

## OPERATOR

Kerry-ITS reflects on becoming the leading Asian depot operator

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Size matters as China dominates tank container manufacturing

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ITCO's latest global fleet survey highlights oversupply

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# Tankcontainer

## MAGAZINE

Volume 3 | Issue 3 | JSeptember 2016



**Singamas**  
Jan van Opstal, Principal of  
its European agency, Flax Field,  
on the Chinese manufacturer



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Quality Distribution, a North American logistics and transport provider has acquired Isotank Group UK for an undisclosed sum. Isotank, led by Colin Garnett, is an intermodal tank container and depot services provider with seven locations throughout the country, and will become part of the company's intermodal business, Boasso America.

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Editor Leslie McCune discusses major tank container manufacturer Singamas with Jan van Opstal, Principal of Flax Field B.V., Singamas' Netherlands-based European agency



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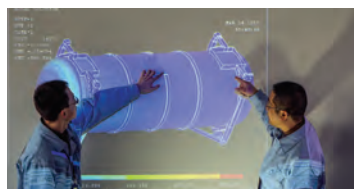


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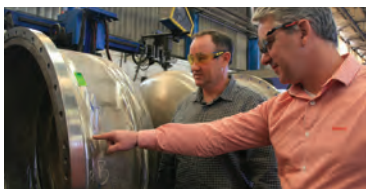


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# The China Syndrome



This issue of *Tankcontainer Magazine* focuses on Asia, where the driver of growth remains – unsurprisingly – China, the world's second largest economy. Economic expansion of 6.9% in 2015 was the lowest in 25 years, while growth in the first half of 2016 was 6.7% (at least according to China's National Bureau of Statistics).

However, in terms of absolute growth, China's growth remains formidable, particularly compared with the paucity of global alternatives.

The question for tank container operators and leasing companies is how to translate China's still-robust 6.7% gross domestic product (GDP) growth into profitable and sustainable business opportunities.

Key to understanding this is to appreciate that the demand growth for the specialty chemicals typically moved in tank containers is invariably significantly higher than GDP. The premium depends on the stage of development of the market, but for specialty chemicals, the growth premium is typically 1.5%-3% above that of intermediate and commodity chemicals, which themselves grow at a greater rate than GDP.

In chemical sales terms, China is the size of the North America Free Trade Association and the European Union chemical sales put together. Put another way, China's sales of \$1,200bn are as large as the next six largest countries combined – these include (in order) the US, Germany, Japan, South Korea, Brazil and France.

Growth in China is of a new quality, with GDP growth underpinned by substantial state sector investment – and a credit spree – over the past few months. Private sector fixed-asset investment increased at only 2.8% in the first six months of 2016 – a record low – while state sector investment grew by 24%, suggesting that the state sector is, perhaps unsurprisingly, benefiting most from the major flows being pumped into the system by government.

The economy will be more dependent on consumer and service-led demand rather than on exports and heavy industry. A fundamental question is whether or not this is good or bad for the tank container sector.

For any genuinely global tank container operator, Singapore and China are essential investment locations in Asia. In Singapore, the petrochemical hub of Jurong Island is equivalent to Jubail in Saudi Arabia, Rotterdam in Europe and Houston in the US.

Singapore remains a pivotal location for tank container operators looking to access China. There are also other attractive opportunities in South-east Asia, such as the petrochemical complexes in Thailand and in Kuantan, Malaysia, from where BASF Petronas moves, for example, highly temperature-sensitive glacial acrylic acid. Petronas's large planned petrochemical complex in Johor, Malaysia – across the Johor Strait from Singapore – will add to the existing tank container market opportunities offered by local companies, such as Lotte, Idemitsu and Dairen, when it is completed in 2019.

A comprehensive chemicals logistics hub in Asia would, as in the rest of the world, include tank container storage and heating, dangerous goods bulk transport and storage, blending, drumming and re-packaging. Local tank cleaning would also be available.

In this issue, we review the depot operations, economics and market pressures on Singapore-based Kerry ITS. We also look at ITCO's 2016 global tank survey, the most authoritative assessment of the global tank container fleet and manufactured output.

The tank container industry has clearly taken advantage of very low-priced tank containers and historically low interest rates to expand, renew and replace its fleet. Low tank container prices have also reduced the barriers to entry into the industry, resulting in several new entrants. Many of these have leveraged their recently purchased low-cost assets to offer discounted rates to build rapid market penetration.

Some argue that, as in the oil and petrochemicals sectors, supply-push strategies by tank manufacturers with surplus capacities have led to the profitability of the entire industry being eaten away.

Others say that the combination of low-cost tank containers, low-cost freight rates and low-cost financing has led to low-cost daily rates, making the use of tank containers more commercially compelling. That would be true if the costs of the nearest alternatives to tank containers – drums and chemical parcel tankers – had remained unchanged. They haven't, meaning that the relative cost advantage of tank containers has not altered.

The Chinese word for 'risk' is made up of two characters, which signify 'danger' and 'opportunity', making risk a mixture of the two. China remains a compelling market opportunity for tank containers, but is not without its dangers. As the Chinese curse goes: "May you live in interesting times".

**Leslie McCune, Editor**

(Leslie McCune will be attending the EPCA, Budapest, 1-4 October 2016)





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# Isotank takeover by US firm Quality Distribution

Quality Distribution, a North American logistics and transport provider has acquired Isotank Group UK for an undisclosed sum.

Isotank, led by Colin Garnett, is an intermodal tank container and depot services provider with seven locations throughout the country, and will become part of the company's intermodal business, Boasso America.

Tony Morsovillo, president of Boasso America, said: "We believe Boasso's operating strength and capabilities will complement Isotank's highly respected business, and allow us to provide our customers with broader coverage and services in the coming years as we grow internationally."

Morsovillo continued, "Colin and



his business partner Bob Bayliss have done an outstanding job building and running Isotank, and we are delighted that they both have agreed to stay on board after the takeover.

"We look forward to growing within the UK and European markets, as we jointly serve our existing customers as well as attract new customers to the market leading services we can

collectively provide."

Quality Distribution is headquartered in Florida and operates the largest chemical bulk logistics network in North America through its wholly-owned subsidiary, Quality Carriers, and is the largest North American provider of intermodal tank container and depot services through Boasso America.

Isotank operates the UK's largest integrated tank container transport, cleaning and depot services network with seven depots and offices across the country. Established over 30 years ago, Isotank employs over 270 experienced professionals and provides market leading services to its customers.

## VTG invests in 1,300 new tank containers

VTG Tanktainer GmbH is launching a new project which has seen 1,300 tank containers built and delivered since May this year.

Managing Director of VTG Tanktainer GmbH, Heike Clausen said: "With this new build program, we're reacting to the current market situation and simultaneously prepare for the future."

To satisfy the various technical requirements of each customer quickly and flexibly, the company is producing tank containers which conform to high-quality unit specifications.

VTG Tanktainer will, therefore, satisfy the expected market, customer and safety requirements in the coming years.

About 1,000 standard T11 20' tank containers were built by Chinese company Singamas, a worldwide leading supplier of tank containers. These new-builds will be primarily used to meet the demands of the Asia market, where market demand remains high.

VTG has also commissioned the construction tank containers in South Africa and Belgium which, for example, are fitted with integrated surge plates or electric heating or which would allow the transportation of hydrogen peroxide.

Altogether, VTG has invested around €18 million in the new-build program. This measure demonstrates the company's



commitment to safety and quality.

Heike said: "Our customers are not the only ones who expect state-of-the-art equipment.

"We have of course made it our mission to transport highly sensitive goods of this sort in the safest way possible. That's where our competence lies."



# Tank Container Directory

## 2016 Edition

Full of updated and fresh information with addresses and contact details, 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.



## Hamburg logistics company grows for 3rd consecutive year

The logistics company HOYER has closed the fiscal year 2015 with new record figures despite a difficult market environment. The firm has shown an increase in turnover by 7% to €1.182m in 2015.

The EBIT reached €49.4m compared to €43.9m in the previous year. In the bottom line, the company €31.1m – an increase of around 12% compared to the previous year. HOYER has succeeded in growing its turnover and earnings for the third consecutive year.

Chief Executive Officer of the HOYER Group, Ortwin Nast said: "Due to challenging market conditions it was not always easy to hold our ground in the highly fragmented competitive



environment. Nevertheless, we again successfully increased turnover and profits, and set new record figures. The decisive task in the future will again be to create sustainable

returns, optimise processes and slim down structures."

The number of employees has also grown. The company employed a total of 5,663 staff in 2015.

## Eurotainer introduces 37,000ltr swapbodies



Eurotainer has taken delivery of new 37,000 litre capacity tank containers in China.

These tanks are built for domestic Chinese service and are the largest capacity liquid, swap body type tank containers in the Eurotainer fleet.

The initial order was for nine units which have now been followed by several additional orders as demand for this new design is high in China.

They are also the largest capacity liquid type ISO tank available in

the Chinese domestic market.

This new design uses the latest developments in tank container engineering and construction to maximise capacity, reduce tare weight to deliver optimal shipment quantities, increase storage capacity and lower overall supply chain costs for clients.

## Pelican appoints new manager for Turkey

Pelican Worldwide has appointed Atilla Odabasi as its new general manager in Turkey.

The office serves Pelican customers in Turkey, Azerbaijan, Egypt, Iran, Israel and Saudi Arabia and has the use of a warehouse stocked with a range of products for immediate availability.

"This office/warehouse in Turkey expands our global network of companies within the Pelican Group to the customer's advantage. Our

goal continues to be the source for all tank needs with quality products and short delivery times all around the world," says Pelican.

## Triton/Tal International merger is finalised

Mergers among container leasing firms continue apace after Triton Container International and TAL International Group announced this month they had completed their combination to form Triton International Limited, instantly making it the world's largest box lessor with around 5 million TEU.

In another deal completed in recent months, two Chinese lessors, Dong Fang and Florens, tied the knot.

Both moves followed last year's merger between Seaco and Cronos, after Cronos was acquired by Bohai Leasing, Seaco's parent group.

On the basis of combining Triton



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and TAL, the revenue earning assets of the new giant would be US\$8.7 billion on an estimated global container market share of 25%.

The newly formed company expects to achieve \$40 million in annual cost synergies, it said, prior to commencing trading on the New York Stock Exchange. In accordance with the terms of the agreement, Triton shareholders own approximately 55 percent of the equity of the combined company and TAL shareholders own approximately 45 percent.

TAL shareholders became entitled to receive one common share of TIL

for each share of TAL stock owned on the closing of the merger.

Chairman and CEO Brian Sondey stated: "We are pleased to close this transformational transaction and look forward to capitalising on the significant operating and financial benefits of the combination to provide an unmatched level of service to our customers and create long-term value for our shareholders."

Both lessors have substantial fleets of standard dry box containers. But whereas Triton's special containers were focused on open tops, flat racks and reefers,

TAL also brings some 10,000 tank containers to the party.

