

Future looks bright for tank containers

The chemical industry is one of many currently benefiting from the China-driven world trade boom. The fortunes of chemical producers worldwide took a turn for the better in mid-2003 and their performance has been buoyant ever since. Global chemical output has increased 6% per annum, on average, over the past four years, about twice the rate of world GDP growth, and shows no sign of faltering.

An ITCO-commissioned study finds that now the industry has turned the corner, the way ahead for tank containers looks smooth and promising

The providers of logistics services to the chemical industry are similarly reaping the rewards of a strong market. For example, the current worldwide orderbook for chemical/product carriers, those flexible ships able to carry both

simple commodity chemicals and refined petroleum products, is equivalent to 40% of the in-service fleet in cargo-carrying capacity terms. In 2006, shipyards worldwide delivered approximately 150 chemical/product car-

riers in the 20-45,000 dwt size range and a similar number will be completed in 2007.

Tank revival

The tank container industry, too, is currently enjoying a revival after six years of fleet overcapacity and desultory results. A decade ago tank containers were the rising star in the chemical logistics firmament, poised to win significant amounts of business previously carried in drums and provide the universal solution to the many logistics challenges facing chemical shippers.

In the event a massive overinvestment in new tanks by the industry coincided with the Asian economic crisis of the late 1990s and tank containers lost their lustre overnight. It has taken until now for the industry to effect a recovery.

Against this background the Brussels-based International Tank Container Organisation (ITCO) has been keen to determine what the longer term prospects are for tank containers to enable its membership to plan accordingly and, if necessary, take appropriate steps to help sustain the current resurgence in the industry's fortunes. Another prime objective of all ITCO initiatives is to promote a better understanding of the role of the tank container in the safe and efficient transport of chemicals and related products on a worldwide basis.

Independent study

ITCO opted for an independent assessment of the market and commissioned a graduate student study supervised by Erasmus University in Rotterdam. Entitled *Longer Term Trends and Developments of the Tank Container Industry*, the study was carried out as a final thesis under the direction of Prof Dr M B M de Koster.

The initial findings of the Erasmus investigators accord with the current general market scenario. Because chemical manufacturers represent by far the largest single user group for tank containers, the buoyant market for chemi-



Wellfit Oddy is keeping the South African tank manufacturing flag flying

icals is underpinning a strong demand for tanks. The study concludes that the use of intermodal tank containers by chemical producers will continue to rise steadily around the world over the next five years.

Asia will be a particularly strong growth market, with tank container shipments from and within the region expanding at least twice as fast as elsewhere.

In addition, chemical companies will follow the current trend of outsourcing their tank container activities increasingly to specialist tank container operators. For those chemical companies wishing to either hang on to their existing tank fleets or build new fleets as strategic assets, they have the option of handing over the day-to-day operation of these fleets to specialist tank container management firms who provide a service but hold no assets themselves.

Supply/demand

In sharp contrast to those desultory days not long ago, when returns barely covered costs, the supply of tanks far outweighed demand and there were no bright prospects on the horizon, the ITCO study has been carried out at a time of much healthier freight rates. Furthermore, returns for tank operators and lessors are continuing to climb. A unique set of circumstances has combined to ensure that this buoyant market is likely to be sustained for some time yet.

First of all, the global chemical industry has entered a period of strong growth. New production centres in the Middle East and China are shifting the global chemical manufacturing axis eastwards while a surging demand for chemicals in China is altering worldwide trade patterns. Even the mature European and US chemical industries are enjoying a revival in their fortunes, and all these developments are supporting increasing traffic flows.

Considering that their recovery had to start from such a low base point, freight rates have still not attained a level deemed acceptable to the tank container operators. Yet, the continued rise in the cost of a new tank, due to the shortage of raw materials and escalating labour costs, is discouraging orders for new tanks and exacerbating the tightness in tank supply.

The current conditions are supporting an industry-wide push by tank operators to increase the charges they levy for their services. The extent to which they can raise their charges above and beyond the increased fuel, manpower and equipment costs they themselves face will provide a measure of their business success in the years ahead.

Building on success

It is not only the chemical manufacturing axis that has shifted eastwards. China, which a decade ago did not feature in tank container production, is now the world's

leading supplier of tanks. The previous global front runner - South Africa - has only one company still involved in the production of liquids tanks. Those European tank manufacturers that managed to survive the long market slump of the past decade are now focused on the manufacture of comparatively small numbers of high-value "specials."

China International Marine Containers Group Ltd (CIMC) is the leading tank manufacturer in China, with busy production lines geared to turning out large numbers of standard, 20ft tank containers for bulk liquids. CIMC has a production capacity of upwards of 10,000 tank containers per annum at its Nantong factory.

China's second manufacturer, Zhongshan Zhonghua Tank Containers (ZZTC), operates on a more modest scale from its factory in the Pearl River Delta. Although ZZTC has the capacity to manufacture 600 tanks per annum, output has yet to reach that level.

In recent months CIMC and ZZTC have been joined by a third Chinese manufacturer of tanks, Singamas. Singamas constructed a dedicated production line, developed new tank designs and established a global sales and marketing network within the space of nine months in 2006 and began the trial production of tanks in mid-December.

