

## **What's new in tankers**

### **A roundup of the latest developments in tanker design, construction, equipment and services**

#### **D'Amico reaches halfway point in fleet expansion**

D'Amico Tankers is midway through a five-year expansion plan in which it will treble the number of product tankers in its fleet. The company's latest newbuilding, the 37,250 dwt Cielo di Milano, entered the Handytankers Pool at the end of September 2003 upon delivery from the Shina yard in Korea. She loaded a cargo of clean petroleum products in China on her maiden voyage.

The Italian-flag product/chemical tanker is fitted with Framo deepwell cargo pumps, has phenolic epoxy tank coatings and can handle up to seven fully segregated cargo grades simultaneously. The ship is also able to discharge cargo via the stern.

When d'Amico Tankers developed its current long-term business plan in 2000, the aim was to build upon its existing fleet of nine ships and establish a major presence in two product tanker segments - the 30-37,000 dwt Handysize class and the 46,000 dwt Handymax size.

This programme has reached the halfway stage, the total fleet standing at 20 vessels. A further 12 new ships are under construction, all except one being 46,000 dwt vessels. By mid-2005 d'Amico Tankers plans to have a managed and controlled fleet of 30 product tankers, with an expected average age of less than six years.

D'Amico's tankers in the 30-37,000 dwt segment are operated in the Handytankers Pool which is under the commercial management of Maersk Tankers. For ships in the 46,000 dwt segment d'Amico Tankers handles the chartering and marketing functions itself. This fleet, which the company has called its High Pool, is operated from d'Amico offices in Monaco, Singapore and London.

The High Pool currently comprises 10 ships in the 42-50,000 dwt size range but the fleet will be augmented by six 46,000 dwt newbuildings under construction for d'Amico at STX Shipbuilding in Korea for delivery from 2004 through to first quarter 2006.

Further growth of the High Pool is on the cards. The tanker operator has recently concluded joint ventures and charter deals with a number of Japanese principals who have new Handymax product tankers under construction in Japan. Such arrangements are likely to be the precursors of future strategic alliances with full participating members in the High Pool.

#### **Premuda achieves double quality certification**

Premuda, the Genoa-based operator of tankers, bulk carriers and an offshore production unit, has become the first Italian shipping company to achieve an integrated quality and environmental certification. Following audits by ABS, Premuda has received certifications notifying compliance with both the ISO 9001-2000 quality assurance standard and the ISO 14001-1996 environmental protection standard, as well as with the the voluntary ABS safety, quality and environmental (SQE) management standards.

Premuda operates a fleet of 25 tankers and bulk carriers totalling 1.6 million dwt, and is in the process of replacing its remaining single-hull tankers. In May 2003 Premuda extended its activities to the offshore sector with the introduction of the floating production, storage and offloading (FPSO) unit Four Vanguard. Unlike other FPSOs this unit is uniquely fitted with a double bottom to provide additional protection against potential environmental incidents. The ABS-classed vessel is currently operating off the North West coast of Australia, an area of particular environmental sensitivity.

Premuda is one of only 17 shipping companies worldwide within the ABS SQE certification programme to have achieved this level of management system certification.

### **Developing tanker traffic in developing countries**

Trinidad, Vietnam and Chad expect to generate significant new levels of tanker traffic in the years ahead. Trinidad is already the world's largest exporter of methanol and ammonia from a single site, and the largest exporter of LNG in the Western Hemisphere.

Outside the LNG sector, the main focal point for increased tanker handling is at Point Lisas on Trinidad's west coast. The port's new Atlas methanol plant, which at 1.7 million tonnes per annum (mta) will be the world's largest, is on course for 2004 completion. When exports are up to plateau levels, Point Lisas tanker traffic will increase from 1,400 visits a year to 1,800. Point Lisas already exports 3 mta of methanol and 3.6 mta of ammonia. Two of the five tanker berths at Point Lisas are currently being refurbished.

In the coming months two new Japanese-owned, Japanese-built, 45,000 dwt methanol carriers will go into service at Point Lisas. The ships have been fixed on 15-year charters by joint owners NYK and Ino Lines to Waterfront Shipping. Waterfront is part of Methanex, the world's largest methanol producer and one of the partners, along with BP, in the Atlas plant. The ships will be used to transport methanol to customers situated in Europe and along the US Gulf Coast.

Vietnam is the only South East Asian nation whose crude oil exports are increasing. However, because its first refinery - at Dung Qat in the middle of the long, narrow country - is still under construction and is not expected to be completed until 2005, Vietnam has to import all its rapidly increasing refined product requirements. Vietnam expects to export 17 million tonnes (mt) of crude oil in 2003, while petroleum product imports could reach 10 mt.

The Vietnamese government has recently announced that it will make a large investment in shipping and port infrastructure, to include eight crude oil tankers of 80-100,000 dwt in size and deepening Haiphong harbour to enable ships up to 150,000 dwt to berth.

Chad is the latest African nation to join the ranks of oil-exporting countries. Oil from the Lake Chad Basin oil fields in the landlocked nation is flowing through a new 1,000 km pipeline to the Cameroon oil terminal at Kribi, initially at a rate of 100,000 barrels per day (bpd). This volume is expected to reach plateau levels of 250,000 bpd (12.5 mta) by early 2004.