## CS Leasing opts for Nipuna in India

Specialist container lessor CS Leasing has appointed Nipuna Containers LLC to cover the Middle East and Indian subcontinent for tanks and specials. Archana Jayakrishnan area manager, said: "I am looking forward to using my knowledge to expand the reach of a company that matches our own focus on customer service and market knowledge."

## RSA-Talke opens 'unique' hub in Jebel Ali Free Zone

RSA-TALKE has completed the first phase of its integrated chemicals hub in Dubai's Jebel Ali Free Zone.

The facility is unique in the region in terms of the standards and the range of services offered and complements the existing state-of-the-art hazardous materials warehousing capacities in Dubai South.

The centrepiece of the inaugurated first phase of the chemicals hub is storage and transshipment capacity for up to 1,800 TEU – designed for empty or laden ISO tank containers with class 3, 6, 8 and 9 hazardous substances or non-hazardous chemicals.

In addition to the purpose built warehouses in Dubai South, which were constructed in accordance with international safety and environmental standards, RSA-TALKE also offers cleaning, maintenance, inspection and certification services for ISO tank containers.

"As the chemical and petrochemical companies here in the Gulf region increase their degree of vertical integration, their demand for comprehensive, professional specialist logistics services is



increasing too", says Richard Heath, director at RSA-TALKE.

The complex is part of a comprehensive, modern chemical logistics centre in Dubai, an important transit hub for the region.

In its second and final phase of development, plants for drumming hazardous and non-

hazardous liquid chemicals will be constructed at the site, as well as a warehouse for packed products. Hence, RSA-TALKE supplements and expands the existing equally ultra-modern warehouses for hazardous and non-hazardous chemical and petrochemical products in Dubai South.





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## Quaker and Den Hartogh extend contract

Quaker Chemical and Den Hartogh Liquid Logistics have signed a three-year contract extension covering bulk liquid transport in and out of Quaker's facility in Uithoorn, the Netherlands.

"This prolonged contract formalizes the confidence we have in the services provided by Den Hartogh," says Quaker's global operations director, Henk Struiwigh.

"Both the Den Hartogh team on-site, as well as the drivers making the deliveries to our customers live up to the expectations we have of a lead logistics service provider."

## Klinge Corp begins production of tank container reefer unit

Klinge Corporation announced that production of a new model of its standard tank container refrigeration unit, the 7-kilowatt TCR-110, has begun, and the first units are coming off the production line in August 2015.

The TCR-110 is also available as an explosion proof reefer unit that is certified to the ATEX Directive, which provides safety guidelines for equipment used in potentially explosive gas atmospheres. The TCR-110-ZII is for use in hazardous Zone II and has the same 7-kw capacity as the TCR-110.

Both the TCR-110 and TCR-110-ZII are available in dual versions in which the refrigeration system is redundant. The controllers communicate to make sure that the back-up unit will start if needed. One unit is mounted on each side of the tank container.

Klinge has also launched a 12-kw heater module for the new TCR-110 7kW unit. This new module is available as of July 2015. Similarly,

a heating-only unit, the TCH-112, is also available with a full enclosure.

Founded as a spin-off of the Transport Refrigeration Equipment department of York International, Klinge has been producing refrigeration equipment at its manufacturing facilities and headquarters in York PA for 30 years.

The company's customized designs offer commercial and military customers robust alternatives to standard, mass-produced refrigerated containers that often cannot meet requirements of harsh environments or stringent testing.

Klinge offers dual reefer containers, offshore explosionproof reefer containers, reefer tank containers, blast freezers, ultra-low-temperature units, quick-thaw units, integral and external generator sets, and collapsible food storage bins.

## PESA honours Hoover chairman



Hoover Container Solutions' chairman and CEO, Donald Young, has been nominated and elected to the

Petroleum Equipment & Services Association (PESA) Advisory Board for a three-year term.

PESA's leadership is comprised of experienced industry executives dedicated to advancing priorities of the service and supply sector. The role of the PESA Advisory Board is to offer insight to the PESA Board of Directors and staff, promote PESA participation within their own companies and strengthen PESA's member ranks via personal industry connections.

Donald Young has been

chairman and CEO of Hoover Container Solutions since 2008. Young is confident serving on PESA's Advisory Board will bring new opportunities and positive collaborations with fellow industry leaders. Hoover Container Solutions values PESA's representation of the energy industry's oilfield service, supply and manufacturing companies and PESA's promotion of development in innovative technologies, advocacy for policies that support U.S. energy production and all efforts to properly equip decision-makers with knowledge that support the energy industry's role as a driver of the U.S. economy. "I am thrilled and honored to be named a member of PESA's Advisory Board, and look forward to contributing positively to PESA's efforts on behalf of Hoover Container Solutions" says Young.

The Advisory Board meets quarterly to determine strategy and direction for the association and to identify members for committees and task force groups. The Advisory Board and Board of Directors also meet jointly at the PESA Annual Meeting, next held April 19-21, 2017, at The Ritz Carlton Dove Mountain in Marana, Arizona.

## EXSIF launches automated tank test approval website

This new initiative, which went live in May, is part of an ongoing effort to provide our customers and business partners with superior service and solutions for managing periodic tank testing inspections.

The new automated system is user-friendly and offers 24/7 connectivity to our tank testing database ensuring real time testing confirmation and approval.

The company said: "Our service center in Purchase, NY, will however remain accessible to deal with any specific requests or requirements.



## Your View: dangerous polymerisers – flow capacity through the pressure relief system on tanks

Dear Sir,

Astute and conscientious readers of your columns will be aware that four new UN numbers will be added to the Dangerous Goods List of the modal regulations from 2017.

These are: UN 3531 POLYMERIZING SUBSTANCE, SOLID, STABILIZED, N.O.S.; UN 3532 POLYMERIZING SUBSTANCE, LIQUID, STABILIZED, N.O.S.; UN 3533 POLYMERIZING SUBSTANCE, SOLID, TEMPERATURE CONTROLLED, N.O.S.; UN 3534 POLYMERIZING SUBSTANCE, LIQUID, TEMPERATURE CONTROLLED, N.O.S.

Let me say straight away that I fully support the decision to provide classification criteria for the inclusion of such substances in the regulations. As I write they will be allocated to Class 4.1 though there is still a query going on as to whether this is the right class for them – some would support inclusion in Class 9 instead. At the same time we are going to be faced with the situation where these substances which heretofore could be transported as non-dangerous suddenly become dangerous goods. I hasten to add that I do not have any idea (nor I guess do others including competent authorities) how many substances will be caught up in these changes though one assumes that divinyl benzene will be one.

Come what may, readers interested in these developments may like to note that for transport in Portable Tanks, the T-code T7 has been allocated to them. For operators of Portable Tanks in the form of the ISO tank container, this is not too much of a problem in itself, I suggest. However where difficulties could potentially occur surround the decision of the UN Subcommittee of Experts to assign

Portable Tank Special Provision TP6 to these four entries. TP6 states:

"To prevent the tank bursting in any event, including fire engulfment, it [the Portable Tank] shall be provided with pressure-relief devices which are adequate in relation to the capacity of the tank and to the nature of the substance transported. The device shall also be compatible with the substance."

This rule will require, effectively, the determination of the quantity of vapours which could be produced once a polymerisation reaction starts to ensure the pressure relief devices have sufficient flow capacity to allow them all to escape and to prevent bursting. Consignors and operators of tanks arguably should start right now determining what flow capacity is needed should polymerisation start and if the tanks currently in service are not provided with sufficient flow capacity alternative tanks substituted or the existing tanks modified. Either way time will be needed to source replacement tanks should that be necessary or to modify existing tanks.

Now, I hope I am not being alarmist and that e.g. it will be found that the flow capacity on existing portable tanks is sufficient to meet the requirements of TP6. However extended transitional arrangements have been provided to meet TP6. In extremis I could imagine that at least two years may be needed (a) make the flow rate calculations (b) ensure there is sufficient lead time so to source suitable pressure relief devices and then (c) either to then fit the devices to newly constructed tanks or burn holes in existing tanks where the additional and/or larger devices can be fitted. Behind all this may be a need for owner/operators to find the finance to fund the conversions

or build new portable tanks.

As it stands at this moment, a 12 month period is all that is allowed to achieve all this for anyone wishing to transport these new dangerous goods by sea (IMDG Code). Anyone needing to use rail, road or inland waterways transport in Europe (RID/ADR/ADN) will only get six months to make the changes.

There is a further complication in all this. In Europe we have another set of provisions for the transport of dangerous goods in tanks found in Chapters 4.3 and 6.8 of the RID and ADR. In response to the decisions taken by the UN Subcommittee of experts, the RID/ADR/ADN Joint Meeting had to allocate a European tank code for the transport of these materials. There is no direct equivalent in Chapter 4.3 or Chapter 6.8 to the TP6 assigned to UN portable tanks so their experts came up decided to add the term "(+)" to their chosen tank codes as a form of equivalency to TP6. Hmmm. This term effectively either means that you have to use tanks dedicated to the transport of just one substance or at best a few similar substances – see 4.3.4.1.3 of RID and ADR. I ask whether this is a regulation too far for these substances – to go from non-regulated up to 31.06.2017 when the normal transitional period ends to being regulated in this way?

I am told that no consideration was given either by the UN Subcommittee or the RID/ADR/ADN Joint Meeting to extending the normal transitional periods, by the way.

Anyone who may be concerned about these issues ought to contact their modal competent authorities as soon as they can.

**Yours sincerely,  
Roy Boneham, Principal Consultant**

We are confident this new system and its ease of use will provide significant

benefits enhancing the overall experience of working with EXSIF globally."

## Dow, RSA-Talke supply chain partnership

Chemicals giant Dow and Dubai-based logistics operator RSA-Talke are strengthening their supply chain partnership in the Gulf region. The growing partnership highlights the increasingly important role Dubai plays in international chemical logistics.

A contract for the storage of chemical products manufactured by Dow from various production sites globally was signed in June by an affiliate of Dow Chemical Company and RSA-Talke, under which the logistics company will receive and store the products in its specialised chemical warehouses located at the Aerotropolis, also known as Dubai South.

RSA-Talke's complex there has been designed to store chemicals and petrochemicals to the highest international standards. The company – a joint venture between Dubai-based RSA Logistics and the German Talke Group – caters to the demand of customers from the chemical and petrochemical industries in the Gulf region.

"The signing of this significant agreement with Dow has again confirmed the interest of our customers in our strategy of providing a full service portfolio for chemical logistics in Dubai," explained Richard Heath, director Middle East & USA at Talke and director of RSA-Talke.

"We have worked hard in the past couple of years to create top quality facilities based on the highest international standards and the journey continues with

the very recent opening of our integrated chemicals hub in Jebel Ali free zone," added Abhishek Ajay Shah, managing director at RSA Logistics and also director at RSA-Talke.