Wellfit Oddy is the sole remaining volume producer of tanks in South Africa and the company continues to move forward. The manufacturer completed 5,400 tank containers in 2006, a new record and 25% more than the 4,300 built in 2005. Some 64% of this output is comprised of standard ISO tanks, 16% specials, 12% swaps and 8% remanufactured units. Oddy is budgeting for 5,750 tank container completions in 2007, about 6.5% ahead of last year's output.

Shipper views

In developing their forecasts for tank container use over the next five years, the Erasmus compilers of the ITCO study carried out comprehensive interviews with senior logistics managers at Europe's 10 leading chemical manufacturing companies. These companies maintain extensive supply chains both in Europe and globally to ensure the delivery of their products to a wide range of customers. All the manufacturers make extensive use of tank containers, amongst a number of bulk and packaged goods transport options, in their supply chain operations.

The study notes that in 2004 these 10 companies shipped approximately 700,000t of chemicals in tank containers on eight primary deepsea trade lanes. The transatlantic flow of goods in tanks between the US and Europe, ie east to west and vice versa, are the two longest established international tank container trade lanes and remain the busiest, account-

ing for about one-third of global movements of tank containers between them.

However, Asia, where drummed shipments dominated in the past, is today's fastest growing market for tanks. Already, intra-Asian movements account for about 20% of the world total and exports from the region to both Europe and the US are growing. The preference of US and European customers for receiving goods in tanks rather than drums will support future Asian chemical exports in tanks.

The report's authors found that for deepsea movements on intercontinental routes, the major chemical producers favour tank containers over drums, intermediate bulk containers and flexitank "bag-in-the-box" options in many applications for reasons of safety, efficiency, environmental protection and, as mentioned, customer preference.

Also, because the majority of new sea-going chemical tankers are being built with fewer but larger capacity cargo tanks than in the past, tank containers are poised to win more business involving the movement of speciality chemicals in bulk.

In mainland Europe, where the tank container concept was born almost four decades ago, chemical shippers increasingly favour the use of intermodal swap body tank containers over road tankers on longer haul routes. Furthermore, the attractiveness of the tank container option in Europe will continue to increase as trade with Eastern and Central European nations blossoms and efforts to promote rail transport and shortsea shipping to help relieve congested roads bear fruit.

Growth forecasts

The Erasmus team found that the use of tank containers in Europe and on most deepsea routes worldwide is expected to grow by up to 5% per annum over the next five years. Certainly, the established and comparatively well balanced transatlantic trades are forecast to continue to grow at this rate into the next decade.

In Asia, the region with the most potential growth in chemical shipments, the prospects for tanks are much brighter, albeit from a smaller, less mature base. Driven by the commissioning of new production plants, particularly in China, tank container trade levels on the Asia to Europe route are set to expand by 5-10% per annum over the next five years, while the annual growth in the intra-Asian movement of chemicals using tanks will exceed 10%.

As with the Europe-Asia trades, tank container movements from Asia to the US are forecast to outweigh shipments in the opposite direction by a factor of 2:1.

When considering all these deepsea trade flows from a global perspective, the repositioning of empty tanks back to Asia for new loads presents a major challenge for tank logistics service suppliers. Newly delivered units from the Chinese tank manufacturing plants are in great demand for loading their maiden cargo for distribution to world markets. Finding paying cargoes for the tanks' return journeys to Asia in order to load product from the region's vast new petrochemical complexes is proving to be extremely difficult.

The imbalance is also preventing the optimisation of the full economic potential of the tank container and raises the spectre that flexitanks could possibly win business from tank containers in the non-hazardous liquids sector. The reasoning here is that it is much easier to find cargo for a standard container being repositioned back to Asia than for a tank.

Service response

The price of stainless steel, which is likely to remain high for the foreseeable future, is serving to dampen the demand for new tanks. The leading operators of global tank container fleets are having to focus increasingly on asset utilisation, customer service and sales support as a means of meeting strong demand cost-effectively.

Fortunately, many of the operators have large, diversified fleets to meet their customers' growing needs. For example, Stolt Tank Containers (STC), operator of the world's largest fleet, has over 20,000 tanks to call upon. The second largest fleet, that of Hoyer Global, has just passed the 10,000 tank mark.

To this inventory must be added the ability to service tanks, not least to clean

tanks to a suitably high standard in preparation for the next load. STC favours a policy of maintaining its own network of in-house tank depots. During 2006 STC opened a major new service centre in Nanhui near Shanghai to facilitate business with China.

Hoyer points out that amongst its strongest growth markets, in addition to Asia and the Middle East, is South America. The China-South America trade lane is one of eight "new" international routes identified by the ITCO study's chemical company interviewees as having best potential for growth over the next five years.

To the next stage

"The Erasmus University study represents the first step in a series of ITCO initiatives to explain more fully the market

prospects and capabilities of tank containers to a wide audience of existing and potential users," states Reginald Lee, president of ITCO.

"As part of this campaign, ITCO is organising a conference on *The Future of Tank Containers in the Global Supply Chain* on June 14, 2007 at the Transport Logistics 2007 event which is taking place in Munich. Leading industry figures representing tank container operators, chemical producers and Europe's railways will be speaking at the conference, one of the main aims of which is to determine what the chemical industry wants from tank service providers going forward." □

The buoyancy of the Asian market is causing logistics headaches for tank operators seeking to reposition tanks back into the region

