encompasses 39,000 tank containers and small portable tanks in 150 types and sizes.

The company's client base is global as is their office network with operations in the Americas, Europe and Asia Pacific.

New service from Albatross Tank-Leasing

Albatross Tank-Leasing has introduced a new service, Albatross Fleet Specs, that provides its customers with 24/7 access to tank container documentation. The database currently holds documentation on tank specification, GA drawing and initial construction certificate for each tank; it will be updated with test certificates after each test.

"Albatross Tank-Leasing is continuously upgrading its service structure to support the growth of its tank container fleet, enabling regional and global customers easy access to operational information which will promote the efficient management of equipment leased from Albatross," says the company.









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Braid adds more ISO tanks to fleet



Braid Logistics is continually investing in its service capability and has introduced another 50 X ISO Tanks to its ever-expanding Fleet.

Manufactured by CIMC in Nantong, China, the 50 X 26cbm T11 ISO Tanks, like all Braid ISO tanks, are food grade standard.

They will be used for bulk liquid distribution for the food and drink industries in New Zealand, Australia and South East Asia.

The 50 ISO Tanks represent the second of four batches which Braid will take in this year.

"Braid have always provided a dedicated Fleet of ISO Tanks exclusively for food grade freight, offering our customers complete confidence in safety standards.

"We are one of the few ISO Tank operators accredited with ISO22000, demonstrating the highest standards in food safety management, including the traceability of our cargo history, the quality of our cleaning process and our ability to safeguard food safety in the entire supply chain."

D-Tec Introduces new chassis



D-TEC has introduced a new container chassis for transporting 20ft and 30ft tank containers.

This chassis was developed especially for the chemical industry, including an open rear side for connecting hoses.

D-TEC has years of experience in manufacturing container chassis, including the wellknown Flexitrailer and Combitrailer.

"In recent years, D-TEC has invested heavily in automating its production process. In particular, we looked very critically into the welding process, achieving a higher quality level. We have also

applied this knowledge and experience into developing this new chassis in which low maintenance costs were the most important aim.

"That enabled us to build robust and light chassis. With a deadweight of 3,400 kg, we offer a chassis that meets the lightest solution in the market."

The new container carrier is suitable for transporting 20ft containers, such as ISO 7.15m and 7.45m, 7.82m swapcontainers and 30ft containers.

Optionally, the chassis can be equipped with a receptacle, rungs and an elevation rod to provide all the conveniences for the driver.

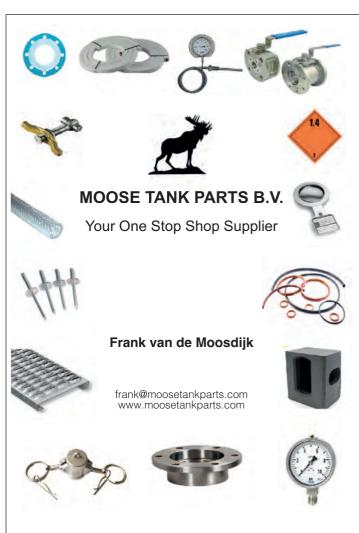














100 Volvo FH trucks for Den Hartogh

Den Hartogh Logistics has recently taken delivery of more than 50 Volvo FH 460 4×2 tractor units out of a total order of 100 trucks which will be delivered to various depots in The Netherlands, Belgium, Germany, UK, Poland, Italy and Hungary.

Den Hartogh Logistics specialises in bulk logistics for the chemical, gas, polymer and dry bulk food industry.

To maximise payload and reduce fuel costs, Den Hartogh Logistics specified Volvo Light Concept tractor units with engines producing 460hp.

"The higher engine power resulted in less gear shifting and a higher cruising speed, giving us a corresponding reduction in fuel costs," explained Equipment Manager Erik Groen.

The drivers are positive too.
"For the work we do, the Volvo I-



Shift is certainly the best transmission available", said one of them. When you accelerate, brake or negotiate a bend, the load moves in the container, but the Volvo I-Shift gearbox always reacts very well.

"Furthermore the Volvo FH is very stable on the road with a fast reacting air suspension system, which is very efficient." Volvo Trucks focus on safety was even as important for Den Hartogh Logistics. Just like Volvo Trucks Den Hartogh Logistics safety measures go beyond the legal obligations set by various sets of legislations and regulations.

Den Hartogh strongly believes that the industry must consider safety throughout the supply chain.

Leschaco launches online freight rate tool

Leschaco (Lexzau, Scharbau GmbH & Co. KG) takes the next step in its digitisation strategy with its own online freight rate portal Instant Freight Quote (IFQ). Currently, Leschaco Instant Freight Quote is the only freight rate portal that also considers the transport of dangerous goods.

In the first phase, the easy-to-use online service includes port to port rates for FCL from Northern Europe to the world and for LCL from Germany to the world. Costs in the port of loading and the usual sea freight surcharges are already included in these rates.

The Leschaco IFQ service was developed to make it easier for companies to quickly receive a freight rate offer, which can then also be booked directly online.

IFQ users receive a freight rate offer without registration based on the selected port of collection and delivery, the cargo to be transported including dangerous goods and the container type.

Additional services from Leschaco's wide range of logistical services can easily be ordered by individual arrangement.

Antwerp and Bureau Veritas hold conference

The first International Technical Tank Container Conference took place at De Ark in Antwerp in June.

The event was organised by Bureau Veritas to provide operators of tank containers, industry experts and government officials with a platform to discuss tank container inspection issues, quality and best practices.

Owners and manufacturers of tank containers face a variety of national and international safety requirements, standards and specifications. The verification of compliance with safety and quality requirements is carried out by independent inspection companies with extensive knowhow and a high degree of flexibility.

Richard Zappeij and Jeroen Scots from Bureau Veritas guided the participants through the conference as moderators and, together with other international colleagues from Bureau Veritas, had the entire day available for questions and answers, as well as expert discussions.

The intensive exchange with the participants made it clear that Bureau Veritas met with great interest with this unique event.

At the Tank Container Conference in Antwerp, specific topics were discussed that help tank container operators to ensure the smooth and safe operation of their tank-container fleet. The positive response from the participants gives reason to think about annual follow-up events in this format.





Singamas issues profit warning after H1 results

Singamas Container Holdings has issued a profit warning to its shareholders following dipped preliminary first half results.

Based on preliminary assessment of the unaudited consolidated management accounts the group is currently expected to report a marginal loss for the six months ended June 30, 2018, as compared to the consolidated net profit of \$16.6m attributable to owners of the company for the same period last year, or the consolidated net profit of \$41.5m attributable to owners of the company for the year ended December 31, 2017.

The company explained that the expected decline in performance for the six months is primarily attributable to the increase in material costs, especially corten steel, despite the strong demand in dry freight containers.

It said: "With intense competition in the market, the group was not able to pass the entire increased material costs to the customers, which affected the gross profit margin of the group. Furthermore, rapid appreciation of the renminbi against US\$ in the first few months of the year further depressed the profit margin.

"With trade tensions between the US and China, economic



downside risk is therefore expected to increase. This may affect the trade volume between US and China in the second half of 2018, which may in turn affect the demand in, and the average selling price of, new dry freight containers.