Dow Middle East and Africa associate director of logistics and international trade Ihab Elia said the petrochemical giant sees the Middle East as a core region in its business model, whether for local production or as part of its global supply chain.

"RSA-Talke will play an integral part in Dow's growth story, as we progress and drive to ensure we work with world class service providers with the right focus on safety, value, and quality," he commented. He added that "this partnership is not new but an expansion on the trust built and established between our entities through historic and current operations. We look forward to achieve further successes in the future."

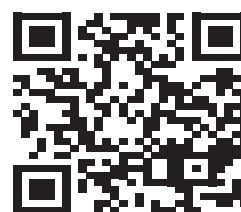
The recent inauguration of a large tank container terminal for chemical goods in the Jebel Ali free zone (JAFZA) rounds off RSA-Talke's concept.

"With the integrated chemical hub, designed around ISO tank container storage and complemented by associated services, we are completing the picture as far as a full range of services is concerned," continued Abhishek Ajay Shah. "We can now handle liquids and solids, hazardous and non-hazardous, packaged or bulk to support chemical manufacturers in the whole of the Gulf region."

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The international logistics company HOYER is a worldwide market leader in moving liquids by road, rail and sea. Wherever they may go, HOYER will get chemicals, foodstuffs, gas and mineral oil to their destinations safely and efficiently in tank containers, road tankers, flexitanks and IBCs. HOYER also has numerous logistics facilities with depots, cleaning stations and workshops. More than 115 representative offices throughout the world ensure a reliable and smooth transport process.



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This latest Dow contract followed the completion of the first phase of RSA-Talke's integrated chemicals hub in JAFZA. The facility is claimed to be unique in the region in terms of the standards and the range of services offered and complements the existing state-of-the-art hazardous materials warehousing capacities in Dubai South

this substantial investment fits perfectly in the strategic framework of our portfolio."

With the closing of the transaction, Kuehne Holding AG becomes VTG's second-largest shareholder.

## Camlock couplings from Elaflex's own production



## WL Ross completes VTG divestiture

WL Ross & Co has announced that its affiliate, CEW Germany GmbH, has sold approximately 20% of the outstanding shares in VTG Aktiengesellschaft to Kuehne Holding AG. Terms of the transaction were not disclosed.

This latest transaction completes the €358m divestiture of VTG shares previously held by WL Ross.

Funds managed by WL Ross, the distressed private equity arm of Invesco, originally acquired VTG from TUI AG in 2005.

Stephen Toy, Co-Head of WL Ross, said: "VTG has been an outstanding business since we made the initial investment and we are pleased to achieve this outcome for our investors."

Wilbur Ross Jr, Chairman of WL Ross, added: "VTG has been an excellent investment for us. But now that it is so large it deserves a broader base of shareholders."

Karl Gernandt, Executive Chairman of Kuehne Holding AG, said: "We strongly believe in the sustainable and quality-based performance of the VTG business and confident that

Refuelling equipment manufacturer Elaflex now supplies a full range of Cam Locking Couplings from its own production, guaranteed to EN 14420-7 standard in every regard. They are reliable, leakproof and operationally safe.

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Apart from the commitment to comply or exceed the EN standard requirements, the new coupling design also features new rugged and ergonomically shaped levers for improved handling.

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## Takeover will boost Brenntag footprint in South Africa

Brenntag, the global market leader in chemical distribution, is strengthening its presence in the South African chemical distribution market by signing an agreement acquiring Warren Chem Pty Ltd. The Cape Town based company is a leading specialty chemicals distributor focusing on the Pharma and Food industries in South Africa.

Member of the Board of Management of the Brenntag Group and CEO Brenntag Europe Middle East and Africa, Karsten Beckmann said: "Brenntag's

strategy is to become a leader in the chemical distribution market in South Africa, the largest market in the African region. The acquisition of Warren Chem perfectly matches this strategy as it complements our existing business in the country. Together with our subsidiary Multisol and the specialty distributors Lionheart as well as Plastichem, both acquired in 2015, Brenntag now holds a strong foothold in the Food, Pharma, Plastic & Rubber and Lubricant industries in South Africa. This is



an excellent platform for further growth in the country and beyond."

Warren Chem is an established chemical distributor mainly servicing the Pharmaceutical and Nutraceutical as well as the Food & Beverage industry and perfectly complements Brenntag's existing product portfolio. Its broad supplier basis includes major international companies. Warren Chem maintains modern warehouse and distribution facilities in Cape Town and Johannesburg, and is well positioned to meet the increasingly strict national and international regulatory requirements of the Pharma and Nutrition market.

Brenntag Group's Managing Director Mergers & Acquisitions, Anthony Gerace said: "The complementary product and supplier portfolio of Warren Chem and Lionheart form a Life Science business unit in South Africa that will be competitively positioned in both the Food and the Pharma industries, which are strategic focus sectors for Brenntag in Southern Africa. The Life Science sector is attractive as it has high growth potential. South African companies are growing in South Africa and expanding into the Sub Saharan region due to the increasing demand from the emerging middle class. This environment offers great potential for Brenntag to further grow its business."

The acquired business generated sales of €26.6million in 2015. The transaction will be closed in the course of the next months.

## Weight savings and increased payload

Den Hartogh Logistics has introduced to its fleet a new type of composite tank container that reduces freight cost by 5 to 10% per trip.

The containers have been developed by Tankwell, using Atlac® 5200 FC resin from Aliancys.

Last year Tankwell introduced a technology for manufacturing high quality composite tank containers.

Managing Director Casper Willems said: "The entire tank is made in one filament winding step, instead of the traditional method of combining separate end-caps onto a circular filament wound core. This means the wall thickness of the composite tank is lower than for comparable composite tank structures. For our tank containers an external frame is incorporated in the overall design, resulting in an assembly with excellent rigidity and mechanical integrity. The manholes, valves and auxiliary components are still standard parts in metal and are nicely integrated in the composite structure."

Commercial Director at Den Hartogh Logistics, Jacco van



Holten said: "These newly designed tank containers will transport 2 metric tons of product more on every trip. Freight cost is dropping by 5 to 10% as a direct result. Together with this significant increase on payload, comes the saving on actual loading and unloading operations. More payload simply means less transport movements, less CO2 emission, less physical handlings, less congestion, less risk."

The newly constructed composite tank containers have a 40% better thermal insulation compared to stainless steel tank containers. Jacco added: "The need for re-heating of the product, prior to the customer delivery, is eliminated with these composite tank containers. This results directly in huge savings on heating costs, but also here a significant indirect effect on improved safety performance and on time delivery at the final customer is to be expected."

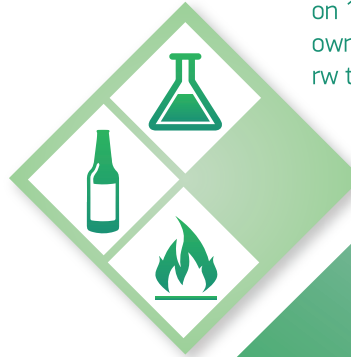


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# Singing the praises



Editor Leslie McCune discusses major tank container manufacturer Singamas with Jan van Opstal, Principal of Flax Field B.V., Singamas' Netherlands-based European agency

## of Singamas

**LM:** From a global perspective, where does Singamas rank in terms of the total number of manufactured containers?

**JvO:** Singamas is the second largest global container manufacturer but ranks third in the world in terms of the total number of ISO tank containers manufactured. The company has an annual production capacity of 1,000,000 TEU.

**LM:** How many Singamas factories are there and are they all in China?

**JvO:** Singamas has a total of ten factories and all of these are located in the People's Republic of China. They are distributed over the Shanghai, Qidong, Tianjin, Qingdao, Xiamen, Huizhou, Ningbo and Yixing regions.

These factories produce dry freight containers, refrigerated

containers, collapsible flatrack containers, bitutainer, tank containers, 53' US domestic containers and specialised offshore containers.

However, while there are ten factories, only one manufactures ISO tank containers.

**LM:** Would Singamas consider manufacturing tank containers outside China?

**JvO:** So far, there is no plan to manufacture outside the People's Republic of China.

**LM:** When did Singamas start manufacturing ISO tank containers and why did it start producing them?

**JvO:** Production of ISO tank containers started in 2006 because Singamas wanted to expand its product portfolio and had forecasted growing demand in the tank container market. The route chosen for market entry was to engage Flax Field in Rotterdam to provide not only the technology and know-how necessary to establish the manufacturing entity but also to provide ongoing product development with international sales and marketing activities.

**LM:** How many ISO tank containers have been

manufactured by Singamas?

**JvO:** Since the start of production, a total of approximately 50,000 tank containers have been manufactured. Singamas can manufacture 6,000 tank containers each year based on one shift.

**LM:** What is the range of ISO tank containers manufactured?

**JvO:** For ISO tank containers, we manufacture from 16,200 litres to 26,000 litres with other non-ISO tank containers in the range of 7,600 litres to 38,000 litres. The range is complemented by additional features such as electrical heating systems, cooling systems, lined tanks, super-insulated, ASME U stamp type and DNV-approved units.

**LM:** What is the range of customers that Singamas manufactures tank containers for?

**JvO:** Singamas supply to a diverse customer base. These include the major global operators, chemical and food producers, offshore operators and leasing companies, all of whom are looking for innovation and relationship-driven manufacturing partners.

**LM:** What other logistics businesses



does Singamas have?

**JvO:** As well as container manufacturing, the Singamas group also runs ten container depots. Two of these are in Hong Kong and eight are in the People's Republic of China. The group also runs a logistics company in the Xiamen region of China, which was opened in 2001.

Singamas has a string of depots and terminals stretching from northern China to Hong Kong and these have a total area of 1.2 million m<sup>2</sup> and a daily storage capacity over 150,000 TEU.

**LM:** How much of Singamas' \$1.1 billion of 2015 revenue was accounted for by ISO tank containers?

**JvO:** ISO tank containers accounted for about 10% of the Group's total turnover.

**LM:** Singamas posted profit warnings in November 2015 and June 2016. It is expected to report a loss of over \$25 million in the first six months of 2016 compared with a net profit of \$10 million for the same period in 2015. What caused the reversal and how will the company's focus change?

**JvO:** Sluggish global economic

conditions continue to affect global trade and exports from China. This in turn affected the demand for - and the average selling price of - new dry freight containers. The expected loss in the first half of 2016 is mainly attributable to low turnover and a low gross profit margin.

**LM:** What percentage of Singamas' total production costs were direct labour costs in 2015?

**JvO:** I would say about 7.5%.

**LM:** Are most raw materials sourced from China?

**JvO:** Containers have been manufactured in China for a long time now. As such, they can be viewed as relatively mature products from a manufacturing standpoint. As a result, most raw materials for tank container manufacture are sourced from within China. All these raw materials are accepted by our container customers.

In general, the customers' requirements define which specification, raw materials and the source of the raw materials.

