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MAGAZINE

Volume 1 | Issue 1



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26,000 ltr	3,760 kg	36,000 kg
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24,000 ltr	3,640 kg	36,000 kg

GENERAL SPECIFICATIONS

WORKING PRESSURE: 4.0 Bar

DESIGN TEMP: - 40°C to 130°C

APPROVALS

UIC, CSC, TIR, IM101, UK-DOT, RID/ADR, AAR600, FRA, TC, UN PORTABLE TANK, IMDG, US-DOT, L4BN

STANDARD FITTINGS

MANLID: 500 mm (20") diameter, 8 point fixing

AIR LINE: 1.5" with stainless steel ball valve and 1.5" BSP cap

RELIEF VALVE: 2.5" SRV set at 4.4 Bar – provision to fit a second

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Welcome to Issue One

Welcome to the launch issue of the Tank Container Magazine.

Created by Duvel Media, the owners of the only dedicated tank container annual the Tank Container Directory, the new magazine was developed, after extensive research and interviews, to provide the global tank container market with quality editorial content, exclusive one on one interviews, regional reviews, and in-depth analysis.

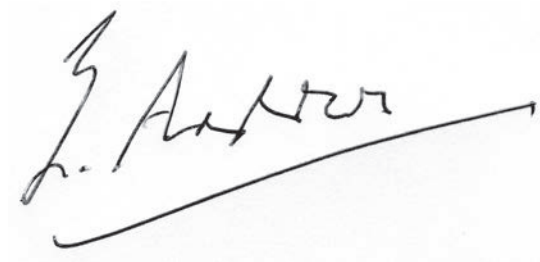
In this issue we have a front cover interview with Koert van Wissen from Interbulk where he talks exclusively to our Editor Leslie McCune about the industry and Interbulk. Look out for our future issues where we will be having more front cover interviews with leading executives from the tank container world.

Tank Container Magazine will be published four times a year and be distributed globally. The readership will consist of executives from the whole spectrum of the industry. From the cargo owners, to their intermediaries the logistic service providers, the operators and lessors as well as the tank container manufacturers and the equipment and service providers .

We decided to publish Tank Container Magazine because we felt there were no publications out there covering this sector of the market exclusively and in such depth.

I hope you will find the first issue interesting reading and please do give me your feedback as to your thoughts on the magazine.

Kind regards,



Ed Andrews

Publisher



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RAM software helps VOTG in its drive for customer satisfaction

Front Cover Interview

Koert van Wissen provides thoughts and reflections on the tank container industry's steady but relentless growth, and his views on the challenges and future direction of the sector



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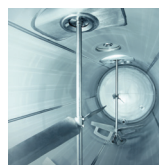
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Starting as we mean to go on

It is my great pleasure and privilege as the Editor to introduce this inaugural issue of *Tank Container Magazine*, a new quarterly journal published by Duvel Media, publisher of the Tank Container Directory.

The tank container market is a large, vibrant, well-regulated and high-growth global industry. It is charged with responsibility for delivering hazardous and non-hazardous products on time around the world, for providing high-quality leased tanks to users and operators and for supporting the essential infrastructure on which the industry depends – whether this be depot repair and cleaning, insurance, certification or parts. It depends on ever more demanding customers, and leverages considerable technical and manufacturing skills in Africa, Asia (especially China) and Europe, the birthplace of the tank container.

Beyond this operational capability, the industry has created and developed sophisticated analytical tools, techniques and systems to optimise overall supply chain performance. These have been developed in close co-operation with customers and offer them a well-practised suite of supply chain improvements that can be unlocked by using new network designs, more effective IT systems and improved tank container repositioning strategies.

In an intensely competitive industry, most of the major steps forward – in terms of innovation – have been the result of collaboration with customers. This is a critical means by which companies can differentiate themselves.

Most importantly, the industry's undoubted success is due to what consultants would call its rich DNA or 'gene pool' – what you and I would call 'people'! Rolled sheets of welded 316L stainless steel don't make an industry, people do, and *Tank Container Magazine* is here to be an information service for them.

The sector is, without doubt, large enough and dynamic enough to support a dedicated journal to capture the continuous flow of news and events. The encouragement and interest in the magazine from the industry has been immense, and I would like to thank at this early stage the many contributors, subscribers

and advertisers who have helped make this journal possible. We believe it is a milestone in the rapid development of the dynamic tank container industry at a time when it faces both challenges and opportunities.

Our intention is both to inform and excite: to inform the industry, and its stakeholders, of the many tank container developments around the world; and to excite comment on topical issues. We therefore welcome your feedback – both positive and of the room-for-improvement type.

Each issue will feature a global region and will contain a global market focus: chemicals, gas, food and specials, like off-shore tanks. This inaugural issue focuses on chemicals and Europe; the second issue, in June, will feature the unique challenges and opportunities for tank containers in the rapidly developing Middle East, while the market focus will be on the global gas tank segment.

In this issue, we catch up on the news from leading tank container operators, explore the drivers and motivations among leading leasing companies and consider some of the new tools available to demonstrate tank container emissions performance. Tank manufacturing and depots are also featured.

Each issue we will interview one of the leading individuals in the tank container industry, and I was delighted that Koert van Wissen kindly accepted my invitation to share his thoughts and experience of the industry. Koert is one of the sector's most experienced and well-respected personalities, having contributed to, and witnessed, its evolution from inception to the sophisticated industry it is today.

Koert recently stepped down as CEO of InterBulk Group, but his decades of expertise will not be lost, as he will remain a Non-Executive Director of the company. For this inaugural issue of *Tank Container Magazine*, I asked him for his thoughts and reflections on the tank container industry's steady but relentless growth, and his views on the challenges and future direction of the sector.

Leslie McCune, Editor

RAM software helps VOTG's drive for customer satisfaction

Back in 1999 when VOTG first started using Real Asset Management's (RAM) tank operating software, the company had over 2,000 tanks and was a small to medium-size player in the industry.

VOTG Tanktainer, originally founded in 1997 was a joint-venture between VTG and Royal Vopak. It became a 100% subsidiary of VTG Aktiengesellschaft in 2007 and is today one of the top tank operators, with over 7,000 tanks in its fleet and eight offices worldwide.

VOTG is a logistics service provider for the chemical industry, serving all areas of transport where an intermodal tank container is required. It has six European and two overseas offices, along with a global network of partners and agents to cover Europe, North America, Asia-Pacific and Africa. Its fleet is constantly adapted to meet customer requirements and consists of standard, swap, electrical, gas

and compartment tank containers.

Real Asset Management's Monitor4000 solution has been an integral part of VOTG's development over the past 14 years. It has enabled the company to grow substantially and improve its business processes. Monitor4000 is a specialist tank container software system that has continually been enhanced to meet the needs of the tank industry.

VOTG produces transport plans within Monitor4000, using pre-calculated costs and routes. It translates quotations into orders and generates sales invoices automatically using stored contract terms and costs. Additionally, the system manages maintenance, repair, demurrage and fleet control, saving weeks of time and effort and without the need to manually check and validate procedures.

"The major benefit of RAM's



system to VOTG is the fact that it is continually evolving," explained Tayfun Oezcan, VOTG's IT manager.

Improvements to VOTG's planning process will come with an upgrade to RAM's latest planboard/equipment allocation tool. This will further reduce data entry time and provide a single data source for identifying tank availability and current utilisation.

"There are many improvements that integrated planning and allocation bring to VOTG," said Oezcan. "Overall better informed planning decisions ensure that equipment is optimised at all times and the potential for idle units is reduced."

RAM is working with VOTG on projects to improve the EDI input into Monitor4000, to ensure data is in real time and that the status of the tanks is always current. Faster and automated updating of this information via depot messaging will increase the efficiency of the business even further.

"VOTG has a good partnership with Real Asset Management," confirmed Oezcan. "There is



steady ongoing development of both the Monitor4000 operating software and the Rental4000 leasing software.

"We are confident of RAM's

commitment to the products and can see that a recent boost of employees to the RAM team and its launch of additional modules to improve the range of functionality are helping its customers to

make more savings and improve their competitive edge.

"The focus on EDI capabilities is of key importance to VOTG and we look forward to further enhancements in 2014. RAM's links with other organisations such as ITCO (International Tank Container Organisation) confirm its position to us as an intermodal specialist."

"It is vital for software to provide companies like VOTG with the tools to reduce costs and improve profitability," said Nicola Byers, marketing manager at Real Asset Management. "RAM will continue working with VOTG and other tank operators to ensure that its Monitor4000 solution meets the ever-changing demands of the industry."

RSA-TALKE opens DG warehouse in Dubai

Chemical logistics joint-venture RSA-TALKE has taken its new packed goods storage facility for dangerous & non-dangerous goods in Dubai into operation. Located in the Dubai World (DCW), the world's first purpose-built aerotropolis, it boasts a capacity of 19,000 pallet spaces and direct access to the Jebel Ali sea port and the Al Maktoum airport.

RSA-TALKE is a joint-venture of Dubai-based RSA Logistics and the Germany-based TALKE Group. The joint-venture, founded in May 2013, enables chemicals logistics specialist TALKE to provide its services to an even larger number of customers and to strengthen the group's presence in the Middle East.

Apart from Dubai, TALKE also has activities in Saudi Arabia, Qatar, Oman and Bahrain. RSA is able to offer its customers a wider range of logistics services through the joint venture and to build on the customer base that already exists.

The newly commissioned RSA-TALKE packed goods storage facility for dangerous goods & non-dangerous goods complies with the highest safety, environment protection and quality standards, such as the US National Fire Protection Association (NFPA) standards or the EU ATEX guidelines on explosion prevention. Furthermore, cutting-edge storage systems enable efficient and safe operations.

New tanks for Dow

Peacock and Dow have entered in a long-term tank container lease contract for 500+ ISO tank containers for use on their Site Logistics Terminal in Terneuzen.

The contract is the result of a strategic analysis of Dow's future tank container requirements and will provide Dow with the flexibility it needs. It will also comply with the latest ISO tank container safety and operating standards.

As of early 2014 Peacock will begin the exchange and modifications of the existing tank container fleet Dow has on lease. This consists of approximately 2,000 tank containers varying in capacity from 14,000 to 35,000 litres.

This exchange programme will partly be supplied by Peacock ordering 350 new tank



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Peacock will order 350 new tank containers for lease specialist Dow

containers, built according to the latest Dow standards by Shanghai-based Singamas.

Founded in 1987, Peacock specialises in leasing tank containers to producers and transport companies active in the international oil, chemical and food processing industry. Peacock is a wholly owned subsidiary of Rotterdam-based Fluvia Holding.

Supply chain expert to lead Log4Chem

Kirry Mukherji is the new managing director of Log4Chem. He will be responsible for further developing the joint-venture between logistics companies Bertschi, De Rijke Group and Hoyer.

Under his leadership, Log4Chem is set to further establish itself in Europe, Africa and in the Middle East as an independent logistics service provider for the chemical industry.

"I look forward to this new challenge," said Mukherji (pictured below). "Heading an asset-light company that combines the strengths of industry leaders is especially appealing to me."

The 47-year-old Englishman has extensive experience working for several European logistics companies, including leading Damco's European business activities as its chief commercial officer. Mukherji was also a member of the supply chain committee of the European Petrochemical Association (EPCA).

Haanpaa expands intermodal fleet

Haanpaa is rapidly expanding its intermodal activities between mainland Europe and the Baltic Sea region. As a result, Haanpaa is investing in a new modern tank container fleet of different size and functionality, manufactured in China and South Africa.

"Our intermodal service on the market has been received better than expected and our



service combining intermodal with road transport as back-up has worked excellently," said general manager Daniel Hauffe.

Haanpaa's international business unit has offices in the Netherlands, Sweden, Norway, Finland, Estonia, Russia, with more to come. Haanpaa is also looking for sales managers with experience of chemical transport in Germany, Poland, Russia and Lithuania.

"This is of course a pleasant situation for us, but my colleagues have worked very hard to achieve this during the four years we have been active on the intermodal market. Therefore, we have now taken the next step in our growth plan and are investing in our own tank container fleet.

"Our plan is to own the majority of our fleet, as we do in our road tanker division. This is a strength we believe in, but we will also continue to rent part of our container fleet to stay flexible in order to balance our peaks and needs," said Hauffe.

"Our customers will benefit when we can offer state-of the-art tank containers with the newest possible technology on the market, such as light material, super isolation, active heating system, track and trace functionality, etc.

"We offer one-compartment and multi-compartment tank containers from 5 cbm to 35 cbm with baffle plates in stainless steel or rubberised if needed."

"Our target is to be the number-one intermodal service provider in our focus market around the Baltic Sea region, as we already are in road tanker traffic."

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Suttons strengthens North America team

Global logistics and supply chain specialist Suttons Group has announced a key new senior executive appointment in its International Division.

Greg O'Shea, has joined the group as regional director, Americas, after spending the past 20 years in the logistics industry in Australia and the Far East.