"Although the group expects the upcoming financial period to become increasingly challenging due to the aforementioned developments, the group's container orders are full up to August 2018. Moreover, material price trend becomes stable and the weakening in the Renminbi leading to the moderation of production cost.

"Subsequent to the review period, on July 3, Singamas has

entered into a sales and purchase agreement with an independent third party to dispose the entire interest of Hui 2 Zhou Pacific Container Co, a wholly-owned subsidiary of the company.

Subject to the shareholders' approval, the company expects the transaction to be completed within this year and the expected gain on disposal will be recognised in the second half of 2018

The board considers that the group's financial situation as a whole is sound with its gearing ratio maintaining at a reasonable level and believes that the group has strong fundamental to cope with the upcoming challenges.

Peacock buys Altermij tank container fleet

On 31 August 2018, ISO tank leasing group Peacock Container completed its acquisition of the tank container fleet, including existing leases and intellectual property rights, of Rotterdambased Altermij Tankverhuur BV.

The transaction adds a further 128 units to Peacock Container's owned and managed fleet as part of a fleet expansion programme which has seen assets under management more than double over the last three years to approximately 5,000 units today.

Managing Director Jesse
Vermeijden commented: "We
welcome this opportunity to
extend our services to logistics
providers and end users in the oil,
chemical, gas and food
processing industries in our core
European markets. Our diverse
fleet of standard and specialised
ISO tank containers will enable us
to offer flexible solutions both to
existing clients and to new
customers who we look forward to
serving as a result of this
transaction."

Changes at Bertschi

Michael Baechler (47), Head of the Business Unit (BU) Global, Dürrenäsch, is appointed to the new position as Chief Operating Officer of the Bertschi Group. He has been working for the company since 1998 and has played a key role in the development of the group in various positions

And from February 1, 2019, Nils Thater (36), Deputy MD of BU Global in Dürrenäsch, takes over as Managing Director BU Global. He has been with the company since 2012.









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Bruhn Spedition reorganises senior management

Lübeck-based logistics company Bruhn Spedition has restructured its senior management.

Gert Laurijssens, Chief Executive of Bruhn Spedition N.V. in Antwerp, has become the group's Management Spokesman.

Alongside Chief Executive Arndt Schanze, who serves as Commercial Manager of the Bruhn Spedition in Lübeck, the two will report to both the owner, Dieter Bruhn, and to Bruhn Spedition's advisory board.

Chairman of the advisory board is Uwe Lüders, the former Chairman of the Possehl Group, while the previous group management spokesman, Marco Lütz, is



leaving the company.

"With the restructuring of the company's management, we maintain our successful course," said Dieter Bruhn.

In the past 12 months, the Bruhn Group invested around €4.2m in new special containers. In addition, a new enterprise software was implemented group-wide.

Gert Laurijssens: "This laid the foundation for the digital future of Bruhn Spedition. Our new system will allow us to automate additional sub-processes, increase data continuity, and integrate our supply chain with a completely digitalized value chain."

Mike Krengle new VP Ops at CS Leasing

CS Leasing, provider of a wide range of Intermodal lease and equipment solutions to global operators, shippers and logistics providers, has announced the appointment of Mike Krengle as Vice President of Operations.

Based in Houston, Mike brings with him a 22-year record of exceptional customer service and technical expertise across multiple container types, including tanks and dry freight special containers.

Most recently Mike worked as a Sales Director for Raffles Leasing. Prior to this, Mike had a wide variety of roles with container lessors, operators and inspection companies, including Hoyer, Cronos, Silver Inspection Services and Stolt-Nielsen.

"Outstanding technical,



operational and customer service expertise are all key to delivering on our client-centered approach. Having previously known Mike for a number of years, we know he has the same approach to forming long term relationships with both customers and vendors as the rest of the CS Leasing team." said Tim May, Chief Operating Officer at CS Leasing.

New Bertschi CEO

Jan Arnet has taken over the operational management from Hans-Jörg Bertschi and is the new CEO of the Bertschi Group.

"We are pleased that a very experienced and reliable manager has come to the top and are convinced that he will drive forward the development of the Bertschi Group with much enthusiasm.

"Hans-Jörg Bertschi will focus on new market activities and strategic projects as Executive Chairman and keeps active in the company on a full-time basis," the company said.

Jan Arnet's successor, Santiago Gonzalez, started in Dürrenäsch last month and will head the BU Liquids.

Michael Koch has already taken over the management of the subsidiaries Spain and Portugal based in Tarragona.

Attitude – a little thing making a big difference

Tankcontainer Magazine discusses with Sue Cassells,
Operations Director at Cassilon, how the tank container
operator competes with the best

TCM: What is Cassilon's background and ownership?

SC: Cassilon is a deepsea tank container operator owned by the Cassells. In 1996 we moved our young family, from an expatriate life, back to the UK to settle and formed Cassilon to run the one contract that we brought with us. The contract involved moving tank containers from Illinois in the US to Botswana in Southern Africa on a just-in-time basis, doing everything from ordering to fulfilment.

We were instrumental in building the world's first long distance, large diameter, high pressure GRP pipeline and the business developed from there.

TCM: Tank container operators tend to be more family owned than lessors. As an operator, what are the benefits of family ownership for Cassilon?

SC: Being a small family owned company has always meant that we have a huge amount of flexibility and that we can take decisions immediately. We are quick to recognise issues when they arise and are quick to resolve them or to present solutions.

Our customers benefit from this while the benefit to ourselves is that we can pursue directions in



which we are interested.

TCM: How does a small operator compete against industry leaders and their economies of scale?

SC: The answer is carefully. Our fleet of 350 tank containers is comprised entirely of chemical grade T11s and for the last decade or so nearly 50 per cent of our work has come from the spot market.

We work from the Benelux to Turkey, Russia, India and the GCC countries, China, Korea and Australia. It is, admittedly, a large global footprint for our fleet size but it takes care of our client's desire for reach.

There is always a place in the market for a team that are all technically very good at what they do and that give accurate, precise results. The mid- to smaller-sized chemical companies enjoy our attitude to customer service. That old cliché about personal service stands - it works.

TCM: What effect has the recent collapse in tank container prices had on Cassilon, and what impact will this have on operators?

SC: We work for the petrochemical industry and load at Shell and Exxon in the Benelux daily. The oil price rout that began in June 2014, which heralded the commodities crash of 2014, impacted downstream chemical prices almost instantaneously. What followed was a 38 per cent crash in global commodity prices by February 2015. This resulted in a dramatic slump in the price of new tank containers.



In the operating world the units in operation were suddenly seriously overpriced and, at the same time, there was a dramatic increase in the number of units available. All this in a market where our main customers had begun to suffer significant losses to their revenue streams.

In other words, the situation represented a perfect storm. The effect on our business, just like almost every other operator, was fairly catastrophic.

Faced with such huge challenges we slimmed down our fleet, realigned as much of our costs as possible and continued to work harder. The statistically-minded will have seen this reflected in the annual ITCO tank container surveys, where in the last three years the size of the operator fleet has grown by a smaller percentage than the rise in the total global fleet size. This a statistic that I seldom hear mentioned.