**LM:** How is the manufacture of specialised units different to

that of standard containers?

**JvO:** The manufacture of specialised units needs much more customer interaction, more intensive engineering, greater prototype testing and more approvals. Compared to standard production, specialised tank containers tend to require different materials, different processing and checking, and different facilities and certificates.

**LM:** How was Singamas affected by the tragic Tianjin explosion in August 2015?

**JvO:** From the operational perspective, the effect was minimal as it only affected one of our depot operations - the one in Tianjin itself. However, Singamas - due to commercial considerations - has compensated our customers for the containers damaged in the explosion.

**LM:** Is container demand in general driven by freight rates or by export volumes from China?

**JvO:** We think the primary driver of overall container demand is the global economic environment. When it prospers, so too does the global tank container industry.





Jan van Opstal  
C.V.

Jan van Opstal, together with Damian Smith, is the Principal of Flax Field Trading B.V., which was established as an agency in 1999. Both previously worked for South African tank container manufacturer Consani. Flax Field in Rotterdam is Singamas' partner in the design, manufacturing and sale of tank containers. The company's activities include a full service facility offering repairs, maintenance, testing, modification and cleaning on a purpose-built site in the heart of the Rotterdam port area in the Netherlands.



**LM:** How seasonal is demand for new ISO tank containers?

**JvO:** Usually the peak season is in the first and fourth quarter of every year.

**LM:** What are the drivers of demand for new ISO tank containers?

**JvO:** The drivers of demand are the replacement of old tanks containers with new ones and a flourishing global economy, especially for chemical sector. In addition, the change of production locations for finished products is having a significant effect.

**LM:** How have customer preferences changed?

**JvO:** Due to the fierce competition in the market, customers hope that tank containers are built not only more economically but also with good quality. Due to the integration of platforms and changing regulations, customers are demanding more in-service advice and support over the lifetime of the container. Singamas are well-positioned to fulfil these needs with the support infrastructure of their partnership with Flax Field, who are situated on one of the most intensive tank container service locations in Europe.

**LM:** What are the future growth

opportunities in the ISO tank container market from a manufacturer's perspective?

**JvO:** There will be further growth opportunities coming from technical innovations, reduced maintenance costs for tank containers, tare weight savings and increased tank capacities that will be achieved by using different materials. We will also see more systems integration, 'smart' and traceable containers and the introduction of 'The internet of things'.

We expect 2016 and 2017 to be flat from a demand perspective but we have an expectation that 2018 will show some signs of improvement.

**LM:** What have been the major innovations at Singamas?

**JvO:** A number of innovations come out of our ongoing development programmes but an example of a major innovation would be the development of lightweight tank containers with a maximum gross rating of 39 tonnes.

**LM:** How is Singamas positioning itself for the 'One Belt One Road' regional growth project, one of China's key foreign policy priorities?

**JvO:** The concept of 'One Belt One Road' provides many opportunities

for different industries. Singamas, being one of the logistic operators, has reached an agreement with Guangxi Beibu Gulf International Port Group Ltd and the Port of Singapore to establish a joint venture in Guangxi to develop a container freight station and logistics business.

**LM:** What plans has Singamas got for the future?

**JvO:** Singamas plans to further diversify its businesses by developing more specialised containers and to strengthen the logistics business. These business initiatives will provide more stable turnover and financial return to the group.



# A pearl of a depot

**With almost 30 years' experience in the tank depot industry, Kerry-ITS is keen to share its expertise with new entrants, reports James Graham**

As Kerry-ITS approaches its fourth decade, it claims to be Asia's leading service provider for ISO tank containers. The Singapore-based company specialises in tank cleaning and repair.

At present, Kerry-ITS's footprints can be found in Singapore, its regional head office; Laem Chabang, Thailand; Ho Chi Minh City, Vietnam; and Shanghai and Tianjin, China.

It is part of Kerry Logistics, one of the leading logistics service providers in Asia, with a strong focus on mainland China but operating in 40 markets.

According to Ann Png, manager – Kerry-ITS corporate services, the company has no plans for further depots in Asia or other regions. However, there will be some turnkey projects to assist interested entrants to set up tank depots in their countries, especially in the rapidly-growing Middle East region.

She says: "The turnkey project will be a complete project, from design, depot setup to in-house training."

Kerry-ITS Singapore's regional head office has 90 employees and an area of 10,500sq metres, 22km from the port, and it acts as a training school for new employees and



customers, teaching them what they should expect in this industry.

The Singapore depot is also the first in Asia to bring in four units of the latest repair technology, a robotic internal tank container grinding system (ROBOGRIND).

The attraction and retention of professional and trained staff is an important issue for Kerry-ITS, as it is for many in the industry, says Ms Png.

She says: "It is a challenge to get operational staff to fill positions such as tank cleaning operators, repairers, grinders, welders, surveyors and even administration functions.

"There is a high turnover of ground level staff due to the tough working environment. However, the depot has been modified to provide a better working environment. For example, platforms with staircases have been installed to save staff the effort of climbing up the tanks one by one by ladder.

"Kerry-ITS has also invested in new technology such as semi-automation

tank shell interior grinding and polishing robot machines to replace manual grinding and uses handheld mobile computers to conduct tank inspections instead of messy hand-written reports and data entries".

It has also created an integrated depot management software system to monitor tank movements and staff performance.

Global wealth magazine *Forbes* has named Singapore as the third-richest country in the world, measured by gross domestic product (GDP) per capita.

In 2011, the average wage in the city state was S\$106,992 (US\$79,405), rising strongly to 2014's S\$110,484 (\$82,000).

The typical hourly wage rate in tank operations is around SD16 (\$12), equivalent to an annual salary of S\$33,200 (\$24,900). This has barely changed since Kerry-ITS was launched and partly explains the high levels of staff turnover.

To create a one-stop solution

for its customers, Kerry-ITS also provides tank container customised training programmes, emergency response, on-site assistance in ports and tank depot software.

Hoping to share its 30 years' tank experience, Kerry-ITS is planning on building an alliance to welcome any interested parties, such as tank depot operators, lessors, operators and end users to strengthen the Asia Pacific network to share experiences, training and common tariff.

### 30 years of change

Ms Png reflects that over the past 30 years there have been many changes in the tank container business in Asia. She says: "The tank industry started off slowly in the 1960s in Europe. The first standard ISO tank regulations were implemented in 1967. With more demand for tank containers to replace drums and IBCs, tank manufacturers came in from UK, Europe and South Africa."

Because of limited valve designs at the time, the maximum capacity of an ISO tank container was 18,500 litres. With more research and development focused on valve designs, the tank capacity grew over the years and reached the common standard of 24,000 litres in the 1980s. In turn, these have been overtaken by the more recently developed 26,000 litres tank containers.

Tank depots had been long established in Europe and developed in Asia from the 1970s onwards.

Ms Png says: "In the beginning, the knowledge of tank cleaning, especially the waste treatment and disposal in Asia, was limited as environment mandates were not strictly set up. In the 1990s, seeing the higher demand of tank containers, many tank depots were set up rapidly with low-entry investment providing only very basic requirements of tank cleaning and minor repairs.

"The common cleaning system installed was a portable high-pressure machine; the cleaning process was carried out with cleaner entering



the tank without any safety measurement and safety gear for internal tank cleaning. Many depots had a waste treatment pit that only treated oil separation without proper waste treatment and discharge to the drainage or river.

"This means there was ignorance as to the responsibility of environment care by operators. Knowledge of proper waste treatment was also limited. As more accidents happened because of a lack of proper waste disposal, governments and safety authorities started to impose regulations and controls over environmental protection and hazardous waste disposal. This set a higher level for a new depot entrant to come in with green technology.

"At the same time, pressure was put on the irresponsible depots to close down. Hence, only tank depots with the higher environmental standards and complete safety equipment remained in operation."

### Banging the drum

A current trend is seeing the ISO tank container market growing rapidly in Asia. Many end

users have started to realise the advantages of using tank containers over more traditional drums or the more modern flexibag. This means that many are slowly turning to tank containers, says Ms Png.

She adds: "There are still plenty of drum users in Asia. Despite this, tank containers have to become much attractive to make them consider switching for long term benefits. In Singapore, there are now many tank players, with majority of them setting up their headquarters here.

"In the past, there was no presence of tank containers on the road. Right now, it is a common sight. With more tank businesses in Singapore, tank depots have also emerged over the years, with many trials and errors. A few closed down and currently some depots stand firm."

Tank depots in China have also increased gradually, to about 40-50 depots in cities such as Shanghai, Guangzhou, Nanjing, Tianjin and Qingdao. These support the rapid growth of the tank container market.

She adds: "After the opening of depots from Singapore and China, we can see more being set up in Malaysia, Thailand, Vietnam, Taiwan, Japan, Indonesia and the Philippines.



There are depots with the basic requirements and also those with higher standards and quality.

"From the 1970s to the 1990s, tank cleaning has been conducted with minimal knowledge of the cargo and safety protection, with just mop and high-pressure water guns. With more concerns on responsible care for the environment from 1990s onwards, tank depots have invested in automatic cleaning systems to ensure quality cleaning and to prevent contamination.

## Chinese influence on pricing

"Especially after the Tianjin explosion in August 2015, when a series of explosions killed over one hundred people at a container storage station at the port of Tianjin, green technology is highly recommended and accepted by the government authorities and end users. Stricter regulations and audits have been imposed to operate tank containers and tank depots, causing many depots to close down."

The competition between tank container manufacturers has always been tight because of market factors and market intelligence.

Ms Png says: "With many new entrant tank manufacturers from China since 2000, the whole tank industry has been greatly influenced on pricing globally. From a price of about \$23,000 manufactured from Europe and South Africa, the price of a 20ft ISO tank container has dropped tremendously to only \$12,000-\$13,000 by manufacturers in China. With such low prices, tank lessors are facing incoming issues for off-hiring of tank containers in batches, since the tank operators can afford to purchase their own tank containers instead of leasing.

"However, the leasing price has also gone down, from \$12-\$14 per day to only \$3.50-\$4. With the huge drop in the leasing price, and the continuous large production of tank containers, there is also the possibility that the tank container manufacturing sector may face long-term oversupply issues with merger and acquisition activity to limit these problems."

## Downward market pressures

Operators such as Kerry-ITS are facing considerable downward market pressures arising from the lower pricing across the industry.

Tank depots are having difficulties in increasing cleaning and repair tariffs to the customers.

Hence, tank depots have to provide repair/cleaning packages to maintain good continuous relationships with customers. Kerry-ITS has invested in numerous advanced technologies to ensure operational efficiency and service quality. There are increasing demands for higher standards of green technology. Kerry-ITS has also deployed tank depots in Asia with highly-efficient cleaning heads and programming systems, with environmentally friendly bio-reactor waste treatment systems, upgraded with nanofiltration and reverse osmosis.