Most recently, he held the position of general manager supply chain, with Tradelink Australia. Prior to that, he was vice-president supply chain, with Big C Supercentre in Thailand.

O'Shea (pictured above) said: "I'm very pleased to be joining such a thriving and dynamic organisation. I have relocated to the US, after 10 years in Asia, to take up this role – a move which I think speaks volumes about the scale of opportunity the position entails and the value I believe I can bring to the business in advancing

its ambitious expansion strategy."

With a widely-esteemed reputation for business development and general management, as well as excellent international business and government connections, O'Shea will help strengthen the group's already thriving American operation. As regional

director, he will be based out of its New Jersey office.

John Sutton, CEO at Suttons Group, said: "We're delighted to welcome Greg to the team. He is an extremely well-respected supply chain specialist whose passionate, innovative and adaptive approach to business supports Suttons' approach of providing our

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customers with a wider range of products and services, increasing their competitiveness through a greater choice of logistics and supply chain solutions."

Suttons Group, which operates across six continents, posted a 4.1% revenue increase, to £154.7m, for the year ending 30 April 2013.

Talke obtains DIN EN 16258

As one of the first companies in the Cologne economic area, transport service provider Alfred Talke Logistic Services has been certified under the DIN EN 16258 standard by auditor TÜV Rheinland.

The standard, which was introduced in 2013, allows companies to calculate the carbon emissions related to their transport services according to an EU-wide standard.

"Documenting carbon emissions per transport will become mandatory in the EU over the next few years," said group managing director Alfred Talke.

"France is a pioneer in this field: since October 2013, the CO₂ emissions related to a transport have to be documented. We expect more countries to follow suit over the medium term, so we have decided to introduce the European standard, which applies across industries, as an additional measure."

Prof Jürgen Brauckmann, member of TÜV Rheinland Berlin Brandenburg Pfalz eV's board of directors, also appreciates the transparency that the new standard offers. "The large number of different methods to calculate transport-related CO₂

emissions led to customers feeling confused rather than informed.

"With the EU standard, which provides a structure and level of certainty for carbon emission calculations, companies can publish comparable figures."

Ever since its foundation in 1947, Talke has been committed to running its business sustainably. The logistics service provider for the chemical and petrochemical industries makes efficient use of resources, takes measures to reduce waste and makes sure it reaches its own environment protection goals. For instance, the family-run business has assessed its carbon footprint applying the European Chemical Transport Association's (ECTA) standard regularly since 2009 - proving that it has reduced its fleet's average CO₂ emissions by 9.5% between 2010 and 2011.

The company is also a member of the Responsible Care programme, one of the first logistics providers to join the initiative, in 2009. In 2013, TALKE co-operated with special

chemicals manufacturer Lanxess in a long-term study to establish the savings potential of "green" tyres with reduced rolling resistance.

New TFG route

German intermodal operator TFG is offering five train connections a week between the German seaports of Hamburg and Bremerhaven and the Rekingen (Zurich) in Switzerland. The AlbatrosExpress connects Basel-Bad nine times a week. TFG is also taking on hinterland deliveries by truck. In the seaports all major terminals are included.

VTG expands

VTG Aktiengesellschaft, one of the leading wagon hire and rail logistics companies in Europe, has expanded its business operations through its subsidiary VOTG. The company is now authorised to transport feedingstuffs, and has thereby succeeded in positioning itself on an even broader basis in the market. The GMP+ B4 certification ensures full compliance



2014 Tank Container Directory

The 2014 edition of the Tank Container Directory will be out soon (May 2014). Full of updated and fresh information with addresses, contact details and information it is the **must have annual for the tank container market.**



The four editorial sections are:

- Tank Container Operators
- Tank Container Lessors
- Tank Container Manufacturers
- Equipment & Service Providers

Each section has a geographic listing at the front followed by a comprehensive alphabetical listing.

with the strict requirements associated with the transportation of these sensitive goods.

"The transport of feedingstuffs has been growing continuously over recent years. To this end, stringent demands have been placed on transport containers in terms of cleanliness to ensure that products do not suffer any damage.

The certification shows that we fulfil these requirements to the fullest extent and that we are also able to respond to ever-increasing customer demands in matters of product cleanliness', said Heike Clausen, Managing Director of VOTG. "We have set up a tank container fleet specifically for this purpose and adapted our quality and transport documentation."

HOYER adds e-learning tool

Hamburg logistics provider HOYER has revised its ADR training. Now, company employees can brush up on their knowledge about dangerous goods through several online training units. There is even a green side effect: by using the program HOYER saves CO2 because trips to external training locations are rendered unnecessary.

Learning just what is important, just when it is needed. That is the basic idea behind the e-learning platform, which Hamburg logistics company HOYER introduced this year. Thanks to an IT solution and to the Internet, courses take place at employees' workspaces where staff are free to pick the best suitable times for the trainings. The e-learning programme for chemical logistics consists of six learning units and conveys the most important regulations

of dangerous goods law.

For the company's drivers, especially, continuously updating their knowledge is of the highest priority and has always been achieved through attending in-class courses. Shortly, however, drivers too will be

able to use the online courses.

HOYER is also implementing the programme in English so all HOYER employees worldwide have access to it. Additional e-learning courses about topics like equipment, handling of special products and quality standards are in the works.

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Ready for new challenges

Koert van Wissen is one of the most experienced and respected personalities in the global tank container and bulk logistics sector. Editor Leslie McCune asked him for his thoughts and reflections on the industry's steady but relentless growth, and his views on its future direction



You've seen many changes over a long and distinguished career, what would you say have been the most significant?

There have been many changes since 1980 but most have been associated with the growth and geographic expansion of use of tank containers. Because of the impact of trade organisations such as ITCO and ECTA, and collaboration with industry organisations such as the European Petrochemical and Chemical Association (EPCA), the tank container business has become professionalised from a technical, regulatory and health and safety perspective.

There has been a big change in manufacturing, which started in the UK/Ireland, on the European continent and in South Africa, but in the last decade most tank containers have been built in China. Prices of newbuild tank containers fluctuated, influenced by the cost of stainless steel and the critical nickel. Standard tank prices varied between \$16,000 and \$28,000.

Tank container design changes increased capacity and reduced tare weight. This enabled increased payloads and resulted in larger tank sizes and lighter equipment. In the



90s the swap tank container was introduced in Europe. This had a larger capacity than the standard 20ft ISO and was introduced to exploit the higher permitted road and rail payloads. However, their introduction reduced the opportunity to balance the global traffic flows of ISO tank containers.

Lastly, competition has increased in recent years, and the increased total fleet has caused overcapacity. This has created tough market conditions that, in turn, have kept rates down.

What are the three most effective “levers” that the tank container industry can pull to increase penetration?

Tank containers can, essentially, convert a fixed supply chain cost into a variable one and can be used in the production and inventory management systems of our customers.

They are typically more economical than conventional road transport solutions when the distance is greater than 500km with a sea/barge/rail leg and/or the cargo is needed for temporary storage.

In deepsea markets, tank containers can be considered as part of the overall supply chain solution when batch sizes are approximately 20 tonne or 3,000cu metres. They can also replace chemical

parcel tankers as an integrated transport and storage tool.

Other factors also positively influence potential tank container usage, such as the growth of intermodal transport. This eases road congestion, helps deal with driver shortages, reduces the cost of packaging and is one of the most environmentally effective means of transport.

What do you see as the major opportunities and challenges?

The opportunities for the tank container sector include growing to meet the new chemicals production capacity coming on stream between now and 2019 in developing geographies such as Middle East and in North America.

One of the challenges is to manage the disruption of the tank container traffic flow balance that is apparent in the Middle East. This has been caused by an imbalance between tank container exports and imports, and the difficulties caused by the export formalities in the region. The development of shale gas in the US will be a base for more chemical production for domestic use, but it will also result in more demand for exports.

In Europe, the signs are that production growth will be stagnant, while imports from the Middle East and North America will grow. Forecast reliability is low.

To my mind, the biggest

Koert van Wissen C.V.

Koert van Wissen has worked in the tank container operating business for 34 years. He held a number of roles in the former United Bos (later UTT), but started as General Manager of the Rotterdam Europoort office, where he was responsible for road tanker operations of the liquid bulk business between the UK and mainland Europe.

As Operations Director of UTT, Koert helped grow the business both organically and by acquisition. From 1989 to 1996, UTT grew to a global fleet of 4,500 tank containers. Between 1996 and 2000, Koert was Operations and Business Development Director of Initial Tank Containers – UTT being renamed while a subsidiary of Rentokil Initial. He went on to become Managing Director from 2000 to 2002, and was part of the team that led the management buy-out of UTT in 2002. After the acquisition, he became Chief Executive Officer of the newly-formed InterBulk Group, which was placed on the UK stock exchange in February 2006. In 2007, InterBulk Group acquired UBC, an intermodal dry bulk company with 30ft bag-in-box containers and logistics terminals. Following a long period of co-operation on domestic China projects, Sinotrans acquired a 35% share of InterBulk Group to form a strong strategic alliance. In October 2013, Koert stepped down as CEO and was asked to continue to support the further development and expansion of the group by remaining on the board as a non-executive director. At that point, the business employed around 450 people, had a fleet of some 11,000 tank containers and 9,000 dry bulk containers and operated eight logistics terminals. He served as Chairman of the Operators section of the International Tank Containers Organisation (ITCO) from 2000 to 2006 and was a European Chemical Transport Association (ECTA) board member from 2006, until stepping down in 2013.

challenges for operators in the short to medium term are: the trade imbalance for tank containers; increased competition from new local and global entrants; the current overcapacity of tank containers in the sector; demand volatility; and the industry's sometimes poor forecasting ability. It will mean that tank container planning and operations will be more complicated.

Several major tank container operators are family-owned. What do you see as the limitations and strengths of that ownership model?

The family-owned companies might have a different view with regards to short term issues in the business. They can agree their own actions and are sometimes prepared to accept losses to support a greater goal. There are big, strong and good privately-owned companies that are very successful. I don't see them having any limitations compared with publicly-traded companies, except that they cannot tap into public markets to raise money for projects and/or acquisitions.

The few public companies in the tank container industry – of which the InterBulk Group is one – have a clear, long-term strategic direction and seek to increase value for their shareholders. The advantage for customers is that financial and operating results and strategy are public and transparent to all. As a result, there should be no real surprises with regards to their financial stability.

As chemical companies increase in size and consolidate, would the leasing model be used more often?

Now and then, customers consider this. I believe sometimes these ideas are purely financial thoughts and don't take into account the specialism of tank

container and fleet management. There is more to it than just leasing or financing a tank container.

A chemical company should stick to its core activity and a tank container operator remains the expert on the supply chain.

What effect do you see shale gas developments having?

I found after a study that, apart from the domestic transportation of chemicals and some storage opportunities, the opportunities from shale gas are not really suited for tank containers.

However, as a result of the increased production of chemicals based on this cheaper feedstock, there will be an increased need for the movement of US chemical production, both domestically and international. Investments of around \$100m in chemical production, up to 2019, have been announced.

I see the US chemical industry increasing its competitive position compared with the Middle East and Europe, and see this bringing a change in the tank container traffic flow patterns in the coming years.

Although the domestic use of tank containers will probably be moderately increased, I believe that for international flows the export demand will outnumber import demand, and thus create an imbalance that will need to be dealt with and financed. Rail traffic has a very strong position and good infrastructure.

How have customers become more demanding?

Tank container customers have relocated or have started production in locations where the cost of making products is cheaper. The objective of production is high output and high asset utilisation. This results in a product push mentality which sometimes conflicts with the costs and service optimisation approach of the supply

chain and planning department.

Moving products has become more complicated and more expensive due to longer transit times. This has led to higher working capital commitment – and therefore costs – in the supply chain.

More capital has been invested by tank container operators in intermediate storage facilities and depots. These investments need to be incorporated in the overall transport cost. For customers competing against local producers, the increased financial commitment to the supply chain may be greater.

Local producers who see lower cost product enter their region put pressure on their own supply chain to minimise costs.

All in all it means our customers face more global competition. They, in turn, put a lot of emphasis on reducing supply chain costs, which is passed on to tank container operators.

What would you say are the critical success factors for tank container operators?

Efficient operation, optimised utilisation levels and balanced traffic flows. These can only be achieved by global network coverage, an efficient IT system for tank container tracking and tracing, connections with stakeholders and last, but not least, having the people in the business with knowledge and expertise. It's a people business!

However, there are still too many containers being moved empty.

Initiatives by the tank container operators and the chemical industry to horizontally or vertically collaborate – or to interchange equipment to reduce empty positioning – have not brought the required result. Tender processes that typically focus on one-way cost reductions for the initiator can create too large a

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change in traffic flow patterns. This can actually increase the cost of empty positioning to the industry and all parties.