There is no doubt that we have experienced a fundamental change in how we, as operators, work. Like many other industries we are facing margin reductions

that have begun to make little sense.

What is necessary is that we concentrate on technical capability and ensure we are providing a service that is backed by a deep knowledge of our product. This is the only way we can differentiate ourselves to our clients

TCM: How does Cassilon intend to meet the challenges inherent in the current wave of new IT developments?

SC: One of the fundamental reasons that allowed us to start and build Cassilon in the early years was our understanding and use of technology.

Twenty-two years ago, ISDN connections, having your own dot-com and digital mobile phones were the game changers.

It's almost laughable now, especially when you consider that today's game changers are big data and disruptive technology.

Without question the future is in leveraging big data and, for a tank operator, that means having telemetry delivered from your tank

CV: Sue Cassells



Sue Cassells is a Scot, educated at Morrison's Academy in Perthshire and the University of Stirling. She is the Operations Director at Cassilon Limited, a family owned, deepsea tank container operator.

Sue and her partner, Brian Cassells, founded Cassilon in 1996 on their return to the UK from Botswana. An expatriate, having spent many years living overseas and working in the freight forwarding industry, Sue moved into the tank container Industry in the early 1990s.

fleet directly into your system.

The issue with big data, apart from its size, is that there must be a very precise plan as to how it is captured into your system, what data to capture and how you use it to drive your company forward, because that is surely what it is meant to do.

We are in the planning stage and we may stay there for a while longer before we have implementation. Although this can be done without huge financial output, it cannot be done without huge amounts of time spent developing the system, so we are

Cover Interview

an early work in progress.

Disruptive technology is not quite so easy to develop a policy or approach for. The development of the internet-based procurement of tank container shipments – along with so-called payment portals – are being discussed as the operating industry's biggest threat.

The issue here is identifying why they have seemed to rise up and why they seemed to have such a hugely negative impact on the operating industries profitability.

Disruptive technology rises because of a gap in the market, and there is no doubt that as an industry we allowed that gap to grow, therefore, we need to close it.

There is not room here for an indepth discussion concerning the market situation that led to their arrival and they should not be confused with the rise of the many very helpful internet-based portals that are matching fleet owners with cargoes in an open and transparent manner. It is enough to say that in an industry that moves the volumes of hazardous cargoes, globally, that our industry does, there is no place for auctioning tank moves and no place for any chemical company to take their decisions based solely on an internet auction.

TCM: As an ITCO member, what successes have there been and how is the organisation delivering its brief?

SC: ITCO's brief is to champion the use of tank containers. It provides the tank container industry with a central focus to consider the regulations and best practices for doing our jobs.

Without ITCO there would, for example, be no definitive guide to how to repair a tank container. It is inconceivable that a depot in Busan would not be guided in its work with the same set of rules that a depot in Buenos Aires



would use. ITCO achieved this. People forget that we are discussing a highly engineered piece of kit, capable of containing some of the most dangerous chemicals that are needed to be moved round the world. ITCO not only produces the guides, but also promotes the training of tank container industry people all round the world. It does an excellent job in this and the many other services it provides to its members.

However, it is time to reinvent our product – we need to invite the chemical industry and the food industry to become associate members of ITCO and invite them to participate in developing a sustainable industry based on knowledge and ability.

It is probably fair to say that many chemical companies use 4PLs [fourth-party logistics providers] because they provide a convenient buffer between themselves and the complications of moving tank containers. Our industry must provide this service directly, or in some other way, to resolve this issue.

I am not sure that emulating the 4PLs would solve the problem, although there is at least one highly successful firm, owned by large operators, that does precisely this. If emulating the 4PLs was a possibility, ITCO is an ideal vehicle. Many of ITCO's members are tank container

operators, so clients could access a wide variety of bids and services. It is probably not a game changer though, and that is what we need right now.

TCM: Has Cassilon seen signs of a recent pickup in demand and rates?

SC: Happily, yes. After nearly four years of crisis and a sense of depression we have at last seen a recovery in the oil and commodity prices.

As a result, our customers can at last produce and sell chemicals at more promising margins. More orders available everywhere and the operator industry is beginning to smooth out its idle tank container mountains.

However, will the recovery be sustained and, more importantly, will it allow the tank container operators to make a simple profit again? If this happens, tank container manufacturers, lessors, depots, hauliers and cleaning stations also benefit due to the industry's inter-dependency.

Will it be affected by potential trade wars? Can the tank container industry come back from being commoditised? Perhaps.

On balance, however, we are quietly optimistic about a future which promises more stable growth that is based on safety, ethical standards and minimal waste.

How attractive is the global tank container leasing market?

Editor Leslie McCune continues his analysis of the leasing sector, using a well known competitiveness model to see if new entrants are likely

In previous issues of *Tankcontainer Magazine* we introduced Porter's well-known 'Five Forces' model for analysing the attractiveness and likely profitability of the tank container leasing industry.

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

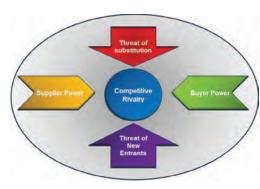
Porter's so-called 'Five Forces' model is a simple but powerful way of understanding the competitiveness of an industry sector, and for identifying the potential profitability of a company's strategy. It has become one of the most popular and highly regarded business strategy tools and, along with the ubiquitous SWOT (Strengths Weaknesses Threats Opportunities) analysis, has become an essential market analysis tool in most company board rooms.

The model recognises that tank container lessors keep a close watch on their rivals but it encourages them to look beyond the actions of their competitors and examine what other factors could impact the business environment. It identified five

forces that make up the competitive intensity of a market - these can either erode or enhance the profitability of a company operating within the market.

The five forces are:

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



In March's issue of *Tankcontainer Magazine*, we analysed the threat of new entrants into the tank container leasing sector and concluded that, while there are no strong and durable barriers to entry into the tank container leasing market, the THREAT OF NEW ENTRANTS is LOW (or WEAK).

In the June issue, we analysed the bargaining power of buyers i.e. those companies looking to lease tank containers. We concluded that the THE BARGAINING POWER of CUSTOMERS is MEDIUM. The inability of customers to drive prices down - because of their small size relative to that of the lessors, and their occasional need for specialised units - is offset by the fundamental over-supply of tank containers available for lease, which stimulates day rate discounting.

Force 3

We now consider Force 3, the threat of substitute products or services. This force explores what viable alternatives a customer may have to leasing tank containers i.e. what is the likelihood of customers finding different ways of providing what a tank container lessor currently delivers. A substitution that is cheap and easy to make weakens the position of lessors and threatens the profitability of the lessor.

Tank container operators form one of the largest customer groups and have, effectively, only one alternative to leasing tank containers i.e. to buy them, with all the balance sheet implications that come with an increase in the capital invested in assets.

Operators supplement the capacity of their owned fleets by leasing tank containers to give them the flexibility to meet short-term incremental demand.

More generally, leased tank



containers can be replaced by either simply purchasing tank containers; by using flexitanks (if the cargo is not hazardous); by moving back into drums; by investing in local production or by increasing the lot size for transport to at least the minimum size required by bulk chemical parcel tankers.