Ms Png says: "While Kerry-ITS is in its 'pearl year', we urge all tank players to stand together to protect the environment by playing a part in setting higher standards for tank operations, auditing and supporting green processes.

"With higher quality, costs may be higher, but this is a cycle where everyone creates better opportunities for the whole industry to sustain longer and more profitable business."



# China scales the heights

Jaap Huigen, MD of Tankformator in Singapore, assesses China's tank container manufacturers

The common denominator among tank container manufacturers in China is sublime efficiency, reflecting a carefully thought out plan that maps out the sequential fabrication processes.

Assembly lines are, in essence, designed to mass produce units of the same specification, whether it is a mobile phone, refrigerator or a tank container.

It is customary to operate different shops for stainless steel work and for carbon steel. This avoids ferric oxide contamination of the stainless materials. Generally, integration of the tank container shell and frame takes place only after the carbon steel has been coated. From the start of manufacturing in the stainless shop, the stainless shell is protected with polyethylene foil.

In most cases, the factory design and layout has been tried and tested and was often part of the deliverables required before the granting of a licence by an established tank container licensor.

The dynamics of the shop floor are such that continuous incremental improvement is built into the process. Nothing is more critical in an assembly line operation than its efficiency. Any disruption comes at the expense of margins, and high standards of housekeeping and cleanliness are maintained.

Best-in-class technology - in terms of equipment such as plasma welding, rollers to shape shell plates to a specific radius, lathes, presses and cutters - is also vital.

The pressing of the tank container's dished ends is often contracted to specialist vendors such as Weide Heads. Included in the manufacturing line is a wide variety of jigs for



assembly and sub-assembly, such as those for the end frames and the installation of insulation and cladding. There are also jigs with rotators for pickling, a critical process to cleanse the shell of oxides whilst inducing the best possible chromium oxide layer on the shell material – the first line of defence against shell corrosion.

The assembly line workers are both highly skilled and, in case of welders, also certified by a third party to Welder Performance Qualification (WPC) standard.

All line assembly processes are carefully timed in terms of man hours and there is no tolerance for failure or hold-ups. Ergonomics throughout the assembly line are required to ensure continuity.

ISO tank container designs, whether licensed or not, are crafted via CAD software. The overall design evaluation of a typical 20ft unit includes finite element analysis, a process where theoretic loads and resulting stresses and deflections are simulated. Areas of elevated stress can be identified and measured.

The aim is design improvement and avoidance of stress concentrations.

Before series production, every

new design is subjected to prototype testing, comprising longitudinal and lateral restraint, inertia testing, a dynamic test performed on a rail wagon in motion and an impact test to 5G.

Sustained end-to-end quality assurance is maintained through quality systems such as ISO 9001. The assembly line includes a number of hold points to accommodate the intervention of independent third-party inspectors such as Bureau Veritas or Lloyds Register. Separately, owner-appointed inspectors may conduct their own independent inspections.

Testing continues at various stages of production. Examinations are visual and may involve non-destructive testing. The latter is based on x-ray and ultra-sound measurement of, for example, the coating dry film thickness. Corner post tension tests are carried out hydraulically.

## China dominates

There are five tank container manufacturers in China. Together, they account for 80% of global production of around 40,000 units. Little goes into the production that does not bear the "Made in



China" stamp. Shell materials, for example, are in most cases supplied by Taiyuan Iron & Steel. Valves and fittings are available from Fort Vale and Perolo operations in China.

Manufacturers in China form an essential part of the tank container community and are a large part of its success story. Unsurprisingly, they have a great deal in common, with little difference in what they make and how they make it. The main difference, however, is scale. Overall then, if you are looking for a tank container, the chances are that it will be made in China.

## Size still matters

In terms of manufacturing scale, CIMC in Nantong, Jiangsu province, tops the list. In 2002, CIMC became the first manufacturer in China after it took up a licence from UBH international in the UK.

Today, Mr Ji Guoxiang, Vice General Manager, tells us, CIMC leads tank container manufacturing both in China and the world – its production in 2015 was 20,000 units. The company holds certification for ASME U-pressure vessels, U2-alternative rules for pressure vessels and National Board Inspection Code R stamp.

In terms of product diversity, CIMC is said to offer the widest range of tank containers, including T11s up to 26,000 litres and other tank container types up to T22. CIMC is also behind the design innovation of the 'Intermodal 407', introduced into the US market as an alternative to transporting liquid products in more expensive DOT 407 tank trucks. This 40ft tank container has a capacity of 27,000 litres and dimensions identical to a standard tank truck. It is approved for many chemical cargoes.

CIMC also produces T50 gas tanks for industrial gases such as LPG, propane and refrigerants. T75 tanks are produced for cryogenic gases such as carbon dioxide, nitrogen and oxygen, while 40ft tank containers are manufactured for LNG gas.

CIMC uses both standard CAD

design software and Solidworks, a new generation 3D CAD from Dassault Systèmes.

## The transformative assembly line

CIMC also "remanufactures", operating an assembly line where 12-15-year-old tank containers undergo major refurbishment to become virtually new units, complete with new valves and fittings, insulation and cladding. Only the original tank shell is preserved. A new initial construction certificate is issued upon completion by an independent third-party inspection agency.

The first licence deal between UBH and CIMC was closely followed by another. Zhongshan Zhonghua Tank Container (ZZTC) was initially licensed by YMCL (Yorkshire Marine Container). The main tank-to-frame integration is created by what is popularly referred to as the "St Andrew's Cross" at either end. ZZTC also obtained a licence from Suretank to build the collar design tank.

Suretank has been a majority shareholder of ZZTC since 2010 and subsequently purchased the remaining 33% of the share capital. According to Vicky Lee, deputy general manager, it can also be expected that the company's product focus could be tweaked.

Lee believes ZZTC's long presence in China, second only to CIMC, speaks for itself and helps to instill confidence in customers looking for a qualified and experienced supplier.

As for the changes, the dynamics of the business inevitably require re-orientation from time to time, but Lee said the company continued to be fully committed to tank container manufacture and expected it would step up the building of T11 tanks containers, along with other tank types and special purpose tank containers.

In 2007, Singamas started manufacturing in Shunde District, Guangdong province and continued to operate there until 2012, when it opened Shanghai Pacific. Singamas's

production capacity is reported in the 2015 ITCO global fleet survey to be 5,700 units, while the company itself reports a 6,000 units a year capability, based on a single shift (see interview, P14, in this issue).

Singamas's main focus is on general purpose T11 ISO tank containers with capacities of 16,200 litres to 26,000 litres. For high-hazard cargoes, Singamas produces u-stamp T22 tank containers in capacities up to 22,500 litres. The company also builds swaptanks, T11s from 30,000 litres to 38,000 litres.

For the offshore market, 10ft ISO tank containers are made under DNV 2.7.1 and EN12079.

NT tank in Nantong also launched its tank container manufacture facility in 2007. Regional sales manager Jenny Guan points to NT tank's ASME U, U2 and R stamp accreditations and its diversity of product range. NT tank's manufacturing capacity – as reported by ITCO – was 5,500 units in 2015 and is mainly made up of 10,900-26,000 litre T11s

NT tank also builds about 1,000 special tanks. These are types T3-T22, lined and unlined. There are several options, including rubber, PE (polyethylene), PTFE and polymer linings from the likes of Chemline. The company offers offshore tanks that meet DNV 2.7.1 in capacities starting from 1,500 litres.

For heat-sensitive products, NT tank offers electrically heated tanks, including glycol heating equipment with heat exchangers and circulation pumps (the glycol is circulated through the steam coils). For industrial gases, such as LPG, propane, butadiene and refrigerants, NT tank offers T50s.

## Strength of parentage

Ms Guan referred to NT tank's parent company, Cold-Chain Equipment Co, and the expertise gained. Cold-Chain Equipment manufactures equipment invariably used in the food processing sector and is made from stainless steel. With this comes a level of expertise surrounding the thermal

value (Kcal/m<sup>2</sup>hx°C) of insulated and refrigerated containers – useful in the engineering of tank containers for the carriage of products such as milk.

The specification of milk tanks may include CIP (cleaning-In-place), hygienic bottom valves and super-insulation (100mm polyurethane foam) to minimise product heat gain during the shipping cycle.

NT Tank's total tank container output, according to Ms Guan, represents about 15% of global production.

CXIC is another company that started operations in 2007. Tianjin-based, it produces a wide product assortment, from general purpose ISO tank containers to specials. The company has obtained ASME accreditations including U, U2 and R stamp.

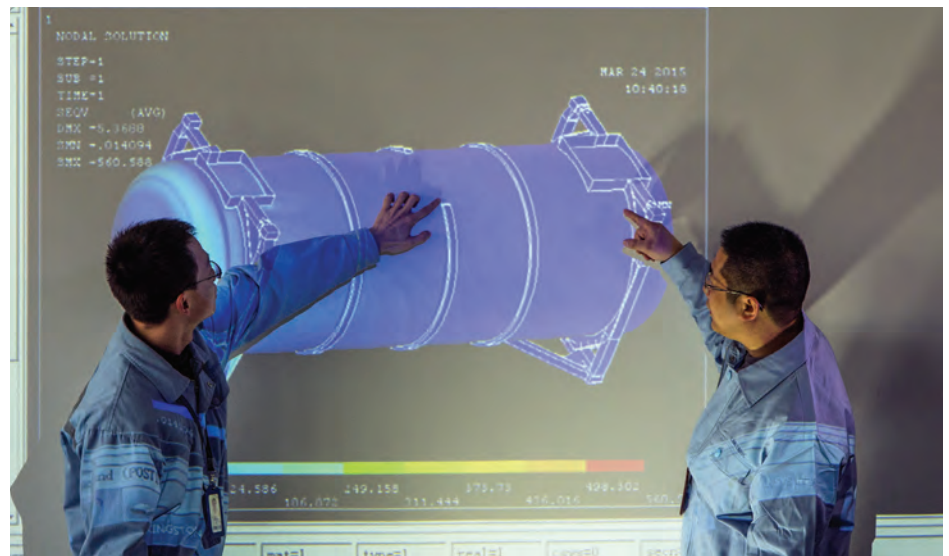
Johnson Zhang, vice general manager, reports that CXIC's annual production capacity is just below 3,000 units (ITCO's survey reported 2,200 in 2015). Most is made up of T11 tanks, between 25,000 litres and 26,000 litres.

Smaller numbers of T1-T22 tanks are built, with capacities from 12,000 litres to 36,000 litres. There are also special-purpose tank containers, tailor-made for a wide range of cargoes such as bitumen and anhydrous fluoride, and powder tank containers for carriage of cement.

Zhang explains: "We keep busy supplying tanks to the international markets as well as the domestic market for road transport and increasingly for CRT [China Railway]."

The domestic Chinese market is gaining traction and accounted for only 10% of CXIC's production a few years ago. The potential for the intermodal transport of bulk liquids in China is significant owing to its large land mass and the extensive rail and waterway networks.