True partnerships, based on trust and transparency between customers and tank container operators, are vital. They are most successful when there is joint working both at the strategic and operational levels. This is crucial to achieve excellence and remove waste out of the supply chain. Alliances and swap out systems for tank containers between operators are one way to reduce empty positioning.

Increased competition may suggest that the tank container industry is a fundamentally attractive one. What would be the barriers for new entrants?

There are several relative newcomers to the industry. These are companies which have been set up set up by employees and management of existing operators. There are forwarders that do some tank container business on the side. New companies and joint ventures have been set up in emerging regions, such as India, China and Asia, and there are European operators that have geographically expanded their operations. What's important is the need to have a global operation, to move operations to the location of the manufacturing capacity and to deliver supply chain coverage.

The business is volatile with major fluctuations in currencies, oil price, feedstocks, etc. I think, ideally, our customers want to work with companies with a global network that can guarantee service levels, taking into account the limitations of the local infrastructure.

Having an efficient global network, IT systems, fleet critical mass and a track record in safe operation are important success factors and, at the same time, create genuine barriers of entry into the market.

"The biggest challenges for operators in the short to medium term are: the trade imbalance for tank containers; increased competition from new local and global entrants; the current overcapacity of tank containers in the sector; demand volatility; and the industry's sometimes poor forecasting ability."

Would it be fair to say that with such a large proportion of demand being met by standard tank containers, the key driver of customer satisfaction – and therefore profitability – seems to be fleet size and profile, experienced personnel and a strong organisation?

Indeed, 'Yes' to all the above – but I would say that companies that take the quality of operation seriously know that their people and their expertise are their biggest asset. And to achieve high performance, internal and external training of the team needs to be done. Most importantly, don't compromise on safety.

How has Interbulk's strategy changed since 2011, the year of the Sinotrans alliance?

InterBulk Group's strategy didn't change that much, but was boosted by our strategic alliance with Sinotrans. This combined our resources and expertise to identify and develop new opportunities in China. We have increased our resources and have InterBulk offices in Shanghai, Qingdao and Guangzhou. Meanwhile, Sinotrans has consolidated its various chemical sector business

activities in one business unit – now our prime interface.

Sinotrans is an active shareholder with a large equity position. What are the benefits, and how is this being converted into new business opportunities?

The benefit is that InterBulk can make use of the Sinotrans network in China – all operational activities are being performed by Sinotrans, which has huge trucking, cleaning, depot, operational and commercial resources.

The alliance has led to increased domestic activity, a number of high-quality projects and more international business.

Where next for Interbulk?

Our focus this year is on the delivery of an excellent health and safety performance and making sure that we operate the business with improved efficiency and cost productivity to improve margins.

Last year, we made some structural changes that will retain the successful InterBulk brand and 'One Company' ethos, but the group now has separately accountable dry bulk and liquid bulk divisions.

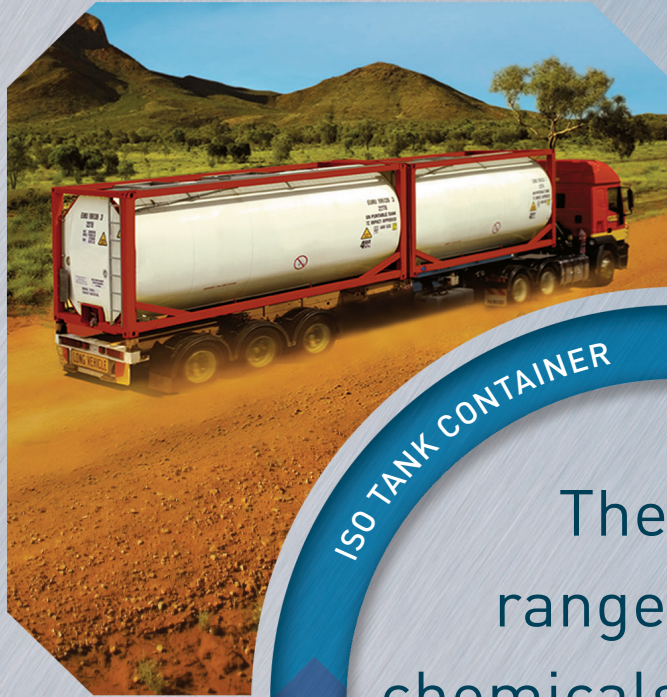
In terms of leadership, Loek Kullberg replaced me as CEO and, in addition, Daan Snaathorst has become Managing Director of the tank container business.

Our development strategy is focused on the expansion of the European operations in the specialised product and tank container segment and the expansion of our deepsea operations in the growth regions of the Middle East, Russia and Asia and China. In China, we will use the strength of the Sinotrans InterBulk Alliance to grow.

It is our goal to integrate further with customers by offering innovative supply chain and third-party fleet management solutions using high-performance IT tools.

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When wine bottles out

Until the late 19th century, the only way to move wine to distant buyers was in barrels. James Graham raises a glass to the tank container – the 21st century version of the historic keg

In 2012, world wine production was 25.2 billion litres, according to L'Organisation Internationale de la Vigne et du Vin (OIV), the global wine industry statistics-gatherer. This wine lake required some 18.9 billion bottles to be filled and transported to consumers worldwide. Poor weather and the reduction in vineyard area in Europe that year resulted in higher prices in the least expensive categories and a reduction in bulk wine exports.

Traditionally, the wine supply chain was very simple, it being consumed predominantly in the country of origin. However, the globalisation of the wine industry has extended the supply chain considerably and brought into question the effectiveness of some conventional protocols, such as upstream bottling.

To the wine trade, "bulk wine" means it is dispatched in volume, to be bottled at destination – a growing trend in the export of wine. Increasing customer willingness to accept bulk wine, combined with background concerns about reducing the carbon-intensity of supply chains and major investments in bottling plants in major consumption markets, have powered the growth in bulk shipments.

Just six years ago, fewer than three in every ten bottles of Australian wine in the UK contained bulk shipped wine. By 2012, that figure had risen to eight, and the

wine shipped out of Australia in bulk overtook that exported in bottles. South Africa ships 65% of all its wine exports in bulk and Chile is also an enthusiastic bulk wine exporter, enjoying the highest average price per litre. According to the OIV, the total volume of wine shipped around the world in bulk rose 61% between 2005 and 2012 to represent more than 40% of all exported wine.

At its most basic, wine is a perishable liquid that must be stored in a consistently cool environment to guarantee optimal quality. It is also distributed and retailed in a highly complex market, distorted by tax and duty levies. Defects in transit can produce organoleptic defects such as impairments of taste, colour and odour and include oxidation, lack of fruit and change in aroma components; chemical defects such as re-fermentation, oxygen uptake and changes in total acid

content; and physical defects such as sediment and clouding.

The utilisation of ISO tank containers is chiefly restricted to the export of shipments of low to medium quality wines. So-called "fine wine" and subtle, complex wines designed to age for decades are shipped bottled.

The lion's share of wine movement is captured by general purpose containers, loaded with bottled wines or rather unromantic flexi-tanks – a rubberised or plastic bladder. A standard ocean container typically holds 12,000 to 13,000 bottles, while a standard flexi-tank holds the equivalent of approximately 32,000 bottles. ISO tank containers hold the equivalent of nearly 35,000 bottles of wine.

Manchester-based Kingsland Wines & Spirits, imports wines for bottling and sale under 20 brand names. The company uses ISO tank containers for imports of bulk wine and rarely has any issues with availability, says Marketing Manager Jo Taylorson.

She says: "In the past, there has been a stigma attached to the shipping of wine in bulk. However, the industry and consumers are becoming more confident that it has no effect on wine quality, and there are certain advantages over shipping wine in bottles"

Promoters of the use of ISO tank containers in the cold chain claim that bulk wine is less prone to experience large temperature

Two issues are created by the use of ISO tank container for wine: the positioning of the container onboard ship, and the lack of backhaul traffic opportunities for the tank owner or lessor

variations during transit, as a larger single volume of liquid has a greater thermal inertia than a smaller one. Wine effectively begins to deteriorate from the time it is filled into bottles, when shelf life is deemed to start. Bulk shipping defers this moment.

This has implications for the retailer. Filling and packaging close to market – adopting the supply chain's well-known maxim of the postponement principle – may also give the sellers more flexibility to change packaging formats to meet changing market demands.

In 2013, Kingsland imported 2,500 bulk containers, saving 3,500 box container movements, says Taylorson.

The company works with Southport, Lancashire-based ISO tank container provider Paltank to source ISO tank containers. Supply chain managers at Kingsland are aware there are a number of small issues they must resolve in choosing ISO tanks over other methods of importation.

There is less flexibility using ISO tank containers because they need to be shipped and positioned before loading. Single-use flexi-tanks can be stored in the country of origin and set up quickly in a container. There is also no air-gap when a flexi-gap is loaded, which is preferable to an ISO tank container from a quality point of view.

"We have had some issues with fitments and cleaning certificate validation in the past. We used to have issues with availability when we used ISO tanks in some new world countries," says Taylorson.

Some 40% of the company's containers come through nearby Liverpool with the remainder being landed at southern UK ports before being railed into Trafford Park for local road delivery. An ISO tank container takes about three hours to empty before the wine is emptied into a range of bottle sizes from 187ml to 1.5 litre



bottles in both glass and PET.

Two issues are created by the use of ISO tank container for wine: the positioning of the container onboard ship, and the lack of backhaul traffic opportunities for the tank owner or lessor.

The wine bottling plant will have no bulk wine to ship out. The container must then be re-positioned back to its point of origin, to a winery in the destination country or switched into a different trade, such as chemical carriage, where there may be local opportunities available. The switch, however, may be irreversible.

A drag on the use of ISO tank containers is the availability or otherwise of bottling capability at the destination. Intriguingly, a similar drag comes from the presence of bottling facilities at the point of origin.

Many New World wineries are located in regions of great social deprivation, where the annual bottling of a wine harvest provides an income that would not otherwise be available to an often poor workforce. This social pressure, and the need to use previous investments in bottling lines at the point of origin, may inhibit a switch to ISO tank container use, despite often compelling economic incentives.

It is a truism that businesses

always look to adopt the most cost-efficient means of production and distribution to protect the bottom line. And yet this may not be the case in terms of the wine supply chain. The use of ISO tank containers for wine movements - the most economically efficient method of wine transit – is, in practice, the least utilised.

A major drag on their use comes from drinkers' perceptions that bulk wine is a lower-quality, cheaper wine. However, wine drinkers' perceptions are not carved in stone and many would not even be aware that the wine has been moved in bulk.

At the turn of the century, the same feelings were being expressed about screw-caps on wine bottles. Now few raise an eyebrow when such a wine bottle is presented.

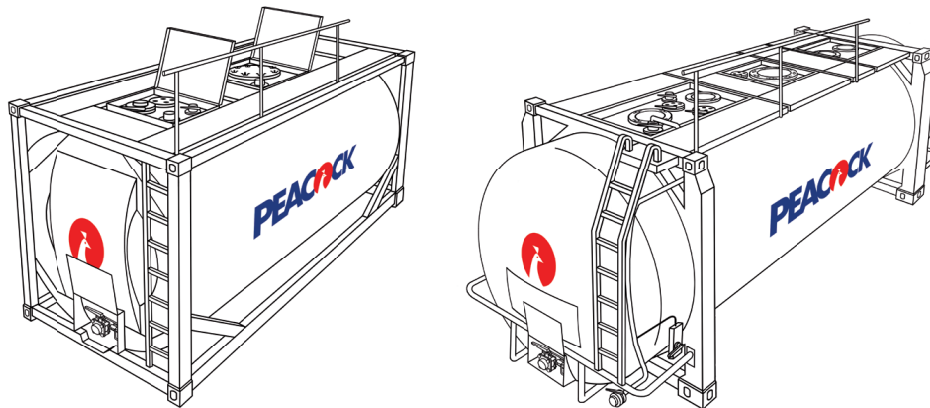
A further drag on tank container growth prospects for the wine trade comes in the growing use of the flexi-tanks. In contrast, a push to the use of ISO tank containers would be instrumental to building trust in bottling facilities at the wine's destination.

However, the use of ISO tank containers goes a long way to "greening" the wine supply chain and making it more sustainable. And that will not leave a bad taste in anyone's mouth.

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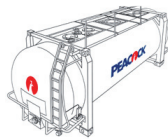
...FROM BULK
TO SPECIALTY...



standard / light weight



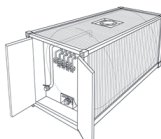
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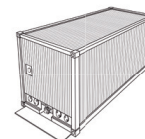
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A chemical reaction

Despite a relentless cost squeeze in the supply chain, ISO tank containers are holding their own, writes Jaap Huigen

The fortunes of the tank container industry are inextricably connected to those of their main patron – the chemical industry. And when we examine some of the challenges in the chemical sector, such as the extremely competitive market conditions and the resulting cost squeeze on the supply chain, it does not take long to see how these flow through to the tank container sector.