The successful substitution of tank containers by drums usually occurs when the demand for a product drops to a level below which tank containers are no longer economically viable. Drums come with their own safety and handling issues but can, of course, can be moved intermodally in standard General Purpose box containers. Overall, they present a very limited substitution threat to leased tank containers.

Sinochem, for example, is authorised by the Chinese government to handle products such as phosphorous trichloride (PCl₃) and phosphoryl chloride (POCl₃). These products are controlled under the Chemical Weapon Convention. Phosphorous trichloride and phosphoryl chloride are exported by Sinochem (now a part-owner of NewPort) in both tank containers and drums to the US, Europe, the Middle East and Asia on a Cost Insurance and Freight (CIF) or Delivered Duty Unpaid (DDU) basis.

Poor safety record

Given their poor safety record and technical limitations, flexitanks pose no threat to tank containers that are leased to move Dangerous Goods. They are, however, a lower-cost option for door-to-door shipments of non-hazardous product. This feature initially attracted Stolt Tank Containers, the tank container market leader, into a defensive

foray into flexitanks which was eventually terminated in 2012, when it completely withdrew from the flexitank business.

The decision followed five years of experimenting with this mode of packaging but the venture failed, not least because the initiatives Stolt took to increase the reliability of flexitanks – such as having them manufactured to Stolt's own specifications succeeded only in making them commercially uncompetitive. Stolt's decision to exit the business was also driven by environmental concerns, given that the high tensile co-extruded linear low density polyethylene and high strength woven polypropylene bags used in flexitanks are typically discarded rather than recycled after use. This practice was said to be inconsistent with the company's environmental standards.

Chemical parcel tankers pose both threat and opportunity for leased tank containers. As a customer reduces their cargo volumes – or seeks to manage their cash flow more efficiently by moving smaller lots more often – the substitution of chemical parcel tankers by tank container may be preferred.

The only tank container operator to have significant chemical parcel tanker assets is Stolt, the market leader in both the tank container sector and the chemical parcel tanker sector. The smallest cargo tanks on board Stolt Tankers' D37 ocean-going parcel tankers is 350m³ (the Stolt Inspiration, for example, has 351m³ tanks in positions 3CF, 4CA, 6CF, 6CA and 8CF, 8CA, 10C and 10CA).

Transatlantic ships often have twenty or so tanks of this size, which are well-used by large chemical shippers such as Dow Chemical, Shell and Infineum.

Chinese isocyanate producer Yantai Wanhua is an example of a chemical company that moved from shipping some bulk volumes of isocyanate in Stolt Tankers' parcel tankers to moving the product to Europe from Yantai Province in Stolt's tank containers. Infineum, Singapore shifted its entire liquid supply chain from parcel tankers to tank containers.

Investing in local production may be a viable alternative to using large numbers of leased tank containers, although other strategic rationales are likely to be more significant.

Conclusion one

The above analysis indicates that the THREAT OF SUBSTITUTE PRODUCTS or SERVICES is LOW (or WEAK).

Force 4 – the Bargaining Power of Suppliers – is determined by how easy it is for tank container manufacturers to increase their prices. This is determined by how many potential manufacturers there are, the extent to which their

tank containers are genuinely unique and how costly it is to switch between manufacturers.

The greater the choice of manufacturers offering the same or similar standardised product such as generic T11 tank containers, the easier it is to switch to cheaper alternatives. The more under-utilised tank container manufacturing capacity there is, the more price flexibility there will be.

Conversely, the fewer manufacturers there are – and the more you need them – the stronger is their position and their ability to charge more, which obviously impacts the profitability of tank container lessors.

Manufacturers' power increases if market growth consumes capacity, or if rapid delivery is needed.

Supplier power also depends on the ability of lessors to pay for tank containers. The more profit a lessor generates, the more it may be prepared to pay.

Since leasing is capital-intensive, the profitability of lessors is driven by financing costs. Those with the lowest weighted average cost of capital should have a per diem pricing advantage over competitors. Successful lessors buy well, sell better and manage carefully in between.

Access to the capital markets for a listed company is straightforward, which helps facilitate the regular refinancing of debt. Gross yield compressions in the past have led to very attractive financing spreads. In the box container sector, TAL, for example, achieved a financing spread of 160bps over five-year swaps in Q2 2014 compared with 280bps in Q2 2012.

To offset near-term earnings pressure, lessors can loosen their depreciation policy, although the risk is that impairments may follow in later years if residual value assumptions are not achieved.

In addition to institutional investors, pension funds have also

made direct investments in lessors. These long-term investments can generate attractive dividends to fund their regular disbursements. The Ontario Teachers' Pension Plan, for example, took box container SeaCube private in 2013 (when it was ranked fifth globally in TEU terms).

The most efficient equity for leased assets tends to be that which delivers tax benefits to the ultimate asset owners. These are sometimes greater than the returns from the asset itself.

In pre-financial crisis Germany, private individuals invested €10bn of equity a year in tax beneficial Kommanditgesellschaft (KG) funds across transportation asset classes.

Many failed during the financial crisis as excessive fees increased the operating costs of, for example, a containership by 40-50%, making them uncompetitive.

Japan has also been an attractive source of tax equity. Many mid-sized corporates deferred cash tax payments by taking advantage of accelerated depreciation on tangible assets.

Conclusion two

The above analysis indicates that the BARGAINING POWER of SUPPLIERS is WEAK.

In the next issue, we look at the last of the five forces that shape industry competition – the competitive rivalry within the tank container leasing market. This force considers the number and strength of the lessors making up the global market. How many rivals are there? How strong are they? Who are they and how does the quality of their products and services compare?

Where rivalry is intense, lessors can attract customers – temporarily, at least – with aggressive price cuts. Conversely, if competition among lessors is muted, they are more likely to have healthy profits.

Trifleet services the air gases and LNG markets

This year, Trifleet Leasing expand its fleet by over 2,000 tank containers, its largest ever annual increase, reports Jan van de Nes

Dordrecht-based Trifleet Leasing has been operating since 1990, now has approximately 14,000 tank containers and is the world's largest privately owned and owner-managed global tank container leasing company.

The company, headquartered in Dordrecht, Main Port Rotterdam in the Netherlands, also operates from Houston (USA), Singapore, Hamburg (Germany), Shanghai (China) and Paris (France). It also has a dedicated team of exclusive agents located in Italy, Brazil and South Africa.

Trifleet is known as a company that is "Committed to Sustainable Excellence". The company continuously strives to provide excellent tank containers and service. To achieve this, Trifleet keeps its modern rental fleet of tank containers well-maintained and available around the world.

It offers a complete range of global services from advice to leasing, and from maintenance to repair. There is continuous investment in both the development of tank containers and workforce training. As with all respected lessors, it follows transparent and well-documented procedures that specifically cover on-hire and off-hire processes.

When surveyed, clients regularly rate Trifleet as 'excellent' on the four cornerstones of excellence: responsiveness, professionalism, reliability and innovation.

As part of its drive for



Philip van Rooijen

excellence, Trifleet's founder and Managing Director, Philip van Rooijen, explains the company does not compromise on sustainability.

"Trifleet is committed to sustainable excellence", he says.