The main driver behind the growth is the central government's drive to enhance the operational safety of transport of chemicals in China. This segment is growing, despite the fact that domestic tanks cost more, because such tank containers



Design examination at CIMC, Nantong

do not benefit from the global tax and duty exemption enjoyed by international shipping containers.

## Global economic pressures

As for international markets, Zhang states that global economic pressures have resulted in customers becoming more discerning about specification.

"They come to us explaining about problems they experienced in their operation and solicit our views about how to avoid these. An example is the incidence of stress corrosion cracking in austenitic steel steam coils.

"Steam coils are prone to stress corrosion cracking resulting from chloride inside the mix of heat, water, air and pressure. The solution offered by us was to build the steam coils out of duplex steel.

"Why? Because duplex steel's microstructure offers much higher resistance to stress corrosion cracking. We agreed to do it and, thankfully, it all worked out favorably."

In 2013, MCC Tank added its capacity to tank container manufacture in China. Rich Ren, a seasoned tank container engineer turned sales manager, explains: "We are the last to start out in tank container manufacture but that does not mean we are least. We have a team of engineers and workers that is highly experienced.

"Experience is not necessary always something that is developed organically. After all, skills are portable and there is always a pool of people that move between organisations.

"We have been solution-oriented right from the start. There is continued discussion about stainless steel and its corrosion resistance and this is why sometimes we propose alternative materials.

"For example, we have a customer that enquired about suitable shell material to carry chloride-containing chemicals.

"MCC proposed stainless steel 317L, a low-carbon, molybdenum-containing austenitic stainless steel with improved resistance to chlorides. It worked out favorably.

"In order to best serve our customers, we like to know as much as possible about their purpose for their tanks so that we can match that with the best solutions."

MCC Tank's annual production is said to be around 5,000 units, although ITCO's 2015 survey reports 1,000 units.

MCC Tank also offers a variety of tank types up to T22 and builds offshore tanks, a variety of lined and unlined specials and 30,000 litres to 35,000 litres swaptanks. MCC Tank too has seen demand growth from the domestic market for road transport and China Railway.



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# Big fish in a small pond

**Australia's SCF Group may not be a global player but it is renowned as an innovator in container design, writes Dale Crisp**

SCF is recognised as one of Australia's largest container providers, specialising in new and used container hire, sales and design. It is a leading supplier to the national transport, resources, construction, defence and chemical storage industries.

Over the past 26 years, SCF has placed the South Australian capital Adelaide on the world map by developing container innovations for Australia's top companies.

Established in 1989 by Richard Sykes and Lindsay Carthew, the company quickly grew, developing containers which became known for their innovation, strength and durability.

Sykes knew the transport game 'inside out'. After years in the furniture removal industry, he saw an opportunity in the transport and logistics sector.

In March 2007, Archer Capital's Growth Fund took a controlling stake in SCF when it partnered with Carthew and Sykes to enable the company to pursue expansion opportunities. The focus was on investing in the lease fleet and growing into adjacent product segments, such as accommodation rooms and tank containers.

In May 2012, most of Archer's 60% stake was bought by London-listed Intermediate Capital Group (ICG), with the remainder bought by Sykes, Carthew and SCF management to regain majority ownership.

ICG is a specialist investor and asset manager, providing mezzanine finance, leveraged credit and minority equity, managing over \$17bn of assets. It has historically provided mezzanine debt to buyout sponsors but also makes minority equity investments alongside management teams.

SCF has continued to expand and diversify since ICG came on board, expanding its container fleet by around a third, from the 10,000 units owned in 2012, in what is a modestly-sized market, given Australia has a population of around 24 million.

The evolution of SCF has seen the company progress from a start-up run from a living room to an enterprise that employs over 80 staff and leases 13,000 containers to some of Australia's most significant transport industry players.

SCF has a depot network spanning Adelaide, Brisbane, Darwin, Melbourne, Karratha (in mining-focused north-west Western Australia), Perth and Sydney.

The company's product range spans tank containers, site storage containers and intermodal equipment which includes refrigeration, side doors, pallet wide and high cube containers.

## Expansion

The group purchased Tank Containers Australia in 2006 and continued to expand into the tank container sector by acquiring the GE Seaco fleet in Australia in 2007.

Since then SCF has continued to increase the fleet size and grow into new sectors, with different tank products for the mining, construction and oil and gas sectors. Recently SCF has leveraged its relationship with the national food logistics network to develop ISO tank solutions for the domestic food industry.

Jamie Driscoll, the Sydney-based manager of SCF's Tank Container division, says its core fleet of

tank containers has a focus on specialised equipment designed to store hazardous chemicals, bulk liquid and bulk powder across a wide range of industries.

"Our primary focus is on leasing equipment as this model allows our customers the flexibility to scale their resources and capital investment based on project demand.

"This is supported by our depot network. We are the only domestic leasing company to offer full service from initial hire through to de-hire including cleaning and disposal, statutory testing, repairs, modifications and refurbishment."

The current fleet size in the Tank Container division is 1,200 units, replenished or supplemented year on year according to market demand. New units are manufactured in China, with the process overseen by SCF's China-based quality control staff.

The division's clientele is drawn from a number of sectors: chemical manufacturing; domestic logistics and dangerous goods transport; intermodal road and rail; food and dairy production; mining; oil and gas; construction; and cement manufacturing.

SCF says that with a combined team experience of over 50 years, it offers dedication and discipline in servicing the needs of customers, specialising in all aspects of tank containers including surveying, testing, tank cleaning, repairs, modifications, storage and tank container sales.

With numerous undercover repair bays at the Brisbane and Melbourne depots, SCF services include tank cleaning (food and chemical grade using high pressure mechanical spinner); modification and full refurbishment of used tank containers; full repairs (structural and part replacement including valves and gaskets); empty and full



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tank storage (depending on cargo); 2½ and 5-year statutory testing; decanting product into IBCs and disposal; and confined space entry.

SCF has developed a number of sector-specific products.. For the construction industry there are pneumatic tanks for cement manufacturers and ISO mixing tanks. For the mining sector, SCF produces sodium cyanide dissolution tanks and static 80,000-litre mixing tanks. For the oil and gas sector, there are wheeled and skidded fracking tanks, and mixing tanks for the drilling and fracking sector.

To service the food industry SCF supplies aseptic dairy ISO CIP tanks, heated chocolate and beer tanks.

The group's bulk liquid storage tank containers can be used for on-site storage in the water treatment and chemical storage sectors. Each unit is designed to allow for the production of a base model with cost-effective upgrades for specific requirements. Designs are available in both skid mounted and trailer versions. Tanks are fitted with 8in manifolds with multiple 4in couplings, which allows units to be easily combined into tank farms.

SCF works with clients on new product development and evolution, says Driscoll. "We work with our customer to find a design solution that meets both the customers' requirements and delivers savings within their supply chain.

"This is then conveyed to our design and engineering team who work with sales to deliver a unit that is both tailored to the customers' needs but also has future potential outside the individual application. T

"The key to successful design is the ability to understand the customer's operating environment and having the industry experience to deliver a containerised solution that fits seamlessly into the supply chain."

#### Environmental focus

With environmental management plans well under way for each depot,



SCF has developed and implemented health, safety and environmental policies and systems to meet legislative and industry standards.

SCF waste water treatment facilities, which deal with the trade waste generated from the washing of ISO tanks, achieve constant compliance with trade waste discharge standards.

Washing of tank containers is undertaken in a roofed and bunded area, ensuring all stormwater is diverted from the wash bays and thus uncontaminated. Oil waste generated as part of the first wash of the tank container – as well as any product or waste remaining in the tank containers when delivered to site – is segregated and stored in IBCs, which is then collected by an Environment Protection Authority-licensed waste contractor and taken off-site for recycling.

Where possible, treated recycled water or collected rainwater is used for washing. The waste water treatment plant has been designed to minimise chemical and electricity consumption, waste generation and to allow as much water reuse and recycling as possible.

The company says it has extensive experience in preservation of shipping container surfaces.

"SCF containers are manufactured with a standard raw material, Corten A steel," says Driscoll. "Corten

A steel controls the rate at which oxygen in the atmosphere reacts with the surface of the metal, making it more durable and rust-resistant, thereby extending the lifespan of the container.

"It is also SCF standard practice to protect and enhance the surface with a suitable paint. Tnemec coating is used for coating the internals of bulk liquid storage tanks that hold highly corrosive chemicals. This high-performance coating minimises damage to the container structure by providing long lasting protection against corrosion and chemical use."

#### Outlook

On the current health of the tank container business and future trends, Driscoll is cautious.

"The tank container industry, like the global shipping and all transport-related sectors, is currently in turmoil, with operators fixated by a race to the bottom to try to place idling equipment," he says.

"Add to this global commodity prices closely tied to the liquidity issues facing many of our customers, and there are uncertain waters ahead.

"One can only hope that stability returns to global consumer confidence and that this flows on to the mining and manufacturing sectors and into global tradelanes."





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# EPCA is Budapest bound

## *Tankcontainer Magazine* looks forward to Europe's most important chemical and supply chain conference

The European Petrochemical Association (EPCA) holds its 50<sup>th</sup> annual meeting in Budapest from 1- 4 October 2016. This year's theme is: "50 years of global chemical industry evolution: what's next?"

On the final day, the event focuses on the chemical supply chain and asks a similar question: "50 years of chemical logistics and supply chain evolution: what's next?"

The 700-member EPCA serves as a European meeting platform to exchange information and transfer learning. The organisation initiates, manages and promotes projects selected by its board as being of interest to the global chemicals business community. These projects include chemical supply chain and logistics improvements.

Chemical producer speakers will include Martin Brudermüller, Chief Technology Officer and Vice Chairman of BASF; Thierry Le Hénaff, Chairman and CEO of Arkema; Bob Patel, CEO of LyondellBasell; Nathalie Brunelle, Senior Vice President, Strategy of Total's Refining & Chemicals Division.

Speakers from Europe's supply chain sector will include Dr Hans-Jörg Bertschi, President and CEO of the Bertschi Group; Eelco Hoekstra, CEO of Vopak, and Essa Al Salah, President of Agility Global Integrated Logistics.

Of particular interest will be the presentations from Dirk Jan de With, Chief Procurement Officer of Covestro (née Bayer MaterialScience) and Andy Rae, Vice President of Operations and HSSE at Shell Chemicals.

The closing session will feature a geo-political view by Herman Van Rompuy, President of the

European Council from 2009-2014.

The Logistics Village, where company literature and press publications are available, will be located at the Intercontinental Hotel Budapest.

The conference takes place in the context of a global market with €3,232bn (\$3,547bn) of chemical sales in 2014. Growth was 2.5%, far lower than the 10-year trend to 2013, during which average annual chemical sales growth was nearly 9%.

Chemical sales growth in China in 2014 was 10.3%, slightly above the 9.1% growth in GDP reported by the World Bank. European Union (EU) chemical sales were 17% of global sales and half those of China.