But let us first review the state of play of the tank container industry. Today, few spare a thought about the multitude of benefits associated with ISO tank containers. To most, the virtues are well known and part of yesterday's news.

Few stop to marvel over the technology common in our daily lives, be it iPads, LCD screen internet-TVs, smart watches or cars. We are all too caught up in our everyday lives.

But imagine a world without ISO tank containers and a return to drums! Individual container payloads would return to a mere 16 tonnes. The accompanying rise in freight cost would be very painful in today's market – and fatal for some producers and traders of bulk liquid products. Imagine all the inefficiencies that would find their way back into the supply chain.

Reassuringly, ISO tank containers are here to stay and few will dispute the economic value and convenience of tank containers. The strength of the basic concept remains and ISO tank containers have become

even more effective over time.

What used to be a world of tank container design diversity converged into one single, regulated, robust design that is considered optimal for the market today. It is mostly referred to as the "collar" design and is known to best withstand the rigors of multimodal transport and handling. These routinely exact punishing forces during the handling and transport process – impact, shock-load and high tension, dilation and vibration are all brought to bear on the tank containers.

Valves and fittings have reached levels of excellence and high service reliability. The unrivalled functionality of ISO tank containers in the supply chain enables it to meet the often exceptional demands placed upon the integrity of a cargo when it passes seamlessly between the tank storage facility of the shipper and that of the consignee.

Enter the moving pipe line. The May 2013 census by ITCO suggested that there were around 340,000 ISO tank containers worldwide. Total manufacture production was reported to be 39,700 units in 2012, suggesting robust global growth of a 10%. This begins to illustrate and explain the continued replication of the multimodal and intermodal success story.

Increasingly strong, assertive and incisive global regulatory provisions in IMDG and other conventions and regulatory platforms favour durable

After 50 years, ISO tank containers still compete against alternative packaging, such as drums, IBCs and flexi-tanks – each has a role, but economics, customer preferences and logistics infrastructure will drive the market's choice

packing over disposable varieties and these can be expected to gain momentum in the future. A much-overlooked benefit of the ISO tank container is its low carbon footprint. A study commissioned by ITCO in 2009 by LCP Consulting concluded that ISO tank containers as well as flexi-tanks are far superior to drums in terms of carbon emissions.

Even though this can be difficult to convert into monetary value, it is of enormous strategic value for the industry as regulatory authorities increasingly scrutinise entire industries for environmental damage – the aviation and shipping industries are both being examined for their carbon emissions performance.

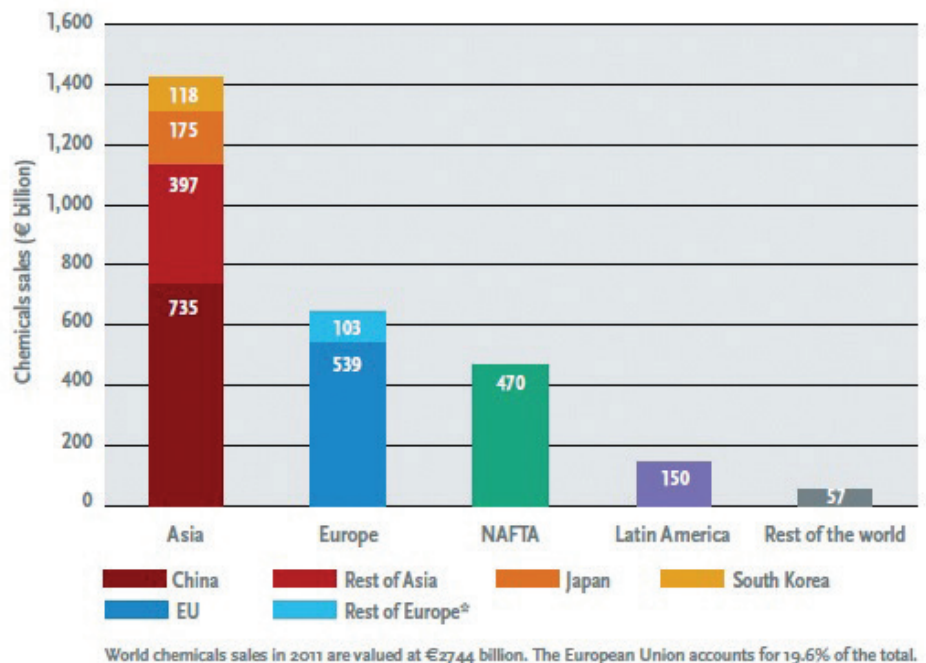
At the time the study was concluded, Professor Alan Braithwaite, Chairman and founder of LCP Consulting, warned that the “tank container industry will not be immune to either the financial penalties of future emissions nor the obligations of corporate social responsibility”.

After 50 years, ISO tank containers still compete against alternative packaging, such as drums, IBCs and flexi-tanks – each has a role, but economics, customer preferences and logistics infrastructure will drive the market’s choice.

Shippers have few doubts about the superiority of ISO tank containers when the shipment involves high volumes and/or the cargo is regulated as dangerous goods. However, the industry’s capacity to be competitive relates to its depth, breadth and maturity and the number of tank containers that are significantly depreciated.

As the world experiences ageing in its population, so too does the global tank fleet. However, well-designed repairs, refurbishment and re-manufacture programmes significantly extend the lifespan of tank containers.

Both ISO tank container and



chemical parcel tanker demand are closely related to economic growth and the fortunes of the chemical industry. Together with dry freight container demand, ISO tank containers can arguably be viewed as a barometer of the world economy.

Confidence appears high and this is reflected in the continued investment in newly built tank containers and investment in the supporting industry and infrastructure, whether it be tank depots, survey organisations, certification bodies and industry representative bodies such as the International Tank Container Organisation (ITCO) and the more embryonic @tco in Asia.

Although dependent on the T10 “workhorse” tank container, the industry routinely handles highly specialised cargo carried in specialised tank containers such as those in T14-T22 tanks.

These products range from class 6.1 high toxic products such as dimethyl sulphate to products susceptible to polymerisation such as MDI. Large volumes of yellow phosphorous, an inorganic product derived from molten

phosphorous rock, are carried.

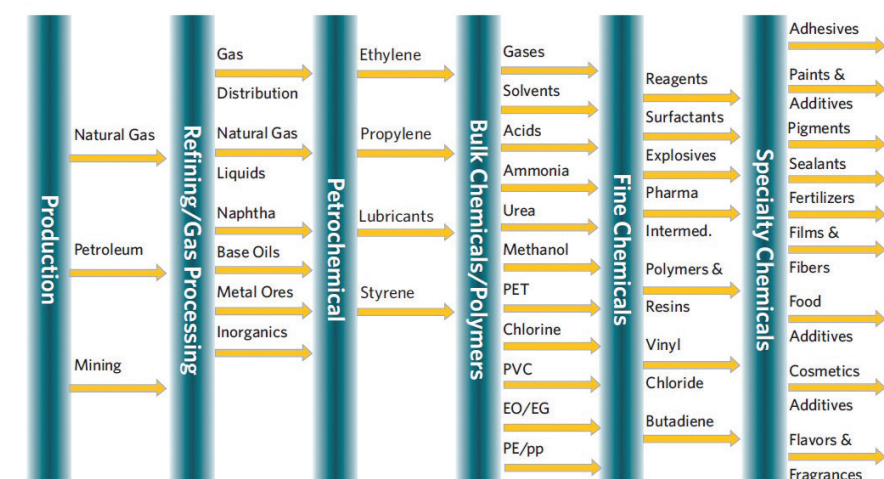
These hazardous and complex cargoes require highly specialised cleaning installations, carefully-controlled safety and environmental standards and skilled operators. Rotor jet water spin cleaning may be suitable for many products but others such as yellow phosphorous erupt in fire upon contact with air and need to be transported under water and nitrogen blanket.

In the niche food transport industry, tank containers are required to meet aseptic cleanliness standards – edible products ranging from dairy products, food colorants, beer and wine, fruit juices, potable spirits, vegetable oils and animal fats need to be considered.

Another specialised segment is the transport of high-purity electronic chemicals, used for cleaning electronic components such as printed circuit boards.

These chemicals – typically formic or phosphoric acid – require tank containers that are inert. This is achieved through lining tank containers with fluoropolymer linings such as PTFE.

In the chemical market, low



The Process Industry Value Chain: Companies look to vertically integrate, converting petrochemicals further downstream to higher value-added specialty chemicals products.

ocean freight rates have enabled tank containers to be delivered at competitive cost to global destinations. This has contributed to a globalised chemical market, with China having the largest chemical sales revenue.

Additional refining and chemical production capacity has, in recent years, been added in China, India and the Middle East – most notably in Saudi Arabia. The Middle East is now the fastest growing world region for chemicals production.

Globally, integration between petrochemical complexes and refineries is ever more apparent and these often benefit from common infrastructure, such as proximity to ports, terminals, storage and transport infrastructure. The cluster concept is, for example, well-developed in Singapore, where Jurong Island is home to some of the world's biggest and most successful petroleum and petrochemicals players, including ExxonMobil Chemical, Shell, ChevronTexaco, BASF, Sumitomo Chemical and Mitsui Chemical.

Many are vertically integrated and leverage Jurong Island's dedicated support infrastructure and services. These include a well-planned and efficient security system; practical and chemical-specific manpower training; IT for communications, safety

and security; and research and development facilities with state-of-the-art equipment for chemical analysis and characterisation.

Refining and chemical production remains weak in Europe but strong in the US, Middle East and Asia. Chemical commodities have migrated closer to low cost feedstocks in the Middle East and the US, while derivatives and specialty chemical production focuses on market proximity.

Paints and dyes, agrochemical products and pigments are higher up the value chain and are usually produced close to consumption. Fine and specialty chemicals are produced in small volumes.

More chemical manufacturers are investing in specialty chemicals. In Saudi Arabia, for example, one such project stands out: Sadara, a Saudi Aramco/Dow joint-venture. It is the largest petrochemical facility ever built in a single phase and is scheduled to come onstream in late 2015.

ISO tank containers feature prominently, with over 150 tank containers needed for internal movements alone.

Transnational corporations such as ExxonMobil, Dow and Shell, not surprisingly, play a large role in new developments in the high-growth region. This could come

at the expense of production in their notional countries of origin. Global player such as INEOS and BASF are noticeably absent.

Chemical commodities have the largest proportion of the global bulk liquid transport market. To increase margins, chemical producers continue to look at their supply chain costs and this pressure will remain.

Supply chain costs average 8-10% of sales revenue for chemical companies although the supply chain is said to add over 30 % of the net value added.

Deepsea tankers continue to offer the lowest freight cost per tonne, but lot sizes need to be large. The smallest tank size on deepsea chemical parcel tankers is 350cu metres. Shippers of smaller bulk lot sizes use ISO tank containers.

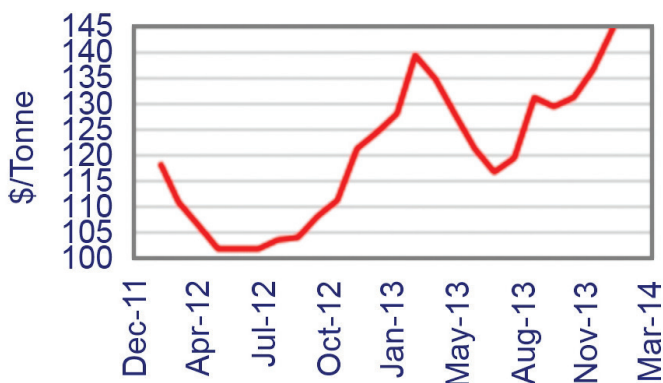
Freight rates on deepsea product tankers depend on parcel size and trade route. For stainless product tankers, the east bound route from Rotterdam to the Far East is \$120-135 per tonne. Other costs include the tank storage terminal's receipt, handling and dispatch charges.

The ranks of tank container operators have continued to expand. They can be divided into three groups:

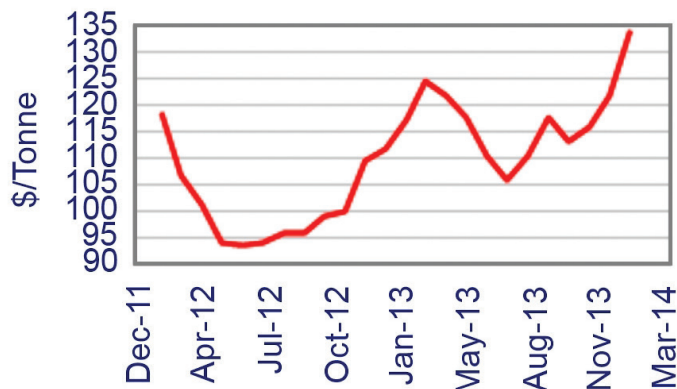
1. Super-large and large size tank operators. lately referred to as Big Tank Operators, that offer global bulk liquid transport services including intercontinental services and service regional markets.
2. Medium-size operators that offer global bulk liquid transport services including limited intercontinental services, but often focus on regional service.
3. Small operators that offer regional and or domestic transport services.