"This includes well thought through and sustainable business growth. Since 1990 we expanded our tank container fleet. We always keep it state-of-the-art and work with the best available employees, agents, depots and surveyors.

"With the addition of over 2,000 tanks containers this year, we will add more new-built tanks to the fleet than ever before. This focus on sustainability is also driven by new market opportunities, such as our entry into the LNG market with cryogenic tanks. As an alternative fuel for oil-based products, LNG is considered to be the most environmentally-friendly fuel for the coming decades. This is on the one hand a business opportunity for us but it also fits into our environmental mindfulness."



Low waste

Following the well-known "cradleto-cradle" principle, Trifleet evaluates and invests in tank containers that are designed and manufactured to be as low waste and efficient as possible.

The company has lifetime procedures in place for its tank containers, culminating in a carefully constructed scrapping program. Industrial risks, particularly with regards to hazardous goods, safety performance, operational security and on-hire issues, are minimised.

The company has ISO9001 certification for its Quality Management System and SGS inspections and certifications since 1992. All tank containers comply with the applicable regulations and undergo mandatory inspections as prescribed by IMDG and ISO and are certified by Lloyd's and Veritas.

Trifleet's tank containers are leased by chemical, industrial gas, energy, food grade and pharmaceutical companies, as well as by tank container operators and shipping lines.

The lease programme contains standard tank containers - ranging from 14,500 to 26,000 litres - and special tank containers such as cool tanks, swap bodies, overwide tanks, lined tanks, electrically-heated tanks and cryogenic tank containers.

In addition to leasing tank



containers around the world, Trifleet also offers lease-related services such as fleet service management. The new cryogenic business also offers additional equipment, such as cryogenic pumps, hoses, valves, installation systems and cryogenic-specific technical support.

Cryogenics

The first batch of cryogenic tank containers in 2018 comprised twenty 40ft tanks, each with a volume of 46,000 litres.

The first cryogenic tank containersare leased to one of the biggest industrial gas companies.

Jaap Kuijpers Wentink is Director of the Cryogenics Division of Trifleet and has more than 25 years of cryogenic experience.

He says: "Building up the cryogenic business at Trifleet is like moving forward with the energy and flexibility of a startup that has the stability and professionalism of an established market player.

"This is the perfect match for bringing the best cryogenic tanks and services to our LNG clients. Hence, we have had a powerful start, with a substantial number of superior tanks, deep cryogenic insights and one of the biggest industrial gas companies as our first client".

According to Jaap Kuijpers

A cryogenic tank container is a framed multi-modal tank designed for the storage, handling, and transportation via road, rail and sea, of cryogenic substances, such as air gases and LNG. Volumes of the 20ft and 40ft cryogenic containers range from 19,000L to 46,000L.

Trifleet Cryogenics ISO Tank Containers: General Specifications

Nominal capacity: 46,000L tolerance -150L + 1.5% Tare Mass:

11,800kg tolerance +/- 3% Max. Gross. Mass: 36,000kg Size and type code:

Dimensions to ISO: L=12,192mm; W=2,438mm; H=2,951mm

42K7 (EN-ISO6346)

ISO Corner Castings: 4 0' x 8' x 8'6"

Max. All. Work. Pressure:

EN 7-10 Bar g Max. All. Work. Pressure:

ASME 7 Bar g
Design Temperatures inner
vessel:

-196°C / +20°C

Design Temperature outer vessel:

-196°C to -40°C / +50°C Baffled with 6 sets (ADR) baffle plates.

Wentink, the effort of moving into the cryogenic/LNG market is based on its very promising outlook.

"As an alternative fuel for oil-based products, LNG is considered to be the most environmentally-friendly fuel for the coming decades. In the rapidly growing gas market, there is an increasing need for transport storage capacity in the form of intermodal tank containers. And, as an alternative fuel for ships and trucks, LNG is soaring."

According to TechSci Research, the worldwide small-scale LNG market is projected to reach \$52bn by 2026, equivalent to an annual compound growth rate of 6.7% from the \$26bn market in 2016

It is the increasing demand for LNG as low-emission fuel which is driving cryogenic equipment demand and researchers forecast a significant corresponding increase of the cryogenic equipment market. According to MarketsandMarkets, the cryogenic equipment market will grow to \$22.4bn by 2021, compared with \$16.2bn in 2016. Grand View Research estimates a 2022 market of \$25.1bn.

Given tank containers are the most expensive type of cryogenic transportation equipment, they make up the largest part of the cryogenic equipment market share. According to Grand View Research, cryogenic tank containers accounted for over 55% of overall 2014 revenues.

Flexible storage

The supply of LNG requires flexible storage, which can be achieved by operational leasing. In view of the significant investment involved in LNG installations – of which stationary tank containers are responsible for the majority – the need increases when it comes to turning capital expenditure into operational expenditure by leasing storage through intermodal tank containers.

Trifleet's cryogenic tank containers play a crucial role in sustainable value-added supply chains, enable economic development and are used for the storage and transport of LNG.

The tank containers require less transloading, which results in fewer risks while minimising product handling and the potential for contamination.

What makes the design of cryogenic tank containers



Jaap Kuijpers Wentink

particularly challenging is the plethora of differing market demands and design options.

The tank containers are vacuumenabled with multilayer super insulation and have expensive cryogenic valves that need to be fire-safe.

The tank containers are designed for extremely low cryogenic temperatures of -196°C.

All Trifleet cryogenic tank containers have double-wall stainless steel (inner and outer tank). In addition, cryogenic tank containers need more approvals and certification than common tank containers. Altogether, this makes the engineering complicated and results in six-digit prices for cryogenic tank containers.

Given the complexity, a lessor needs considerably more than just capital to run a cryogenic tank container fleet.

Trifleet has acquired considerable expertise on the market requirements, the design and the manufacture of cryogenic tank containers and the associated equipment.

Features include:

- Fast loading and unloading due to the size of the pressure build-up vaporisers;
- Long holding time of approximately 120 days;
- Stainless inner and outer tanks, resulting in a better vacuum;
- Best-quality Herose valves;
- Provision for double bottom fill.



Peacock focuses on Asia and Europe

In the past two years, Peacock Tank Container Leasing has doubled the size of its fleet and relocated its headquarters. Felicity Landon talks to MD Jesse Vermeijden

Tracing the evolution of Peacock
Tank Container Leasing over three
decades makes interesting reading.
The company was set up in
Rotterdam in 1987 by Van
Ommeren, became non-core after
the 1999 merger between Van
Ommeren and Pakhoed (Vopak),
and was sold to two banks and
management in 2002.

In 2005, the management acquired all the shares; two years later, the company was sold to Fluvia. Then the economic crisis of 2008-09 brought major challenges as a large customer fell into bankruptcy, and reorganisation followed.

At this point, Jesse Vermeijden comes into the story. He had worked part-time for Fluvia while studying for his bachelor's degree in logistics and economics and his MBA and in 2009 he was asked to look after the ISO tank containers business.

"In the summer of 2009 we were in the middle of the crisis; it was not the best time," he says. "But one of the main advantages for me was that I learned quickly – and I learned a lot."

Since then, Vermeijden has overseen the reinvention of Peacock to the point where it is now a fully Singaporean company.