However, the EU chemical sector generates a significant trade surplus. CEFIC reports €44bn in 2014, with chemical imports increasing while exports have remained flat for the past five years. EU exports of specialty chemicals (i.e., those most likely to be of interest to the tank container sector) were €45bn in 2014, compared with imports of €20bn.

Despite pockets of strong demand, the overall outlook for European chemical growth is fundamentally weak and uncertain. China's economy – a principal driver of demand for European products – is slowing as its government moves away from infrastructure investments and an export-driven economy to one that is more services and domestic consumption-oriented.

The volatile oil price has made it difficult for chemical producers to pass on costs to customers, and the windfall profits from the recent collapse in oil, and the closely

correlated naphtha and LPG chemical feedstocks, will not be repeated.

The ICIS Petrochemical Price Index shows prices being down 12% in Q2 2016 compared with Q2 2015, but, as importantly, the greater price volatility in the market means that all chemical prices contain a larger risk component. Volatility keeps inventory levels (and therefore tank container movements) lower than normal, despite the recent higher crude prices.

Europe itself is mired in low economic growth, although Eastern Europe and some plastics-related activity are more buoyant. The UK Chemical Business Association (CBA) published its latest Supply Chain Trends survey, forecasting a "significant downturn in trading conditions following the Brexit vote", which gave the UK greater control over its sovereignty at the possible cost of being relatively economically poorer in the short-to-medium term.

CBA members tend to be small-to-medium-sized businesses that distribute, blend and pack 3.5m tonnes of chemicals each year. But with only 2.5% of EU intermediate capacity, 4.4% of EU aromatics capacity and 4.5% of EU plastic capacity, how significant is the UK in capacity terms in the context of the EU28?

Negative sentiment in the UK mirrors the relatively poor outlook for chemicals across Europe, with slow demand growth and lower output.

But, even with weak growth, tank container operators and leasing companies should not under-estimate the sheer scale of demand from Europe's chemical producers, and most will be 'open-for-business' at the EPCA conference.

(Leslie McCune, *Tankcontainer Magazine* Editor, will be attending the EPCA)



# Watch this space!

**Producing tank containers for outer space is one of many exciting projects by South Africa's GasCon – and there's more to come, reports Debbie Owen**

GasCon has received repeat orders after supplying its initial super-cooled liquid oxygen tanks to the space exploration industry.

According to Paul Coetzer, GasCon's Business Unit Manager (Cryogenics): "Developing and manufacturing these highly specialised tanks was particularly challenging and many hours of testing went into developing tank containers which could deal with, and be approved for, the helium-rated temperatures required by this industry."

In addition to the space exploration market, GasCon has also launched new products in recent months.

It has, for example, designed and built cryogenic trailer barrels for Tennessee-based Heil Trailer International. These have been fitted to a special five-axle trailer to deliver the largest capacity LNG trailers operating in Alaska.

The company has also launched a new lightweight, low-maintenance, 40ft tank container for the LNG market. This is likely to become a standard item, not only in GasCon's cryogenic product range, but for American LNG transporters wanting to maximise payload and realise cost savings of up to 10%.

The new T75 tank container is more efficient to build, so GasCon plans to roll the design into its 20ft cryogenic line.

According to Coetzer: "Fewer components have been used in the design of the new T75 tank container, which not only makes it easier to maintain, but more



Brian Sparg, GasCon's Sales and Marketing Director

efficient to build. Because of these efficiencies, we plan to launch a 20ft version of the T75 later this year."

Also due for delivery later this year is a new vacuum-insulated swapbody container for the European gas market.

Increasingly, GasCon is becoming the 'go to' company for those needing highly-sophisticated, specialist tank containers or pressure vessels which cannot be manufactured by anyone else – and this is exactly the type of business the company is looking to develop.

"Our focus has always been on innovation and quality, rather than quantity. Since we opened our doors 11 years ago, our aim has been to produce a better product, rather than competing on price or chasing big volumes," explains Brian Sparg, GasCon's Sales and Marketing Director.

Despite tough global economic conditions, production volumes have continued to increase in the last two to three years, and future growth is expected in the cryogenic market, in particular in tank containers required to serve the small-scale LNG industry.

"Our intention is to be at the forefront of the LNG market. We're already one of the largest LNG tank manufacturers in the world and this niche market will remain a focus area as it is one where we can utilise our strengths and expertise," explains Coetzer.

The company is also looking to grow in the modular gas transport market and is extending its reach into the African market.

"A number of African companies are importing allied products – such as tube skids – from Europe or the US. Not only do we have the capability to produce these products in Africa, but we're able to do so more cost efficiently."

The company's focus on cost efficiency – and its decision to pass cost savings on to its customers – has served it well. Its orderbook is full to January 2017.

"We generally don't sell more than six months ahead as we prefer to have the flexibility to adapt to the market as and when required. For example, when the oil and gas project market – which traditionally accounts for a third of GasCon's business – picks up, we want to be able to respond as quickly as possible."

GasCon currently exports approximately 80% of its products and, while production volumes for the oil and gas industry have dropped, GasCon's bottom line has remained positive thanks to growth in other areas of its business and, in part, a weaker rand.

## From the ashes of Consani

An innovative, enterprising spirit has been the hallmark of GasCon since the day it opened its doors in 2005 following the closure of Consani Engineering,



Paul Coetzer, GasCon's Business Unit Manager (Cryogenics), with Brian Sparg

a well-known, Cape Town-based tank container manufacturer.

Led by GasCon's Sparg, investment was secured from Southey Holdings and Investec to continue the manufacture of gas tank containers and pressure vessels after Murray and Roberts, Consani's owners, decided to liquidate the business.

GasCon has subsequently become a wholly-owned subsidiary of Southey Holdings Group, a large privately owned industrial company based in South Africa. Southey Holdings – originally a contracting company servicing South Africa's mining industry - serves a number of industries throughout Africa.

The group has supported GasCon both financially and strategically, while retaining GasCon as an autonomous business and brand within the group. This independence has allowed GasCon to build an agile, profitable business.

"To do well in this market you don't only need the engineering expertise and market know-how, you also need to be extremely quick to respond to market demands. Because we are not restricted by our parent company,

equipment or production line, we are able to focus our energy on developing innovative products and designs that support our customers in the oil and gas, power and transport sectors. And it helps having a team, such as ours, that thrives on change," says Sparg, who has been in the tank container business for more than 25 years.

GasCon currently produces around 300 certified vessels a year in its 25 000sq metre factory in Elsies River, Cape Town and has customers in more than 20 countries. The majority of its customers are based in Europe, the US, Far East, Australia, Canada, Alaska and the Caribbean.

Its product range includes gas tank containers, cryogenic static storage and transport vessels, pressure vessels, heat exchangers, columns, drums, silo tanks, tanks, dive bells, decompression chambers, LPG vessels and trailers, rail barrels and other general fabrications.

GasCon also offers other services including R-stamp repairs and re-certification of ASME U and U2 stamped pressure vessels, high-end weld repairs, high pressure piping

and testing, cryogenic repairs and testing and heat exchanger repairs.

## A force to be reckoned with

Already a force to be reckoned with in the global tank container market, Sparg and Coetzer attribute GasCon's success to the company's focus on stability and customer service, combined with its entrepreneurial spirit and a hard-working, dedicated team comprising young, enthusiastic engineering talent and experienced industry stalwarts.

"The GasCon brand is one that has become increasingly associated with innovative, market-leading, high quality products as well as on-time delivery. Our decisive, positive business culture enables us to leverage our expertise to remain resilient in an ever-changing market; we're a team that thrives on challenges and one that is not afraid to try new things.

"In short, our focus is on growing our business in both existing and new markets and breaking new ground by developing exciting, technologically-advanced products for the transportation of goods, whether by road, by sea or into space."





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# Tanks galore

## Editor Leslie McCune lifts the hatch on the latest ITCO global fleet survey

The International Tank Container Organisation's (ITCO) 4<sup>th</sup> annual tank container fleet survey reveals that the world's tank container fleet grew by 7.2% compared with 2015, with the additional 30,640 units bringing the global fleet to 458,200 units. Operators and lessors exploited irresistibly low prices and low interest rates to expand and renew fleets, while new entrants were encouraged into the market.

Heike Clausen, President of ITCO, noted: "Continuing investment in the industry reflects considerable confidence in the long-term opportunities, with international operators expanding their deepsea services, while niche regional operators are opening up and developing new regional markets to serve their customers."

While the global fleet increased by 30,640 units, the number of tank containers manufactured was 43,780. This was 9% down on the 48,200 units manufactured in 2014 – small wonder then that some tank container manufacturers base their prices on marginal cost economics.

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

Reg Lee, president of the Asian Tank Container Organisation, claims the five largest Chinese manufacturers – CIMC, Singamas, NTtank, CXIC and MCC – produced 34,000 liquid tanks in 2015 (ITCO estimates 29,400 units).

Poor global market demand for dry freight general purpose box containers led dry box/tank container

manufacturers to prioritise the manufacture of tank containers, thereby adding to the oversupply.

Anecdotal evidence suggests that Chinese manufacturers have been busy this year, with demand stimulated by breakeven prices of below – some say well below – \$15,000 for generic T11s, according to industry sources. A weak renminbi/US\$ exchange rate has made Chinese-made tank containers more competitive, as have low interest rates and cheaper slot rates on liner shipping.

Weaker steel and energy prices reduced input costs and enabled further price reductions. The top five manufacturers account for 90% of global production, with the top three being CIMC (with 46%), Welfit Oddy (14%) and Singamas (13%).

This year's ITCO survey usefully shows the gas tank and swaptank fleets, as well as the manufacture of new tank containers and the historic fleet size back to 1993.

It covers 205 tank container operators. The operator fleet accounts for 72% of the global fleet of 458,200 units, two-thirds of which is owned by the operators themselves. The remaining third is leased in.

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

The top 10 operators account for 54% of the global operator fleet of 329,080 units. This suggests the operator segment has significant scope for consolidation.

Around 60% of the leased fleet is leased to operators, just over 30% is leased to "Shippers (i.e., producers

of chemical, food and/or drinks) & Others" and 10% of the leased fleet is designated as being idle.

ITCO acknowledges that the idle leased fleet might be larger – and the nine-high canyons of empty tank containers in Europe's major hubs would suggest this – but the figure of 10% maintains the reporting consistency.

The "Shippers" fleet is judged to be static, with the trend to outsourced logistics accounting for the growth in industry units. Producers tend to own more specialised tank containers.

More operators have entered the market, as a barrier to entry has reduced due to lower-priced tank containers. The larger operators sometimes struggle to compete with these new small, locally-focused operators. While new entrants have added to industry fragmentation, their volumes are relatively small, although the destabilising effect of their aggressive pricing permeates a large segment of the market.