According to the Tank Guide 2013, published by *Hazardous Cargo Bulletin*, the global leader is Stolt Tank Containers, with an

Rotterdam - Far East 1,000mt Chems S/S



Rotterdam - Far East 2,000mt Chems S/S



Graphs from Clarkson Shipping Intelligence

estimated 30,000 tank containers. Hoyer follows, with around 25,000 units. Bertschi, Interbulk and others follow. Few focus exclusively on tank containers and many offer total global bulk logistics. This often requires total management of a chemical majors requirement for the handling of their bulk liquids in all respects – tank storage, ocean going tankers, tank containers, IBCs, flexi-tanks, and drums.

Stolt Nielsen has a comprehensive package for bulk liquid handling. Stolthaven's global network of tank storage terminals ties in well with Stolt Tankers fleet of chemical tankers and their large fleet of tank containers. Under the "Total Global Logistics" concept, other transport equipment is operated via different modes of transport. In the US, Canada and Mexico, Stolt-Nielsen Rail Services (SNRS) operates a fleet of more than 500 tank cars.

Road tankers too have an important place and here both Hoyer and Bertschi operate sizeable fleets. Lastly, some operators such as InterBulk and Hoyer operate bulk powder tank containers. This along with their requirement for gas bulk logistics, too, continues to be a core need of many chemical producers.

The primary launch pads for ISO tank container shipments are the European shipping hubs such as Rotterdam, Antwerp, Hamburg,

Le Havre and Rouen. In the US, Houston, Los Angeles, Long Beach, New Jersey, Philadelphia, Boston and Baltimore are key and in Asia, Shanghai, Ningbo, Xingang, Busan, Kaoshiung, and Singapore are the main shipping pivots.

Most operators can compete on the key trade routes, based, hopefully, on tank containers being emptied, cleaned and reloaded with a return or onward load. In the absence of onward or return loads a tank container operator may have to absorb the cost of repositioning the tank – insurance, documentation, the ISO tank container charges, haulage and cleaning at destination. These empty legs are often referred to as "deficit movements", but can be compensated by a subsequent profitable onward movement.

The challenge of balancing fleets is critical to an operator's utilisation, and therefore its profitability.

A key priority is to keep the in-service maintenance standard of tank containers high. ITCO has an industry standard – ACC, commonly associated with the leasing companies.

What scope is there to make tanks even better? Can the tank shell be developed? With bulk chemicals getting more complex in composition, many also test the limits of the corrosion resistance of austenitic stainless steel 316.

Several forms of corrosion – of which pit corrosion is the most prevalent – need to be treated. This is important to preserve the value of the asset and to extend its lifespan through refurbishment and remanufacture. Some Duplex steels have a much higher corrosion resistance – at a price – and so could offer longer lifespan. This is a step taken by deepsea product tankers, which are built from Duplex steel 2205 for many years.

The concept of a hybrid operator has developed. These are businesses with both chemical manufacturing capability and a logistics. Hybrids usually have a parent which is a chemical producer. For their logistics arms, which usually have tank container asset base, ready cargoes are available and these provide an assured base load. Korean-based Daelim and Sinochem in China are examples.

Well-established trade relations with chemical shippers together with scale are the prerequisites to sustaining a profitable operating business.

But how might we expect chemical shippers to view ISO tank containers and their logistic services providers? Both need each other. Shippers may be constrained in their choices with suitable tanks unavailable in the numbers required, and at the time required.

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The Full-service Depot Solution

Strategically located near the port of Rotterdam, the Lucrasoft ICT Group has had a strong link with transport and port-oriented companies for many years. *Tank Container Magazine* spoke with Lucas Vos, Gijsbert Dekker and Bart-Jan de Jong on DEPOT Software, the full-service software solution for repair/cleaning depots and container terminals.

CEO & Founder Lucas Vos, "Lucrasoft was started from my passion for IT and it has grown into a team of 40 driven professionals over the course of 18 years. We noticed that our quest for being a strategic partner, instead of a supplier, worked. The high level of involvement is valued by our customers."

Introduction to the Tank Container industry

Lucas Vos talks about the introduction to the tank container industry, "In the early days

of the company, the first jobs came through acquaintances and friends. Frans van Zomeren was one of those contacts. He had just founded Demi Container Services and was looking for software to arrange the process of container handling, repair and all additional administrative activities. This is when the foundation for DEPOT Software was born!"

It is hard to imagine nowadays, but back then computers and software were not generally accepted. For a specialized market like the container sector there still wasn't a good solution. The increasing demand did not become clear until after the completion of the first application. "When we entered into discussions with the leasing companies TML and Eurotainer, it became clear to us that the way in which our software communicated was a perfect interpretation of their information needs."

Gijsbert Dekker, Global Manager DEPOT Software, "After having developed a number of customised solutions we started standardising the package. There were many more companies to benefit from a proper Depot Management System (DMS), not only in the Netherlands, but worldwide. In close co-operation with IAT in Denmark and Tank Cleaning Europoort, we have customised the software even further. This is also when our vision was born, to offer

management support to all parties in the chain with DEPOT Software, with communication being a key point of attention."

Committed partner

The people behind DEPOT Software see themselves as a strategic partner rather than a supplier. Brainstorming to develop the best customized solution for each project is embraced wholeheartedly.

Together with our customers we focus on the long term, Gijsbert Dekker "within our company we are very proud of the fact that our earliest customers are still part of our clientele."

Mr. Vos about commitment to the organization and a timely launch of innovation, "We visit great (family) businesses which have been active for even longer than us. As an entrepreneur, I highly respect that. It is wonderful to see how businesses are working for many years in order to help their customers. Meanwhile, there are often situations where I notice opportunities and possibilities.

"Working with Excel files, emails and retyping PFD files, duplicating etc.. In many cases a company can operate in a considerably more efficient manner. We notice that some companies get into trouble because they do not implement innovations in time. They are side-lined by the new players, although certainly this does not have to happen! We



Depot Software

put ourselves in the hot seat to consider long-term plans and provide these companies with the appropriate resources to streamline these kind of processes."

Software benefits

Basically, the power of DEPOT Software lies in a relatively simple principle: storing all data in one place. The overview created in the process should make it easier to control all work, activities and processes at the Depot Yard. As a result, work can be completed faster and more efficiently. At the same time, all parties concerned get the right information. This takes place completely automatically or with just a few mouse clicks.

"We are convinced that DEPOT Software is the best solution in the business, simply due to the way in which it was created. Because it has been developed in cooperation with leading companies in the field, the software perfectly matches working methods. The modular design allows a perfect solution to be found for any organisation" according to Bart-Jan de Jong, Product Manager DEPOT Software World Wide.

Future plans

Throughout the sector, people are working towards fulfilling the need for information and the call for a centralized communication system. How can DEPOT Software realize this and what are the plans for the future? "Our system helps to improve the communication between parties through

automation and standardization where possible. The key principle is to manage and control everything using a single system. We continue to link systems and make data more clear. In addition, our developers are full of ideas, they see opportunities and possibilities to create new applications everywhere.

"Recently, for example, we have launched the DEPOT apps, applications that run on smartphones and tablets, as well as computers, and provide a perfect support in the daily work activities.

"The demand for opening up data for all parties concerned and the communication on this subject, remains a clear priority for all new resources and applications. Communication is the key for practically all



Lucas Vos, CEO and Founder

problems and challenges. Ensuring that everyone has all desired information at their disposal, when he/she wants to, remains the focal point." Gijsbert Dekker.



New opportunities but old challenges

Ask European tank container operators about trends, two key themes emerge: increasing opportunities and a need for them to get under the skin of their customers' businesses to respond better to day-to-day demands. Felicity Landon reports

David Kerr, who rejoined Suttons Group last year as Regional Director for Europe, says: "Coming back into the tank container industry after some years, I see there is growing demand from the customers for tank container operators to understand more what the role of the tank container is within the supply chain, and to understand the impact on the total supply chain costs of all the different activities that are involved in moving chemicals in tank containers.

"There is more focus on improving working capital utilisation and ensuring at the same time that the product is available at the correct time and in the correct place to meet customer demand. I think there will be much more focus in terms of supply/demand planning. We find most customers, if you press hard, want security of supply to fit the production line."

Suttons is focusing on five key topics in Europe. "Total customer experience" will include account management services. Second, it is looking to build on work done last year in terms of trade lanes, with a strong focus on building further density on specific geographic corridors, to and from the Middle East, North America, and Asia.

Two other priorities are linked



to this – using automation to improve efficiency and utilisation, and upgrading IT systems.

Finally, new equipment: "We do see targeted investment in specific equipment classes and also in our shortsea European operations".

While Kerr doesn't see any particular signs of turmoil in the marketplace, customers are looking at the different ways of organising procurement and logistics.

"Some stay on the traditional route and others look for operators to be value partners as opposed to pure suppliers. People think a 4PL model is applicable everywhere - it is only applicable if it delivers value and is done with a certain

amount of contract-based savings."

Kerr also notes some recent movement away from chemical parcel tanker shipments, "because of the tightening of capacity available in storage tanks in key locations, linked to the realisation that the total supply chain costs of chemical parcel tanker shipments, together with storage facilities, are on-costs with associated working capital. This has driven growth in the tank containers as well as a move from drums to tank containers."

Growth opportunities for tank containers are strong worldwide, says Mike Kramer, President of Stolt Tank Containers. "We

continue to open new markets and ship more commodities on more tradelanes than ever before – this includes more mature markets, such as Europe,” he says.

“We continue to see cargo converting from flexi-tanks, drums and chemical parcel tankers into tank containers, simply because of the inherent flexibility and low cost of tank containers, and the fact that they are a proven safe and secure mode of transport.”

The key challenges for tank container operators are the same, says Kramer: how to properly price and manage the business to secure the proper returns for continued reinvestment, while striving to raise the standards of transport and ensure the safety of the customers’ products and supply chains, people and the environment.

“It is about improving tank standards, dealing with a changing regulatory environment and ensuring that all operators use properly audited and approved depots to minimise environmental impact.”

Customers want the highest quality, most reliable and safest service at the lowest possible cost – they always have and always will, he says.

“What makes it tough is that trade patterns are constantly shifting, depending upon many factors.”

In these carbon-conscious times, it’s important that tank containers are environmentally friendly compared with other transport modes, says Kramer.

“While tank containers themselves do not generate emissions, the ships and trucks that carry them do. Stolt Tank Containers uses top-tier truckers and ocean carriers who operate the safest and latest equipment that meets or exceeds environmental regulations. Beyond that, Stolt Tank Containers operates its own global network of 14 depots worldwide that gives us control over tank cleaning and maintenance,

and waste-water treatment.”

Tank container operators have no control, however, in shipping line alliances. “The recent announcements on carrier agreements is a source of concern and must be watched to ensure that any consolidation or sharing agreements do not hurt the tank container industry’s ability to compete globally,” warns Kramer.

Stolt Tank Containers will have two new depots, in China and the Netherlands, next year, taking the network to 16.

“One of the really exciting things on the near-term horizon is the innovative new online tool that we’ve built for our customers,” says Kramer. “It will allow them to order and track tanks, of course, but it’s more than that; it’s a high-performance, user-customisable platform with features and functionality that will help customers to analyse and better manage their supply chains.”

Swiss logistics company Bertschi is planning record levels of investment for 2014, as it continues to expand its European and global presence in the tank container sector.

The family-owned company, which operates 54 subsidiaries across Europe, Russia, Turkey, the Middle East, China, South-East Asia and the US, owns more than 19,000 tank and dry bulk containers, 1,200 trucks and 16 intermodal container terminals.

Dürrenäsch-based Bertschi started its expansion beyond Europe into global tank container operations nearly three years ago and this has been very successful, says CEO Dr Hans-Jörg Bertschi.

“We have a quite dynamic plan for further growth this year. We see ourselves as a global operator but we also think of ourselves as a tank and dry bulk container operator in the European market focusing very heavily on intermodal activities – we move about 70% of our containers by rail in Europe,

achieving significant reductions in carbon dioxide emissions.”

Bertschi continues to invest in Europe. It is investing in a significant expansion of its intermodal rail terminal in Schwarzheide in East Germany and in new depots for storage of hazardous goods tank containers, one at Duisburg and the other at Schwarzheide.

Bertschi says this year its tank and dry bulk container fleet will exceed 20,000 tanks, with the expansion being geographically spread.

“Growth is very much focused on Asia and globally, while in Europe the strongest growth is mainly Turkey, Eastern Europe and Russia, while in Western Europe some countries, like Germany, Spain and the UK, are reasonably out of recession and others, such as Italy, are lagging behind”.