"After the crisis it was quite clear that the European Union on its own as a customer base or market was rather limited and held too many



risks," he says. "We had already had an agent in Singapore for ten years. The owner of the agent was looking to sell and we were looking to expand beyond Europe, so we already had a platform with a couple of hundred units in Asia, so this was an easy merging of interests."

Peacock acquired the agency, GCS, in 2013. The following year, Peacock and Fluvia demerged to allow Peacock to pursue a rapid growth strategy.

"For us, acquiring the agency in Singapore had two main reasons; definitely commercial diversification but also structure," says Vermeijden. "Singapore has an interesting combination of financing and a large chemical home market and is therefore an interesting place for tank container owners like Peacock. Through the acquisition

we were able to leverage the platform that was here."

In 2016, Peacock took the very significant decision to move its headquarters fully from Rotterdam to Singapore. The company now has teams in both locations - at present, the volume of business is evenly split between Europe and Asia. "But not so long ago it was 90 per cent Europe, so there has been big growth in Asia."

Having the opportunity to buy into the Singaporean platform was important, says Vermeijden.

"Starting from scratch is expensive and takes time. Also, it was partly that we had to defend our position; if the agent wasn't selling to us, he was going to sell to someone else. The highest growth chemical markets are in Asia, so it makes sense to have a strong presence here as a tank container leasing company. In our case we moved everything here."

Singapore's business-friendly environment is often forgotten, he adds.

"Singapore's authorities are very much open to business.
Government organisations welcome companies like us even though we were quite small. They still see it as adding value and they understand the business we do. Chemicals and finance are definitely targets for Singapore – they could see that we have a combination of these, and quite a lot of experience."



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The move to Singapore was tied in with substantial investment; Peacock added US\$40m worth of new assets to the fleet as well as investing in its management organisation and team. It was granted the MSI Approved Container Investment Manager status two years ago.

Peacock's customer portfolio is 45% shippers and end users, 45% tank container operators and 10% others. "A lot of the customers we deal with are global – basically being large chemical shippers, producers and operators," says Vermeijden. "But we are also very much a 'local' company as well and we have local customers."

The tank container market in general is mainly exposed to petrochemical (75%), with the balance in other markets such as foodstuffs, he adds.

Today, Peacock has a fleet of close to 5,000 tank containers with a range of types. The average age of the fleet is six years old and the ambition is to grow in the near term to a fleet of 7,500 tank containers.

While chemical markets in Europe are still interesting, he expects to see the main growth coming from Asia. "I would say 60-70% of the growth will be from Asia. Having said that, there are so many areas even in Europe where we have never been and which will allow us to grow quite substantially. While there is more natural growth in Asia because the market is growing a lot faster, Europe it is more about targeting specific industries and customer portfolios."

Vermeijden is proud of the fact that Peacock has managed to double its fleet in recent years. "Of course, there are others that have grown even faster. But we managed to do this and still be able to lease out our fleet on a sustainable business model both in Europe and here in Asia, and in challenging times."

It is always easy to stick with what you know rather than try to reinvent yourself and see what the market really is in different times, he says. "But we have achieved our strategies. It is rather easy to lease brand new tank containers, especially very cheap ones. It is a totally different game leasing out tank containers that are more expensive and already 5, 10 or 15 years old. And we have been focusing especially on the second and third life of tank container leasing."

What does Peacock offer customers that sets it apart from the competition? Vermeijden does not think the company is so different in its aims. "What we always try to do is to understand the business of our customers. We like to know what they are doing, where they operate and what kind of products they have."

He adds: "We look at the needs of the customer and adapt our strategy and business models - typically, it is the other way around in many companies. That's the model they trust more because they have been doing it for years. We adapted our models."

Tank containers have become commodities over the past few years, so the business requires a different approach to that of ten years ago, he insists. "This is now far more competitive and a lot more of a financing game. You have to be more innovative and creative – the market definitely forced us to be so.

"When tank containers are cheap, interest rates are low, there is so much capital around and many new players, you have to do something, otherwise you just spiral downwards."

He emphasises the quality and reliability of Peacock's partners around the world.

"Having good relationships is important for us. We don't see them as suppliers but as partners and I believe this positive approach is helping us to deliver."

The market, he says, is 'never OK – it can always be better'. However, he notes there have been improvements over the past 18 months or so.

"We still see an abundance of money in the market which is looking for a return and can end up in our market. But the real challenge is the amount of knowledge. A lot of people with a lot of knowledge of the chemical and tank container sectors are slowly retiring and moving out of the market."

Vermeijden says these two add up to a long-term difficulty. "We see on the one side too many people treating our market like a commodity, working on tight margins, so returns are dropping, margins are reducing and costs are lower. But at the same time, knowledge is leaving. In a sector that transports, moves and handles highly hazardous chemical products, this is not a healthy combination.

"In most economic situations where the risks are higher, the rewards should be higher when you take on those risks. At the moment, the balance is completely off in our market."

If you are seeing lower returns on a tank container that is carrying highly toxic or dangerous goods with a lot of risk, compared to the returns on the dry and bulk container market, something is very wrong, he points out.

"I believe it is a risk that we should be very careful of."







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Static tank containers at a port or on a quayside will either have been unloaded from an ocean, deepsea or coastal sea voyage or be about to be loaded into a vessel for shipping along a coast or overseas (assuming there is no rail head at the port). This is one example of a tank container's inter-modality.

DP World, which operates two of the UK's most significant container gateways, Southampton and London Gateway, will, like every port operator worldwide, have a number of tank containers in transit through its facility at any one time.

Given the scale and complexity of deepsea and coastal container traffic, few operators take the trouble, or accept the cost, of distinguishing between GP dry boxes, tank containers, flats or other container traffic. That is why, unless a tank container is flagged up as having hazardous or dangerous contents, it will slip through DP World's hands as one of the organisation's annual 70m TEU throughput un-noticed.

Of course, it is 'un-noticed' only in

the sense that a tank container with a safe or inert cargo will simply be treated like any ocean box container.

Asked whether tank containers create any special issues in handling, Robert Freeman, DP World Commercial Manager, says: "Not really, unless the tanks contain hazardous material, in which case they are held in specific areas. They're also considered separately when they are loaded into specific stows onboard ship."

More visibility

Freeman was talking just months after the port operator had upgraded its "Where's my container?" cargo tracking tool to provide more supply chain visibility by offering advanced tracking for users of DP World's London Gateway and Southampton ports. This provides even more visibility and enables users to plan, adapt and drive efficiencies.

The launch in May at the Intermodal freight event in Birmingham built on six years of work to end the lack of visibility of cargo as it navigates supply chains. Combining an easy-to-use visual interface with a range of new features, it provides cargo owners, freight forwarders and supply chain partners with better real-time information on cargo progress.

Features include estimated discharge times once a vessel is inbound to the port and notification by SMS or email when the container is ready for collection. Historical information is kept of the container's journey.

The arrival of the latestgeneration "Where's my container?" comes a time when Freeman and other industry observers are highlighting a move away from traditional tank containers to socalled 'flexi-tanks', especially in the drinks business.