Instead of competing on price, major operators are concentrating on their operational efficiency and a broader service offering to lock in business at the larger chemical producers.

The survey identifies 36 leasing companies, with the leasing fleet being 201,750 units. The top ten lessors account for 85% of the total leasing fleet, but the top three leasing companies – Exsif, Seaco and Eurotainer – account for 58% of the leased fleet, indicating a high degree of consolidation.

One bright spot is the strong demand for more specialised tank containers. These include tank containers for temperature-sensitive organic peroxides, fluorhydric acid, halogenated organic acids and liquefied gases, such as LNG, industrial gases and cryogenic products.

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# Italian chemicals and logistical challenges

Infrastructure, regulatory simplification and safety measures are priorities for Federchimica, reports Angelo Scorza

The main topics debated at Federchimica's 13<sup>th</sup> Congress on Chemical Products & Logistics in Milan were the implementation of a new safe and sustainable logistics system for the chemical industry and the management of the technical, financial and institutional rules to foster the development of a new national and European plan.

The first session focused on the best practice necessary to make chemical logistics products safer and sustainable; the second session considered rules, the relation between state and private management and how Italy's logistics system could be upgraded.

According to Renato Frigerio, President of SET - Federchimica steering committee: "Safety culture has been a major topic for several years and so is the environmental protection in relation to air and water pollution".

Massimiliano Di Febo is the Operating Manager at Depositi Costieri Ravenna – PIR Group, which was founded in 1920 and is owned by the Ottolenghi family. It also has depots in Genoa, Vlore (Albania) and Zarzis (Tunisia). Referring to risk assessment, he said: "Vocational training must be an enduring process and company know-how must be transferred to human resources to enhance security".

Domenico Marsicano, Emergency Service & Security Leader at Dow Italia added: "Security is made by people; therefore it's absolutely necessary to invest in them and to enhance



communication and dialogue".

The management of plants - as well as security measures – must consider global risks, including cyber threats. Dow Chemical, for instance, has one common system, globally-implemented, with an integrated approach to security.

Umberto Chiminazzo, General Manager at Certiquality (pictured above, left), talked about risk-based thinking, illustrating how the new approach on ISO 9001:2015 implies "less bureaucracy and is closer to the enterprises' operational mode."

Flavio Guzzo, Heavy Loads Manager at ASC Quattroruote, illustrated the major causes of road accidents and showed how preventive measures are important, adding: "Among all the European driving schools, none of them train drivers who carry wagons with an intake of 40 to 80 tons substances at 80 km/hour".

Fabio Giovanni Atzei, who is

responsible for logistics and planning at Versalis, stressed that Italy "boasts a geographical fortune which is not fully exploited; we must consider we are not a hub, but a terminal country only".

The Italian government is targeted an upgrade to the performance and competitiveness of the industry. This is planned to be achieved through the new National Logistic Master Plan, aimed at raising the share of freight rail transport to 50% by the end of 2020 compared with today's 10.4%.

The Ministry of Transports and Infrastructures has set up a new technical team to pursue three major steps leading to a switch from road to rail. These include a strengthening of infrastructure, a simplification of rules and coordinated funding. "The best strategy to achieve the government's target to relaunch the development of the country is a

perfect synergy between public and private sectors", concluded Atzei.

Giampiero Strisciuglio, Marketing Manager at RFI, illustrated the plans conceived by RFI Rete Ferroviaria Italiana (FS State Railways Group) to implement railway transport infrastructures and upgrade the 'last mile' links to rail transport.

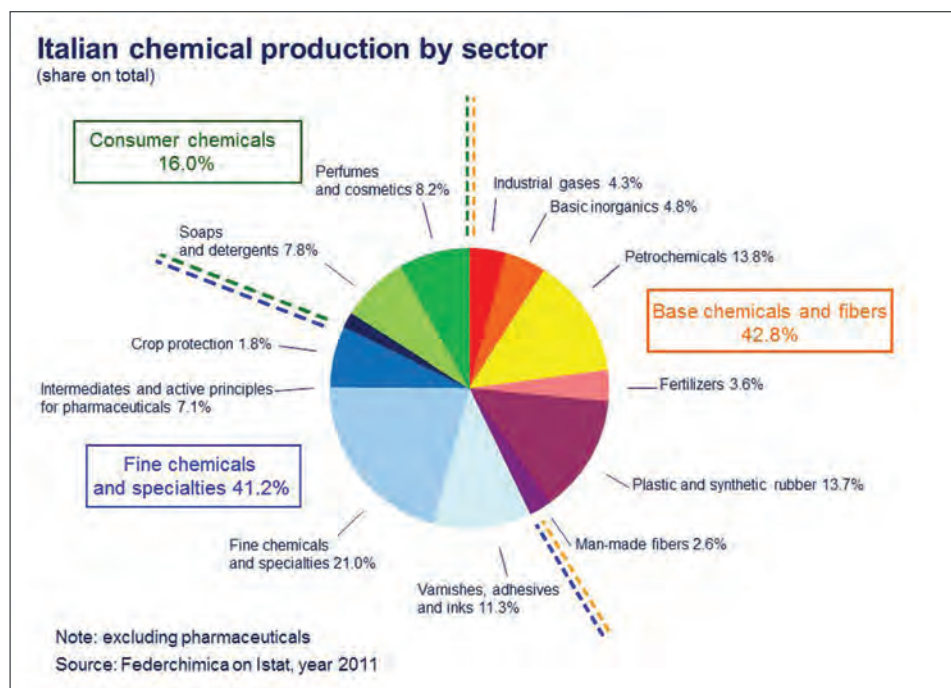
To such infrastructures, Cassa Depositi e Prestiti, a company supporting public-private partnerships, holds a strategic role. According to Simona Camerano, who manages the development and finance research department at CDP Cassa Depositi e Prestiti, logistics and port operations are a key element to enhance enterprises' competitiveness and the entire economic system. He said: "Besides confirming CDP's role as major lender for strategic infrastructures in the country, the new business plan also appoints CDP as a promoter of these initiatives. We will support other promoters and help them overcome all difficulties in outlining their needs, conceiving plans and investments, operating as a financial advisor."

A key point is a demand to justify the construction of new infrastructures by leveraging on larger integrated projects".

Cassa Depositi e Prestiti will attempt to simplify the bureaucratic hindrances, making the segment more appealing and efficient.

According to Marco Cutaia, Manager at National Customs Agency, "the new Customs Code just enforced envisages a series of simplifications for all logistics operators, who will qualify as authorised economic operators".

A topical issue was tackled by Stefano Salano, Head of Ocean Freight Capacity Management, DHL Global Forwarding Italy, and his colleague Ofelia Pecchio, Key Account Manager Chemical Sector. Making reference to the recent SOLAS Chapter VI's amendments - which introduced the verified gross mass (VGM) concept - they pinpointed that "there's been a lack of communication



between public and private sector in preparation of such a critical moment, and so there are great discrepancies among different countries in terms of legislation; only practice in the medium and long term will allow the logistics chain to comply adequately with the new regulations".

After Germany and France, Italy is the third-largest chemical producer in the EU. The sector has a turnover of €52bn, comprises almost 3,000 companies and employs approximately 110,000 people. The structure of the national industry is made of small-medium-size firms (39%), local branches of multinationals (37%) and large groups (24%).

With a strong industrial base and taking advantage from its positioning in the Mediterranean region, Italy is a large market for chemicals and many foreign-owned companies view Italy as a strategic location from which to manage their operations in Southern Europe.

According to Federchimica, world chemical industry growth is patchy: strong in the US, slowing in China, gradually increasing in Europe. As a consequence, global chemical demand is expected to maintain a fairly stable pace of expansion in 2016 (about 2.5%) although the European chemical

industry is expected to improve only gradually (1-1.5%) following modest growth of 0.5% in 2015.

Italian specialty chemicals producers have not benefited from a significant and widespread cost decrease. Recovery of chemical production in Italy is still very gradual but, for the first time, the sector shows signs of revival in domestic demand, in particular, in the automotive, plastics, cosmetics and food sectors.

During 2016, the first signs of improvement have also emerged hard-hit sectors such as furniture, but the situation remains tough for important sectors like textile, leather and construction.

The production trend is still fluctuating; purchases suffered a setback in the middle of 2015 because of downward expectations about chemical prices due to the sharp drop in oil price; in general, customers are still affected by uncertainty and liquidity constraints keep raw materials stocks at very low levels, with purchases being made only in response to clear improvements in final demand.

Despite the general weakness of international trade, Italian chemical exports showed strong growth (+3.9% in value, with prices



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Despite the general weakness of international trade, Italian chemical exports showed strong growth (+3.9% in value, with prices slightly falling). Imports also recovered and grew 2.6%.

A moderate recovery of chemical industry in Italy is expected to continue due to a more widespread revival of domestic demand; not only are exports expanding but so is the domestic market, although this does not yet extend to all sectors.

The outlook has many external risks and, as a consequence, forecasts for the Italian chemical industry in 2016 have a higher degree of uncertainty than in the past. Chemical production in Italy is expected to grow by 1.4% assuming that uncertainties in the international outlook do not cause a more pronounced

slowdown in emerging markets or arrest a European recovery.

Despite being affected by high energy costs and regulatory burdens, Italy's chemical industry faces recovery in better conditions than many other industrial sectors in the country – the incidence of non-performing loans (in the chemical sector (6.2%) is the lowest of all Italian industrial sectors; the share of companies with profitability levels above 10% is higher - by seven percentage points - than the manufacturing average; employment has held up better, with job losses about half that of the average for the overall manufacturing sector.

Italian chemical industry exports have also outperformed most of the main European chemical producers. This is the result of companies repositioning themselves following the domestic market crisis post-2008; fine and specialty chemicals confirm Italy as an area of specialisation, with a cumulative exports up 33% since 2007 compared with the manufacturing average of 14%. Lastly, the trade surplus reached €2.5bn in 2014 and continues to increase.

## Federchimica at a glance

The Italian Federation of the chemical industry was founded in 1920. It became Asschimici in 1945 and was transformed into current Federchimica in 1984. Today, 1,400 companies with 90,000 employees are members. They are grouped into 17 Associations, articulated into 41 product groups.

Federchimica is a member of Confindustria (General Confederation of the Italian Industry) and CEFIC (European Chemical Industry Council). Its primary objectives are the coordination and the protection of the role of the Italian chemical industry as well as promotion of its development capacity. It has the following main duties:

- to elaborate guidelines in economic, industrial and trade union matters and in the areas of environment, innovation and energy policies
- to promote these policies with public authorities, national economic organisations, entrepreneurial and international organisations to whom the Federation belongs, and with trade union leaders, environmental and consumer organisations
- to contribute to the establishment of an accurate image of the chemical industry in the public opinion
- to carry out studies and projects which inspire and legitimise entrepreneurial choice
- to contribute to the promotion of the level of quality of associated members with a focus to initiatives in the field of innovation.



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