The market is still challenging and difficult to forecast for the next 12 months, says Bertschi. “But personally I am optimistic that the global markets will develop positively. In Europe, the price of raw materials for the chemical industry is still too high compared



David Kerr: back in the industry he sees more focus on planning

to the US. Most of our customers are under significant cost pressures and are trying to take costs out of the supply chain. So Europe will continue to be pretty challenging and not at all an easy market."

This, he says, is the reason for increasing the business' global focus. "If you are going to shift your market focus, you have to invest to achieve that. But what we do see today is how many customers are still using chemical parcel tankers and storage tanks to move products between continents, like, for example, between Asia and Europe.

"There is significant rationalisation to be achieved by using tank containers instead of chemical parcel tankers and the pretty high fixed costs of storage tanks; so as customers start to understand the savings they can achieve. There is good growth potential for tank containers."

Bertschi is to add a fourth business unit, solutions, to the established three – liquid containers, dry bulk in containers (both European-focused), and global tank containers.

"The objective is to grow our product handling facilities to include bagging and debagging of plastics, drumming of liquid products and warehousing – going deeper into the logistics handling facilities and services. This will be on a global scale. Projects are already starting in Asia and we plan to start our first investment this year in South-East Asia."

Hamburg-based Hoyer last year expanded its gas container fleet, moved biodiesel from Brazil to Europe for the first time and took a stake in Antwerp's Combinant terminal.

The company is continuing to build up its intermodal activities in terminals, and this was reflected in its acquisition of Inter Ferry Boats' interest in the Combinant facility. The other partners in the terminal are BASF and the combined transport operator HUPAC. Hoyer



also runs terminals at Schkopau and Dormagen, and is a partner in the Kombi-Terminal Ludwigshafen.

In July 2013, Hoyer carried biodiesel from Brazil to the Netherlands by tank container, an achievement it said would open up new market opportunities in its overseas transport operations.

After expansion in its global gas logistics business in 2012-13, Hoyer's gas fleet reached about 1,000 units of 20, 30 and 40ft tank containers by the middle of 2013. In December Hoyer announced it would be using new 40ft containers for the LNG transport.

"Europe is mainly a pipeline and trailer market. In some areas, the combined transport makes more sense – that means. Hoyer invests in such niches," says Ewelina Jankowski, Corporate Marketing team leader.

Log4Chem, a 4PL company established in mid-2013, will meet an increasing demand for asset-neutral service provision, according to Kirry Mukherji, its new Managing Director.

Bertschi, De Rijke Group and Hoyer are pooling their activities in chemicals-related logistics in this non asset-owning joint-venture, providing a "neutral

facilitator" between contractors and service providers.

Mukherji, appointed in January, says: "Our three joint-venture partners are well respected, family-owned, asset-based providers of solutions to the chemicals industry.

"They recognise, however, that there is increasing market demand for asset-neutral service provision, focusing on the optimisation and improvement of the total supply chain, without being distracted by the need to maximise own asset utilisation.

"Their engagement and investment has been rewarded with a significant customer contract – we are growing beyond the proof of concept phase."

Log4Chem is an important element of Bertschi's strategy, says CEO Dr Hans-Jörg Bertschi, "especially as we see the outsourcing trend of logistics on the producers' side growing in the future".

Log4Chem's customers will be medium-sized speciality chemicals companies which don't have the size to cater for logistics competence in-house, but tend to outsource the total distribution package to an independent operator.

'It's war' as new players put a foot in the door

Overcapacity is distorting supply and demand in a sector facing rock-bottom rates, reports Isabel Lesto

In less than a decade, the cost of a new standard ISO tank container has dropped from around US\$35,000 to \$19,000. Rental rates have dropped accordingly, with prices around \$6 per tank per day compared with \$14.50 in 2007-8.

Nickel price fluctuations have a lot to answer for. Lower steel prices have resulted in lower tank container prices and, naturally, cheaper rental rates.

"The price of the tank container is down, which is not good for leasing. We like high manufacturing costs," says Vincent Martin, MD of Paris-based tank container lessor Eurotainer.

More recently another factor has been influencing leasing rates: overcapacity.

"I think a price war is going on, driven by overcapacity. I've never seen lease rates this low," says Trifleet Leasing MD Philip van Rooijen.

There are a number of factors contributing to this overcapacity. Some industry sources point to the growing number of tank container manufacturers.

"On the one hand you want competition in the market, so it's good that there is a sufficient number of manufacturers," explains van Rooijen. "But if there are more manufacturers than the market

needs, you create overcapacity and that's a dangerous trend.

Others attribute overcapacity to the growth of new tank container lessors. As dry box rates have become less attractive, lessors have shifted their focus to other areas, investing in reefers and tank containers, which provide higher returns.

"They are obviously trying to get their foot in the door and get some share in the market, and when you want to get share, you reduce rates. That's added pressure," says one source.

Another adds: "Those companies have access to money and have an appetite for lower returns than traditional tank container leasing companies are used to."

Jesse Vermeijden, MD of Rotterdam-based tank container leasing company Peacock, maintains that excess capital has found its way to leasing companies.

Large banks which need to invest capital naturally look at industries which have shown growth. "The whole container industry kept on growing even in the crisis, so a lot of money found its way to our market," explains Vermeijden.

"You have a chemical industry which is growing at 4-5% a year and then you have stock-listed leasing companies which have



to show growth of at least 10%. This doesn't go well together. If you are building for 10% and the market is only growing 4-5% then there is going to be oversupply."

In a marketplace characterised by low tank container prices as well as oversupply, lessors that may have purchased tank containers five years ago at higher rates may be sorely tempted to lease equipment at any price.

Another challenge for lessors is the demand for shorter or more flexible contracts.

"This is something we have definitely seen in recent years and the trend is towards more short-term contracts," says Vermeijden, but adds this is not always the case. "Some bigger customers understand the opportunities at the moment; equipment is

quite cheap. So if they can fix long-term contracts now they do, because they know they will need tanks five years from now."

Eurotainer's Martin agrees. "In this current market these types of requests take place. If you say yes, you are the bad boy because you are pulling the market down, but if you say no, there will always be someone next door saying yes."

Tough market conditions aside, Europe's tank container leasing companies appear to be positive about the future, both in Europe and elsewhere.

"Europe is still growing," says André Bauer, head of sales for German lessor TWS Tankcontainer-Leasing. "We have also noticed a greater demand for our special equipment.

"Europe will remain our central market with continued growth," he says. However the company is also focusing on the high-growth regions like the Middle East, Asia and South America.

While Seaco has its head office in Singapore, the largest percentage of its business is in Europe, where it has offices in London and Hamburg.

"The percentage in terms of global split in the business has remained constant over the last few years," adds John Bannister, director of product marketing for Seaco's tanks division.

"There might be some additional business coming out of Asia and America, but it's remained pretty constant in Europe.

He explains that a lot of the operators Seaco does business with in Europe are global operators. This means that if volumes fall off in Europe, they pick up in other regions, but the requests still come from Europe.

Trifleet's van Rooijen believes that Europe, with its 700+ million people, will always be an attractive market for tank container leasing companies.



That being said, Europe is a consolidated market where it is a lot more difficult to grow, he adds. Chemical companies have moved production to locations where labour or feedstocks are cheaper and where there is more demand, so there has been a decline in the market.

"The good thing for a leasing company like ours is that we can move our assets to other parts of the world, provided we have infrastructure to deal with them," he says.

Around 70% of Peacock's customers are Europe-based, although it has grown its customer base through its geographical reach.

In October 2013, Peacock acquired Global Container Solutions (GCS) marking its first base outside Europe.

"GCS was our agent for almost 12 years so it did a lot of work for us in South-East Asia," explains Vermeijden. "The opportunity to purchase it was a nice step for us."

GCS's main focus is Singapore. Totalling 130 tanks, the fleet is still relatively small, but is expected to grow.

Financing for the acquisition was manageable, says Vermeijden,

but admits that for smaller leasing companies it is still difficult to find capital for investments.

"It's always a struggle to find finance. Although containers are considered to be an interesting investment vehicle at the moment, that only seems to work when you have a large fleet of tanks."

Peacock runs a fleet of 2,000 ISO tank containers. Up to 800 of these were added in the last four years after it decided to grow its fleet to at least 2,500 units by 2015.

"We have already ordered 500 tank containers, so we might reach our target a little earlier than expected," says Vermeijden. They will arrive during the course of the year and about 75% of the order is already covered by contract.

The reason Peacock decided to expand its fleet was to diversify its customer portfolio in order to reduce risk.

Meanwhile, Trifleet's joint-venture with dry box and reefer container lessor Textainer, has given it access to the funds it will need for growth.

"We are management-owned, so we had a ceiling on our growth rate," explains van Rooijen. "To grow the business we reinvest profits, but that puts a ceiling on what we can achieve."

The advantage of working with Textainer, he explains, is that this "ceiling" has been removed.

Trifleet and Textainer have already invested in their first 1,000 tank containers. The first arrived in October 2013.

These tanks were bought speculatively but many are being leased. "The market is difficult. You have to have tanks available. If you tell customers that you will have them in three to four months they will most likely go to someone else who has availability."

Trifleet reached a milestone in December with a fleet of 10,000 standard ISO rental tanks. "We were quite proud, most of this was done of our own

accord," says van Rooijen.

He admits that the joint-venture may have some people worried. "The market is looking at us and wondering what will happen. Textainer has a reputation for being very aggressive on rates, but I'm not sure that's justified.

"We are not a price fighter - Trifleet focuses on supplying good quality tanks at competitive rates. But we can now deal with any situation, and we will fight back if anyone wants to start a price war."

While rates for standard tanks have dropped, leasing rates for special tank containers remain steady, reports TWS's Bauer.

And Seaco, which exited gas tanks some years ago, has now stepped back into that market.

"We are looking at the T50 gas tanks," says Bannister. Our first 50 came offline at the end of last year and we are building more. I'm not sure what our target will be, it depends on the market and how successful we are in leasing them."

Enquiries are arriving from around the world, he adds. "We've had enquiries from Europe, the US and Asia, so I would say there's still demand there.

"We built on a speculative basis.

You have to with gas. The lead time is quite long and the demand comes very suddenly, so if you don't have them on the ground you tend not to be able to participate."

Eurotainer, has for the past four years been active in cryogenics for the LNG market.

"We were highly specialised in gas leasing, so we asked ourselves 'why not specialise more?'" says Martin.

"We continue to believe this is the place for us, but it's not a huge market. It involves a higher level of investment and it is a tiny market compared with standard tanks.

"It involves small quantities of equipment, but it is higher risk so of course the rewards are better."

Towards the end of 2013, Eurotainer received its first 40ft LNG tank containers. Hoyer and TML have also recently invested in these tank types. Built in South Africa these containers will be leased to a client in Australia. They have a capacity for 46,000 litres and can hold loaded LNG for 100 days. Other LNG tanks are destined for Eastern Europe and China.

Eurotainer says it has seen a growing global demand for 40ft cryogenic tanks as the market for LNG has expanded and intermodal transport is becoming

more economically competitive.

"We order LNG tanks speculatively as well as for customer orders," explains Martin.

"There are exciting things happening in North America and we believe this is something we will be involved in for the future," he adds.

If LNG is a lucrative and growing market, why aren't more tank container leasing companies investing?

Peacock's Vermeijden admits that while the company is focusing more on specialised equipment, it has not invested in LNG tanks.

"Everybody agrees that LNG will have an interesting future. The big question is when? We are reluctant to step into LNG; the equipment is really expensive compared with other tanks.

"So yes, we are keeping a close eye on LNG, but we don't have any immediate plans to step in."

Trifleet is also looking into LNG but has not yet made a decision to invest. "The attractiveness of the LNG market is that it is a growing market, which cannot be said of many others. But the tanks are at least four or five times more expensive and the market is a lot smaller," says van Rooije.



Dedicated to keeping our standards up

Europe, despite its loss over the past decade of substantial business to lower-cost producers in China, remains an important centre for intermodal tank container manufacture

The industry originally took root in Europe more than 40 years ago and today the region is still very much at the forefront of product research and development. Even though annual production is now generally measured in hundreds, rather than thousands, several companies are reporting plenty of interest from tank buyers globally.

At the forefront of these is UK pioneer UBH International, whose site in Burscough, Lancashire, has been in production for decades. It offers a potential production exceeding 1,500 tanks a year. UBH is particularly well-known for its innovative “beam” design, which has been produced since the 1980s and offers both lighter tare weight and improved aerodynamic shape.

It is reported to save up to 7% on fuel consumption compared with the road transport of more conventional tank designs – an important selling point as the cost of energy has risen. UBH also claims its basic tank design can offer a 30% lower “whole life” cost than some rivals. Moreover, no major warranty claims had ever resulted in a UBH tank being withdrawn from service.