Freeman notes that from his position it is difficult to know from a port perspective what is inside a box or tank container as DP World has "no knowledge of what is loaded in a box or tank unless the content is hazardous." For that

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reason, where appropriate, they must know the IMDG information on that product. He says: "We are aware there has been a move towards the use of more flexi-tanks in GP box containers by the drinks industry as it moves away from bottles and by some bulk liquid products such as soap."

In terms of the volumes of tank containers handled at DP World's two locations, Freeman says: "At DP World Southampton, year-to-date 2018, we have handled 5,059 tank containers over the quay representing 0.8% of the overall throughput." He says most of the tank containers handled at the port have arrived from North America.

"Where's my container?" includes the same functionality users have become familiar with from DP World, which was the first company to give them information about their cargo as it moved through its UK ports. The new upgrade will give customers access to information about a container's status at either DP World London Gateway or Southampton.

It allows simultaneous searches of multiple containers and will help enable the more accurate coordination of haulage and the prioritisation of containers for distribution centres while enabling better forward planning and the ability to adapt quickly to disruption or changing customer demands.

The provision of historical data also provides for more accurate auditing, allowing firms to have 360-degree visibility of cargo in transit to provide financial clarity at every stage of the port supply chain. Push notifications will also enable real-time decision making, helping users to react quickly to potential business challenges.

"Traditionally, it's been difficult to track cargo movements in ports. This affects the ability to adapt plans that really impact the bottom line for business. That's why we introduced "Where's my container?" so they could make informed business decisions that



drive profitability," says Freeman.

"This new enhanced tool will enable users to boost their competitiveness through increased operational efficiency; and some of those already using the original version have been able to reduce their in-land distribution windows by up to two days – a significant cost saving. As the shipping industry becomes increasingly digitised and organisations continue to look for new ways to use data to boost their bottom line, we plan to remain dynamic by evolving this service in line with this fast-changing industry," says Chris Lewis, UK Chief Executive Officer, DP World

European strength

The port of Rotterdam is one of the most important for container traffic in the European Union. The port has various depots that specialise in the storage, cleaning, inspection and maintenance of tank containers. These also offer storage facilities for loading ADR tank containers and the possibility to transport tank containers via inland shipping routes to and from the hinterland.

Tank container numbers are surprisingly not separated out from numbers available for general container traffic but the impression is that tank container throughput is in good health at Rotterdam. On average, the transport of fluids,

powders and gases in tank containers has grown by over 10% in the past five years. It is expected that the number of tank containers will double in the coming 10 years, equivalent to 7% compound annual growth.

Overall container throughput rose by 11% to 13.7m TEU and, by weight, by 12% to 143m tonnes in 2017. In the second half of the year, tonnage throughput was 14% higher (12% in TEU terms) than in the same period in 2016.

There has been steady growth over the past five half years. Rotterdam's 31% share of the container market through to Q3 2017 was its highest since 2000. Most growth was seen for Asia and South America and for exports to North America. Feeder volume grew particularly strongly (21% in TEU terms) for all European shipping areas and in particular for Scandinavia and the Baltic states.

Growth in shortsea movements amounted to 10% (in TEU terms) with a particularly sharp increase in throughput for services to and from the Mediterranean and ScanBaltic region. Hinterland volume rose by 6%.

This growth – and the increase in feeder volume - confirms the strong position of Rotterdam in the networks of container shipping companies and the major alliances.



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Covering demand

Angelo Scorza reports on Brianza Plastica, the leading manufacturer of GRP laminates for tank containers

With five production sites and commercial branches in France and in Indiana, US, Brianza Plastica is the only company offering fibreglass laminates which are made using continuous hot lamination (Elyplan range) and discontinuous cold lamination (Elycold range).

The company was established in 1962 in Carate Brianza (Milan), a province in the industrial region of Lombardy, with the specific purpose of manufacturing fibreglass laminates for the building sector.

As its expertise developed, and the demand increased for high quality laminates, its fibreglass laminates were used for recreational and temperaturecontrolled vehicles.

In the 1980s, the company entered the roof and wall thermal insulation market. Its Isotec® system, an innovative polyurethane-based under-tile thermal insulation, was launched in 1984.

The firm has significantly extended its market presence and product range having achieved success in the transport sector since 2006, where it supplies fibreglass sheets both to manufacturers of recreational vehicles (campers and caravans), trucks and refrigerated-trailers.

Both Elyplan and Elycold flat laminate ranges are suitable for tank container coverings and can be produced in various weights and thicknesses, with or without woven roving reinforcement.

"Our export volume is over 70% and we deliver to the most important markets. Italy has been



our first market and is always strategic, but we are also the market leader in France, Spain and Poland" says Export Manager Gianluca Della Pedrina. "We have strongly increased our production capacity and we continue to follow the overall positive market trend for GRP products."

But what are the real advantages and benefits of GRP products? "Fibreglass laminates from both product ranges are used to cover the external surface of tank containers. Elycold is appreciated for its excellent aesthetic finish, achieved as a result of roomtemperature polymerisation, which avoids the thermal shocks of continuous processes. Fibreglass laminate gives advantages in terms of weight, reparability and corrosion resistance," he adds.

Brianza Plastica, still owned by the founding Crippa family, has 260 employees and generates a turnover of €75m. The HQ site in Carate Brianza includes the continuous hot lamination production line built to meet the demands of the temperaturecontrolled and recreational vehicles markets.

In 2006, Brianza Plastica opened a new production site in San Martino di Venezze (Rovigo), which was further enhanced in 2016 with the production of flat fibreglass laminates using discontinuous cold lamination.

Purchased in 2009, the facility of Ostellato (Ferrara) also increased production capacity.

"Laminates from two cold lamination sites and the hot lamination site create maximum production flexibility and meet the requirements of an increasingly demanding market," says the export manager.

Brianza USA Corporation was established in January 2014 as a commercial-logistics centre to serve the US market and strengthened the company's US presence. Its headquarters in Elkhart, Indiana, serves the manufacturers of recreational vehicles and heavy load vehicles such as trucks and buses.

Environmental concerns are addressed – all fibreglass laminate production sites are equipped with powerful suction systems that purify the internal production areas by carrying the solvents to modern abatement plants. These plants are powered by the recovery of the heat generated by the combustion of solvent. The heat recovered is also re-used to power the plant and generate hot water for heating.

Stepping on the gas

Forwarding specialist Cryologistics has expanded operations with a new facility in Algeciras, reports Sam Whelan

Strategically located on the Strait of Gibraltar, Cryologistics Spain specialises in the transportation, handling and maintenance of cryogenic equipment, including T75 tank containers.

It is the Belgium-based company's second cryogenic facility, having launched an operation in Antwerp several years ago.

"There was high demand from our southern European customers for a new entity in Algeciras," explained Cryologistics Spain director Rafael Segundo.

"The major industrial gas producers were seeking better performing solutions to export their gas from Europe to Africa.

"And Algeciras has become a real hub for the African continent - it's the second busiest port in Spain and one of the most active in Europe behind Antwerp and Rotterdam, so it makes sense that Cryologistics settles there," he added.

Volume up tenfold

The volume of cryogenic gases exported to Africa has increased ten-fold over the past 20 years, according to Segundo, with dynamic economic growth in North and East African countries driving demand. He said the performance of the cryogenic gas market is closely linked to the development of specific industry sectors.

"For example, when there is a lot of construction projects in a country, argon and nitrogen consumption will increase because they are needed to develop those activities. Likewise, if a new bottling company emerges then the carbon dioxide



supply will increase accordingly."

Cryogenic gases transported by sea require a high level of expertise and the deployment of expensive and fragile units - the purchase price for a standard cryogenic T75 ISO tank ranges from €70,000 to €1 million (\$82,000 to \$1.2 million).

Safety and quality

According to Segundo, liquefied refrigerated gases require extremely efficient transportation to guarantee the quantity and quality supplied to the end user, as well as to optimise the profitability of the assets.

"For safety and quality reasons, tank containers can only be loaded to a certain quantity, therefore the higher the consumption is, the more efficient the logistics needs to be. In other words, an efficient supply chain would involve the maximum quantity of gas transported and the shortest transit time for each loop.

"Therefore, we only have a few days to bring the gas from origin to the end user. The challenge is to deliver the coolest gas possible in the quickest time because the longer the transport, the worst the quality."

He explained that the new Algeciras depot has been able to slash transit times to Africa.

"The average loop from Europe to Morocco used to be 37 days but

now, from Algeciras, we have been able to reduce it to just 8 days."

Cryogenic tank containers are weakened during sea transport due to rough handling during port operations. A serious impact can severely damage the vacuum insulation, resulting in repairs which can take up to several months in a worst-case scenario.

"We believe maintenance and logistics belong together," noted Segundo. "Cryologistics Spain therefore decided to invest in the tools required to perform two levels of maintenance.

"Maintenance Level 1 is dedicated to inspections and quick repairs such as purging, gas changes, small repairs, analysis and testing. Level 2 covers more complex operations such as engineering and piping modifications.

"Since the opening last June, the demand for maintenance has been growing and major gas companies entrust not only their T75s to us but also their road tankers," Segundo said.

Cryologistics' own assets include chassis and trucks. In Belgium, the firm also owns storage tanks acquired from manufacturers Chart Industries and Cryolor. These tanks speed up the loading process as they can be loaded directly on-site, saving time and money by not having to load at the production facility.

Processes

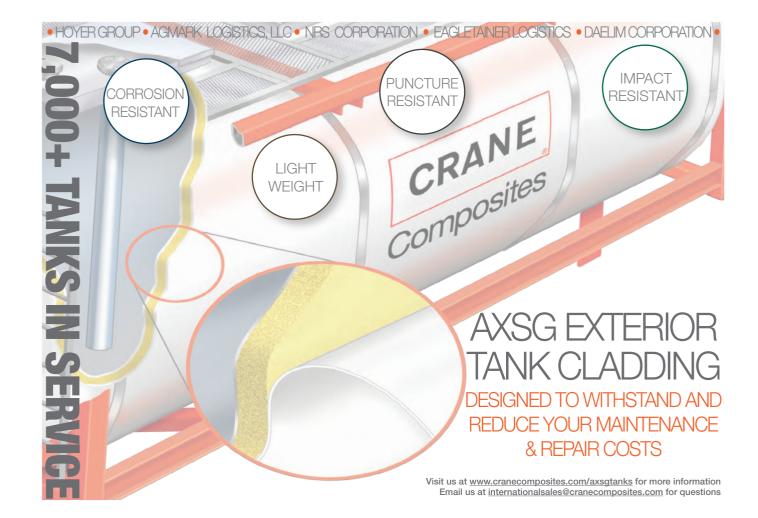
Having been cryogenic specialists for several years, the company has gained extensive know-how in the gas transport field, resulting in the development of innovative loading techniques which it has patented.

"The holding time calculation is one of the main examples of this," explained Segundo.

"This technique allows Cryologistics to calculate the maximum amount of gas that can be loaded in a container considering the transit time, the loading pressure and the technical specifications of the tank container.

"Each driver is equipped with a tablet - 'the cryopad' - and an app enabling them to process a total safety check of the container, whilst also very easily determining the best quantity to be loaded in the tank.

"This tool has been very useful for guaranteeing easy, safe and optimised operations for both our drivers and customers."



Targeting a smaller environmental footprint

Vienna beckons for the EPCA's 52nd annual meeting

The theme for the 52nd annual meeting of the European Petrochemical Association in Vienna, Austria, 7-10 October, is "Petrochemicals and the Low-Carbon Economy: versatile solutions for greater sustainability".

The EPCA meeting doubles as Europe's premier networking event for the chemical business community, featuring a thought-provoking programme with contributions from a host of high-level speakers.

This year the EPCA looks at what the industry needs to do to play its part in the push for a sustainable low-fossil fuel economy.

Climate-friendly

To mitigate the impact of global warming the European Commission is investigating costefficient ways to propel the European economy towards a more climate-friendly environment by becoming less energy-consuming.

To succeed in its aspirations for a low-carbon economy the EU advocates that by 2050 greenhouse gas emissions need to be cut to 80% below levels in 1990.

The ambitious roadmap to this target is for a 40% cut in emissions by 2030, aiming for 60% by 2040.

According to the EU, to reach this goal, action will be required in all the main sectors responsible for Europe's emissions: power generation, industry, transport, buildings, construction and agriculture.

It follows that petroleum and petrochemical enterprises will face

more pressure from both regulators and the market to do everything in their power to reduce emissions and, consequently, their carbon footprint.

A recent white paper from Carnegie argues that, as the momentum builds towards a low-carbon global economy, it will be necessary to "minimise unintended energy, economic and environmental consequences". It suggests that the roadmap needs to "account for all petroleum shifts, not just the ones that capture the most attention".



Notwithstanding the challenges associated with the rapid drive towards a low-carbon economy, the petrochemical industry continues to suffer from significant commodity price volatility.

The EPCA meeting opens on 7th October and on the following day the EPCA will host the European Youth Debating Competition finals. The next day will see the opening business session, along with a Talent & Diversity forum.

The Logistics & Supply Chain session will take place on Wednesday morning, 10th October.

The EPCA and PlasticsEurope have again partnered to organise a series of debating competitions for young people in Europe.

The debating competitions on the role of sciences and

sustainability in the chemical industry were held between April and October in various European cities.

The main objective of the competition is to promote STEM education (science, technology, engineering and mathematics) as well as to inform about sustainability and resource efficiency.

For the first time this year the three Benelux countries competed against one another during a debate held in Brussels on 25th June.

Caroline Ciuciu, CEO of the EPCA complimented the quality of the debaters during the Benelux finals.

Unique opportunity

"This competition is a unique opportunity for students to express themselves in a convincing way and for our industries to connect with the new generation, and to listen and learn about how they see the future," said Ciuciu.

She continued: "Beyond promoting STEM education, our aim is to empower them with the soft skills that will help them to interact in a fast-changing world."

Winners of the regional events go forward to the finals at the EPCA annual meeting.

During the EPCA meeting in Berlin last year, the former Secretary General of the United Nations, Ban Ki-moon, commended the EPCA for its efforts in "promoting education, diversity and sustainable and resilient supply chains".





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