The company has recently added to its already sizeable product range, comprising lined, heated or refrigerated types, as well as those suited for carrying bulk liquid (including hazardous)

or gas/cryogenic commodities. There is also a range developed specifically for oil/gas field application. One focus of recent years has been on the gas and cryogenic tank sectors, which have grown rapidly and UBH has expanded the range of industrial gases that can be handled.

UBH gas tanks can come in 10ft, 20ft, 30ft or 40ft lengths and provide an equally wide range of capacities and pressure ratings. The smallest versions are just 7,500 litres, for highly pressurised and denser chemicals. The largest is the “jumbo” 43,000 litre tank. Following the company’s purchase of its main factory site, additional investment is being made in higher-capacity cranes and other plant to enable a greater manufacture of high-pressure and

larger-volume tanks suited for LNG and cryogenic carriage.

Another, more traditional, design of tank has also been subject to upgrade in recent months, after UBH was approached by a US beer distributor. This resulted in a new style of 20ft beer tank, better suited for long-haul export shipment. It features four compartments and refrigeration equipment, which preserves the quality of the beer, maintaining flavour and aroma. The overall capacity of the new tank is 14,000 litres and the side-mounted refrigeration unit maintains the temperature between a critical +1°C and +3°C throughout the journey.

UBH’s lengthy involvement in tank manufacture has seen it weather many recessions, although the aftermath of the 2008 global economic downturn has proved one of its most challenging periods.

The requirement for standard ISO tank equipment was, predictably, hit the hardest, even though more specialised and product-specific types have tended to remain in better demand. As an example, UBH has experienced a continued strong uptake of lined tanks for sensitive and aggressive chemicals. Linings vary, according to the product, and include rubber, PTFE, PFA or enamelled finish.

Another well-established European contender is WEW

A new-style 20ft tank for long-haul exports features four compartments and refrigeration equipment which maintains the quality, flavour and aroma of 14,000 litres of US beer



(Westerwalder Eisenwerk GmbH), located in the heart of Germany. Its design and production facility occupies 12,000sq metres and employs 120 technicians, many of whom are long-serving. It has an annual manufacturing capability of more than 600 ISO and specialised tank units.

The company has been involved with tank container construction since the 1970s and focuses on serving the global oilfield, chemical/petroleum, nuclear, defence and water treatment industries, delivering tanks suited for the transport, storage and dispensing of around 2,000 different hazardous liquids and gases, and holds over 100 separate product patents. Much of its annual turnover is reinvested in research and development projects.

Since 2011, WEW has been active in the production of smaller carbon and stainless steel tank-based modules. One area of growing importance is the supply of highly engineered mobile systems, adapted for water and fuel treatment/handling in defence applications or disaster relief areas.

In August 2013, WEW parent, Buhold Industries, sold its stake

to WEW GmbH itself after 14 years. This has allowed WEW to modernise its production plant and created additional capacity for the refurbishment and upgrade of military equipment returning after lengthy deployment.

Another recent – and more diversified – product development is the company's modular chemical delivery system and fuel station, developed for use in harsh climates by the oil and gas industries. This has enhanced WEW's role as a systems integrator, as its modular design incorporates pumping and dosing, and provides robust solutions for both upstream and downstream oil/gas field applications.

These tank units offer a payload ranging from just 1,000 litres to maximum 50,000 litres, with about 50% falling outside the ISO "footprint". They can also be multi-functional, featuring several compartments, to permit the storage, transport and dosing of numerous chemicals concurrently. Add-on features include telemetry and remote control systems.

Van Hool, of Belgium, has also been actively producing intermodal tank containers for several decades.

Although its core business remains the manufacture of municipal and commercial vehicles and trailer bodies, it has a production facility dedicated to intermodal tank, as well as dry bulk and silo construction. The Van Hool plant is one of the biggest in Europe, with a potential annual capacity running to almost 2,000 tank (or related) units.

It is one of only a few factories able to fabricate both tanks of stainless steel for bulk liquid or gas carriage, and of aluminium, for the transport of dry bulk powders, in the same workshop. In addition, some tank chassis production is carried out as well.

Seven to eight tanks are built on average each day, the majority of which are of standard ISO type, plus a smaller number of swaptanks and other specials.

It too offers intermodal designs for all types of chemical and foodstuffs carriage, including customised versions for bituminous products and compressed carbon dioxide.

The company's silo containers are of special lightweight design, adapted to take denser powdered or granulated products, an area that has grown significantly over the past decade. Special pressurised silo versions, of ribbed cylindrical design, are also available.

Van Hool is another market leader to have entered the challenging field of cryogenic tank manufacture, having developed its own version of 20ft twin-walled container offering up to 20,000 litre capacity. Cryogenic gases are often transported at temperatures as low as -200°C, and its tank design features vacuum between the inner and outer tank layers, creating a very high level of insulation. It can also absorb any expansion or shrinkage in the stainless steel structure, which requires an extremely stringent degree of finish and has to undergo very strict testing.

Growing business in the European triangle

It is not all doom and gloom in these grave economic times. The tank container industry is doing well, all things considered, reports Janny Kok

Compared with the estimated size of the global container fleet of 34.5 million in 2013, the tank container industry is just 1%. At the end of 2012, ITCO estimated the fleet size to be 340,000teu, but also reported a growth of 25% in the past five years. The coming decade will see a double digit growth. Opportunity is knocking for the tank container industry.

Tank Container Magazine was told that the industry continues to attract new customers in mature and emerging markets, and more customers require smaller volumes, suitable for just-in-time delivery and storage. Transport of food-grade products is expected to grow faster than the transport of chemical products, at least in Europe.

Growth rates can be higher if some of the key links in the supply chain are supported more comprehensively.

Gunther van Loon, CEO of Group Van Loon, advises port authorities to support the industry's interests and to understand their needs.

He adds: "They can improve their marketing of our sector abroad, in the Far East in particular. Port authorities can also help improve the link between liquid storage companies and

the tank container industry."

To his mind, Rotterdam is one of the leaders in facilitating tank containers.

"There is a greater awareness about what to do and how to do it. We see Antwerp also being very responsive, but port authorities can still improve their involvement with our line of business, in terms of facilitating the business."

It seems that there is a job to be done, particularly in the major areas

where the tank container industry has much of its prime business.

This is the triangle-shaped bordered by the nodal points of Rotterdam, Antwerp and Ruhr. Van Loon says knowingly that other ports in the northern Hamburg-Le Havre range play a less important role in his line of business.

"The tank container industry is where the chemical industry has been situated", says Business Manager Containers Lida Maclean



Rotterdam is one of the leaders in facilitating tank containers



of the Port of Rotterdam Authority.

"That is why this port aims at providing, in the chemical cluster, the proper facilities in terms of space, safety and other related issues, and to see to it that the vital tank container industry can be situated close to the chemical cluster."

This includes the close physical location of the essential tank container service providers which offer repair and maintenance, storage and depot, cleaning, refit and recycling.

Talking about the awareness of the importance of having the chemical cluster and the tank container sector linked together, Maclean says: "Rotterdam port has to see to it that the chemical cluster and related businesses are well serviced by means of co-siting, proper intermodal connections – pipelines included – and thorough corporate governance."

Keynote speakers and delegates will talk about all these aspects at the two day business-to-business congress organised by Russia-based SeaNews and the

Port of Rotterdam Authority on 13-14 March in Rotterdam.

The event's target groups are the Russian logistics service providers and their Dutch counterparts, container shipping lines, ship's agents and shippers. The Russian congress organisation has specifically asked the Port of Rotterdam Authority to invite representatives of the tank container industry to the event.

Maclean will use the opportunity to highlight the facilities already in place in Rotterdam port, and those expected to be ready for use next year.

Showpieces are the existing Rail Service Centres, pipeline, road and inland waterway connections onto the hinterland, and the dedicated tank container jetty for barges to be ready for use end 2015. This jetty will be constructed at RMI Global Logistic Services in the Botlek area, the place where the majority of the chemical industry producers and the tank container industry is located.

Those involved in Rotterdam and Antwerp are convinced

Rotterdam "aims to provide, in the chemical cluster, proper facilities"

that there is strong growth in the future for the tank container market in all the market segments using tank containers, whether they be liquid foodstuffs, juices, oils and fats, chocolate, bio-fuels or chemicals.

According to van Loon, there is more to the tank container sector than meets the eye.

He particularly mentions the link between the industry and knowledge centres when research, construct and design are involved, and about the important role certification businesses play, such as Bureau Veritas, Lloyd's Register and others.

"As it is, everybody in our business meets the minimum standard requirements the EU legislation stipulates. The only distinction between service providers is the international groups like by Hoyer, Den Hartog and Stolt and the like, and independent players in the tank container market, such as we are."

A wash and brush-up

There is growing demand for tank container cleaning stations in many key global locations, reports Katerina Kerr

"We are seeing the deepsea business for tank containers growing, as it allows the possibility of shipping liquid and bulk materials in small quantities in an economical way," says Joost Kasbergen, Group Business Development Manager at Groninger Cleaning Systems.

He notes that the industry is seeing a shift to many more tank containers moving from Asia and the Middle East to Europe. The two Saudi Arabian ports in Jubail are undergoing major developments with a new portside logistics facility and a rapidly-expanding hinterland of chemical production plants which Kasbergen believes is boosting tank container movements to Europe.

"The most recently-built stations in Western Europe are in port areas, putting extra focus on the tank container industry. Around 10 years ago, only 15-20% of cleanings taking place were of tank containers compared with tank trucks. This has increased to 60-70%."

There are approximately 350,000 tank containers worldwide, and more than a million cleanings take place each year using Groninger equipment at 100 facilities. The system reduces the consumption of water and energy and recovers energy.

"The latest developments in our products are primarily driven by the green revolution," says Kasbergen. "During the cleaning process, steam is used, requiring water temperatures to be raised from 10 to 90°C. Water stays for



around 3-5 seconds in the tank and then is flushed into the treatment system, which means a lot of energy is subsequently lost.

"One of our solutions is to feed high-pressure pumps with water that has been preheated to 90°C by the excess energy captured using heat exchangers. This saves a substantial amount of energy."

Netherlands-based Cleaning Twente's facility at Hengelo became fully operational in 1987 and its cleaning bays are equipped with systems from Groninger, some of which have been in use for 27 years. Its sister operation in Maastricht, Limburg, began operating in 2002.

The facilities each have the capacity to clean 50 tank trucks and/or tank containers

a day, but on average they handle approximately 30.

"Our Hengelo location is probably the most strategic," says Harald Buytenhuis, Company Manager at Cleaning Twente.

"Most of the trucks and tank containers we clean come from Germany and are heading towards the Rotterdam port area – time is therefore usually critical"

From hazardous cargo to food products, the materials transported in tank containers can vary a great deal and cleaning can take from five minutes to four days.

Although cleaning times must be as efficient as possible, the quality of the cleaning is equally important.

Kasbergensays: "A lot of attention is being placed on the software of cleaning systems. It is possible

now to run a cleaning programme that records temperatures and pressure and times that are involved in a single cleaning. In this sense we are trying to create more transparency between the cleaning facility and the customer."

Such systems were introduced at NTC Tankcontainer Services' facility in Botlek, Rotterdam, in May 2013. The new facility offers eight cleaning bays for tank containers, two for food cleaning and four for chemicals, including two bays with 200 bar cleaning capabilities.

Groninger worked closely on the project. "NTC wanted to focus 80% of cleanings on tank containers and 20% on tank trucks. When fully operational, the NTC Botlek facility can perform just over 300 cleanings a day," says Kasbergen.

The facility is fitted with high-pressure machines, pumps and rotor jets that clean the tank from the inside out. Additionally, the facility supports a vertically-aligned air treatment system, consisting of two scrubbers and an activated carbon filter for the capturing and cleaning of hazardous vapours.

Meanwhile, the polluted water from a cleaning process is transported through drains to a collection tank where it is pumped to the wastewater treatment system.

"Developments in food cleaning will see facilities having to monitor and validate the entire process, and all the while energy will become more expensive," says Kasbergen.

Independent tank cleaning and service company Cotac has reacted to the positive market growth in tank containers.

"We have a utilisation of 80% to 90%, and at most locations we have options to expand capacity when necessary," says Tako Runia, Manager of tank cleaning operations at Cotac.

The company, which is part of bulk transport provider Hoyer, has

seven depots throughout Europe.

"For international transport companies, the relevant strategic locations are the main European seaports of Rotterdam and Antwerp, and Dormagen in the German Ruhr area," says Runia.

The Rotterdam location boasts the largest maximum capacity of the seven facilities at 40,000 cleanings a year. Its Schkopau facility in Germany can handle approximately 20,000 and has recently added two new cleaning bays.

"Over the years we have seen a growing demand for tank container services," says Runia.

"In the past, the emphasis was on accompanied transport, where the driver is always present with the equipment. Nowadays, we see a big shift to unaccompanied transport, where the depot needs to take care of the internal logistics.

"In the future, we think that tank container transport – and therefore unaccompanied transport volumes – will grow. The biggest challenge is how to optimise the internal logistics."

Runia told *Tank Container Magazine* that he also foresees

growth in tank container cleaning. It will become more important for depots to offer a "one-stop shop" to customers, where a total package of tank container services is available.

"Due to the fact that most of these transports are unaccompanied, tank containers require more attention when cleaning, and especially for repairs."

Cotac's facility in Rotterdam not only offers cleaning and depot services but also has an extensive repair workshop.

The cleaning industry is not without its challenges however. Operating on the same environmental, safety and operational standards throughout Europe can be difficult.

To reach this goal, a network of branch organisations has been created within each European country. These include The Association of Tankcleaning Companies in the Netherlands, The Commission of Tank Cleaning in Belgium, the DVTI in Germany and the NRTCA in the UK.

All European associations are, in turn, members of the European tank-cleaning organisation EFTCO.

Through EFTCO a number of standards for different classes of products in the tank cleaning industry have been developed over the years.

"Depending on the product to be cleaned, the cleaning method will vary considerably," says Runia. "Furthermore, we are also seeing that customers are requesting special requirements with regards to the cleaning process and special procedures."

Groninger's Kasbergen adds that as increasing volumes of specialty liquid chemicals are being produced in the Middle East and other regions, tank cleaning specialists are adapting their procedures, capabilities and locations.



The straight-forward and bespoke solution

Mike Wackett talks to Rob Thacker of Pound Gates, a company specialising in tank container insurance and celebrating a quarter of a century in the business

Insurance is the equitable transfer of the risk of loss from one entity to another in exchange for payment. This was the foundation of a business relationship in the late 1980s between Felixstowe-based freight forwarder Ivan Gates and Lloyd's of London insurance broker Allan Pound that was to develop into a friendship and a desire to start a business together to service specialist sectors of the marine and transport industries.

Twenty-five years later I am sitting in the board room of a large office block in the centre of Ipswich opposite Rob Thacker, business development director of Pound Gates.

It employs 30 people and has been located at the 5,400sq ft offices for six years, sharing the accommodation with sister company Sevatas – a provider of risk management, claims and damage reduction solutions to the finished vehicle logistics sector.

"Why Ipswich?" I ask. "It is ideally placed for Felixstowe – just 15 minutes by car – where the port handles 40% of the UK's container imports," he explains, adding that the county town is an insurance hub where the larger insurers maintain a presence, including numerous marine agencies.

Pound Gates has just been shortlisted for the prestigious 2014



"We have had problems with Russia for example, but by managing risk carefully we can offer bespoke solutions for territories that are difficult to arrange insurance for."

Insurance Times Awards and that this evening Thacker is taking his hard-working team out for a drink to celebrate the achievement.

However, he may have had to restrict himself to a soft drink as he is in training in for his second half Iron Man challenge this summer in Milton Keynes, building up to a

full Iron Man next year. This is all part of a self-confessed "health obsession", which has seen him run three marathons – including London where he achieved a very respectable time of 3 hours 30 minutes.

For a quarter of a century Pound Gates has been a prominent commercial broker, arranging insurance cover for a wide range of businesses and attracting clients from across the UK and, in the case of the tank container business, globally.

Tank container insurance enquiries normally stem from phone calls or e-mail and a quote is turned around in a matter of hours making good use of the in-house easy to follow IT systems.

I am here to talk to Pound Gates about a product launch for its tank container business. It is a bespoke insurance solution for companies that lease or operate tank containers and for freight forwarders involved with the movement of goods in tank containers.

Unlike general cargo loaded into standard containers, which is often not insured, here the value of the contents is such that you would not want to be exposed to the risk of something happening to the tank or its contents in the supply chain.

Furthermore, "Leasing companies

will invariably require evidence of insurance before they will let the tank container leave their depot," says Thacker.

The body representing the industry is the International Tank Container Organisation (ITCO), established in 1998 to represent and promote the industry to the public and government bodies and boasting a membership of around 120 companies worldwide.

For several years, as the industry grew, ITCO was acutely aware that the missing element within the organisation was that there no data available that recorded the number of tank containers in service.

Last year, ITCO undertook the difficult task of researching and producing the first fleet survey of tank containers. According to the data, in 2013 there were a total of 338,260 tank containers in use around the world. 228,460 of these were in service with operators. This sector is dominated by the big three global tank container operators: Stolt, Hoyer and Bulkhaul.

Leasing companies have control of fleets totalling 150,440 units with EXSIF Worldwide (42,000), Eurotainer (27,500), Seaco Global (14,200) and Cronos Group (14,400) the market leaders.

ITCO estimates that there are about 3,000 tank containers sold on annually; many are refurbished and some are sold for scrap with the value of two tonnes of stainless steel dictating the selling price.

Thacker says tank containers are, by design, inherently robust with a life span in excess of 20 years (double the average for standard containers) but continual use inevitably means there will always be a replacement need.

New demand needs to be catered for, so there is a healthy manufacturing sector. Unsurprisingly, the supply is dominated by the big general purpose container manufacturers



in China, from where, CIMC, Singamas and Nantong compete against Welfit Oddy in South Africa and other manufacturers in Spain, France, Belgium and Germany.

According to ITCO's research there were 39,670 tank containers manufactured in 2012, a total expected to have been exceeded in 2013.

Pound Gates noted that there was "no straight-forward, bespoke solution" for these companies.

Thacker explains: "Although many of Pound Gates' leasing clients look to support their lessees with insurance solutions, this becomes an extra cost of sale administration burden and, if something goes wrong outside of their control, the claim ends up being recorded and settled under the lessor's own claims experience."

So Pound Gates had "responded to these issues" calling on 25 years of experience in the tank container sector to create an exclusive product via the Lloyd's of London insurance market.

"The insurance solution provides an extensive wording, at extremely cost-effective rates, to protect tank container lessees, operators and freight forwarders for all damage

or loss to the tanks, the cargo and third party liability that flows from the use of the tanks or the cargo carried," says Thacker.

Cover often needs to be arranged at short notice to meet leasing company requirements, thus the Pound Gates TankPlus product has been designed with this requirement in mind. It allows for immediate issue of paperwork to comply with leasing company needs and those of the cargo owner.

Moreover, the reputation of Pound Gates ensures that its paperwork is accepted around the world because it is recognised as a global insurance expert in this field.

Thacker adds: "We have a long history of involvement with the tank container industry and, as insurance advisors and exclusive brokers to ITCO, we are regular attendees and contributors to industry conferences and media. We feel a product of this type is overdue and will be warmly received."

Given that many tank containers will be going to emerging market countries, did that give any problems arranging insurance coverage?

"We spend a lot of time outside the insurance placement looking at risk and profiling our clients approach to it," says Thacker. "Insurance unfortunately does not take away all the hard work required by a client once a serious claim occurs.

"We have had problems with Russia for example, but by managing risk carefully we can offer bespoke solutions for territories that are difficult to arrange insurance for."

He concludes: "Tank containers are a highly specialist piece of equipment and damage to them needs to be managed and dealt with carefully."

It is a statement that Mr Pound and Mr Gates would surely approve of.



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Emissions measurement – why bother?

Why do so many companies find it difficult to embark on a programme of transport emissions measurement, monitoring and reporting? asks Andrew Trill

This article highlights some of the principal obstacles, and some reasons – ones that make complete environmental and commercial sense – not to be afraid or to deter any longer taking action.

Nobody wants it

The most obvious reason for not measuring one's emissions is because nobody is asking you to do so. Unless a company is a listed multinational company, there is usually no legal requirement to report Green House Gas (GHG) emissions. If your company has been caught by the recent UK legislation on the mandatory reporting of GHG emissions, there is no direct requirement to include so-called Scope 3 emissions (e.g. those from contracted haulage services).

If customers are not asking you to report your emissions, there may be legal or commercial imperatives to do so.

Equally, if the Board is not requesting emissions to be reported, why bother?

Maybe tomorrow...

If your company is caught by the recently-introduced regulations on mandatory GHG reporting it is noteworthy that the guidance does allow room to interpret some other emissions sources as being

relevant for inclusion. Furthermore, the number of companies required to report GHG emissions is set to increase, not only in the UK but globally. An OECD report (May 2012) claimed: "In Japan, in 2009, over 11,000 enterprises reported their CO2 emissions under the mandatory GHG Accounting and Reporting system, accounting for about half of the total emissions of Japan nationwide".

In the US around 3,000 companies and associations have reduced the amount of oil burned since 2003 by 121 million barrels, emitting 52 million tonnes less CO2 and saving \$17 billion in fuel costs. Most transporting goods in or through France will be aware of the initiative to introduce mandatory reporting of CO2 emissions to customers.

Why report? To monitoring emission targets; for compliance with Emissions Trading Schemes; for public awareness, customer and investor information; to encourage GHG reduction programmes within firms. It's clear that the introduction of mandatory reporting of GHG emissions is increasing.

Partly motivated by public opinion, corporate social and environmental policies, political and legislative pressure, more companies are requesting a report on their Scope 3 GHG emissions, often as part of a contract tender



process. This allows decisions to be made on emissions performance records as well as price and service.

Although not essential, GHG emission reports may soon be mandatory so early preparation could be a shrewd move.

It costs too much

It can be costly in terms of time, resource and investment, to collect and collate the data required to measure GHG emissions. Gathering the information and entering it into a calculation tool may require a new business procedure, needing cooperation from drivers and other staff.

Even if automated, agreements may still need to be reached with staff - particularly drivers and drivers' representatives who may resent monitoring. They might fear their emissions performance (which correlates to fuel consumption) could impact

their pay and conditions.

In freight transport, where over 30 per cent of the freight rate is to cover fuel costs, firms may be reluctant to provide customers with too much information if they think it could be used in contract negotiations to reduce the freight rate.

It doesn't have to

It is true that one of the most difficult task facing companies that want to measure their GHG emissions is collecting the data on which to base the calculation. The best data is 'primary', ie, that which comes directly from the truck operator. They are best placed to know exactly what distance was travelled, what tonnage was being carried for each legs of the journey, what fuel was consumed and the type of vehicle used.

People are more aware of the need to measure and monitor emissions, and the importance of reducing them as much as is practical. Employees will be more willing to accept data collection as part of their job as it is, perhaps, linked to an internal competition or a reward system rather than a penalty system.

A growing number of customers want to reduce Scope 3 emissions because they have a corporate requirement to reduce their own environmental footprint. Many firms offer help to their carriers to find ways to reduce emissions. Ultimately, help is only possible from customers if there is visibility over current emission levels and emissions performance.

Analysis of the results will identify the causes of higher emissions and lower performance (e.g. kgCO₂/tonne-km) by comparison with other parts of the operation. It is not usually in the interests of the customer to use emissions reduction targets as a means of reducing the freight rate: by



working with carriers they get the service, at a competitive and sustainable price, with the emissions reductions they want. The carrier gets a customer that is more likely to stay with them having invested time and resource to collaborate on the issue. The programmes, tools and software available are not expensive, especially compared to in-house system development.

But which tool or programmes is right? The choice depends on what is important to a company.

Some tools base their calculations on estimates and averages. Others enable primary data to be used based on actual work done, increasing the accuracy. Some enable benchmarking by providing a calculation methodology that adheres closely to international standards, a scoring methodology and common reporting standards. Others use their own methodology and more bespoke reports. Some tools are somewhat less transparent than others.

Some programmes cover just CO₂ emissions, others include CO₂ and GHGs with 'equivalent' global warming properties (CO₂e) like carbon monoxide, while others include other GHGs and particulates. Some measure emissions from well to wheel, others tank to wheel. Other programmes offer platforms for networking with like-minded peers, sharing best practices and verifying under test and real-world conditions the emissions-reducing claims of various

technologies and practices. Some schemes cover single modes of transport; others multimodal.

Whatever the needs, there will be a programme or tool. For those interested in benchmarking CO₂e emissions, and therefore requiring a common methodology, the programme offered by Green Freight Europe (GFE) may be appropriate.

The right tool

It covers road freight operations and enables primary data input and estimates to be used and enables for the first time a single emissions performance result for a door-to-door, multimodal operation or supply chain. It also provides a platform for sharing and verifying best practices. It is a not-for-profit programme funded by member subscriptions.

Members comprise a growing number of highly influential companies, along with knowledge partners (academics, consultants, research institutes and other experts) providing authenticity and international credibility to the programme. Members include chemical companies and carriers such as Dow, LKW Walter and Hoyer.



Dr Andrew Traill, has over 20 years' experience in public representation and public affairs in the international freight sector. He

has worked for trade associations, covering developments in all modes of freight transport, competition, trade facilitation, supply chain security and environmental sustainability policy. Andrew is an advisor to Green Freight Europe (GFE) and secretariat of the UK & Ireland branch of GFE. He can be contacted at atraill@greenfreighteuropa.eu or andrew.traill@shippersvoice.com

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