An interesting, longer-term project is a plan by Qatar to put some of its vast natural gas resources to use in what will be the world's largest gas-to-liquids (GTL) plant when it comes onstream in 2008. Initially, it will produce 70,000 bpd (3.5 mta) of naphtha and transport fuels for export but that volume will be doubled two years later when the second phase of the project is complete.

### **Largest-ever Uitor nitrogen generator for Bow Sun**

Odfjell Tankers' recently delivered Bow Sun, a 39,900 dwt chemical parcel tanker with 40 stainless steel tanks, is fitted with the largest nitrogen generator ever supplied by Uitor. Nitrogen is used for purging and padding cargo tanks on chemical tankers.

Based on IGS membrane technology, the Uitor system on Bow Sun can deliver up to 3,750 standard cubic metres of nitrogen per hour and has the ability to vary the specification of the nitrogen delivered, from low-purity (95 per cent) to high-purity gas (99.9 per cent). In addition, a combination of low and high purities can be provided to meet special needs. The system has 68 membrane modules and is fed by four large

air compressors. The nitrogen generator system on Bow Sun brings the total number of such systems delivered by Unitor to 200.

The tanker is the first of a series of six ships being built for Odfjell by Poland's Stocznia Szczecinska Nowa yard. The remaining parcel tankers will be completed between now and 2005, although the yard holds options on two further such ships. Unitor was also chosen to deliver Bow Sun's ventilation system, refrigeration system for provisions, CO<sub>2</sub> fire protection system for the engine room, foam system for fire protection on deck and onboard portable fire and safety equipment.

### **Monitoring hull stresses with fibre optics**

MPT Consultancy of Barsebeck in Sweden has developed what it claims to be the world's first fibre optic hull stress monitoring system. Called SENSFIB and utilising data gathered from strategically located strain gauges, the technology enables the display of real-time hull stress information on the bridge display. In addition to the display of continuous hull stress information on the bridge, alarms can be set to activate at certain limits and data can be stored for later analysis.

By integrating SENSFIB with ship's loading computer, GPS system and radar-based wave system, the crew is able to make knowledge-based decisions on ship speed and heading in adverse weather, and to optimise cargo and ballasting operations in order to reduce hull stress.

SENSFIB has been retrofitted on three shuttle tankers and is being installed on ix VLCCs building in South Korea for Frontline and Vela International Marine.

### **Little and large NME freefall boats**

Norwegian Maritime Equipment (NME) has recently developed the world's smallest freefall lifeboat as well as the largest enclosed lifeboat. The latter is able to accommodate 102 persons and such boats have been delivered for installation on several floating production storage and offloading (FPSO) vessels over the past few months.

The small freefall boat is 4.9 metres long and has a capacity of 13 persons. It has been designed with a view to minimising both deck space and weight, and a prototype was successfully tested during the summer months.

NME also supplied six 60-person totally enclosed lifeboats to Agip for installation on two drilling rigs active in the Caspian Sea. In this case freefall boats were not an option as the rigs are positioned on artificial islands in water depths of only 2 metres.

### **Maersk, Norgas link on semi-ref gas carriers**

A P Møller/Maersk Tankers and I M Skaugen ASA have agreed to establish a new gas carrier pool to improve the marketing of their respective SkandiGas and Norgas fleets of 5-12,000 m<sup>3</sup> semi-refrigerated gas carriers. To be known as Maersk Norgas Gas Carriers (MNGC), the new revenue-sharing pool will operate a fleet of 37 vessels totalling 334,000 m<sup>3</sup> active in the carriage of LPG and petrochemical gases. MNGC operations are headquartered in Singapore but the worldwide service is facilitated by further offices in Houston, Dubai/Riyadh, Copenhagen, Shanghai and Oslo. The new MNGC will also be marketed in cooperation with the fleet of larger semi-refrigerated vessels in the SkandiGas Pool, commercially managed by A P Møller/Maersk A/S, to provide customers with a full range of carriage options in gas carriers ranging from 5,000 to 22,000 m<sup>3</sup> in size.

The primary MNGC focus is on short haul voyages and the regional distribution of ethylene, propylene, VCM, LPG and related cargoes for customers in the petrochemical and oil industries. The MNGC alliance enables the servicing of large-scale freight contracts and provides the foundations needed for the carrier to become a more integrated part of customers' supply chains.

I M Skaugen of Oslo has also recently established a joint venture with Teekay Shipping Corp to further develop the ship-to-ship transfer operations of its SPT subsidiary.

### **Controlling hazardous materials onboard**

The satcom firm Xantic and HSE Global, a Norwegian company with expertise in chemical hazards, toxicology and related IT systems, have formed a strategic alliance to assist the shipping industry with the control of shipboard chemicals and hazardous materials.

While merchant ships usually carry 100-150 different chemicals for use in routine cleaning and maintenance work, such chemicals are not usually integrated into a vessel's operational and maintenance planning processes. The same is true for passenger ships, which often carry up to 1,000 different chemicals for various applications.

HSE Global has developed a new module for Xantic's AMOS maintenance and purchasing (M&P) tool which actively integrates the operation and maintenance of onboard chemicals. The new module facilitates integration of the entire onboard stock of hazardous materials, and includes electronic safety datasheets, a health risk assessment module and relevant reporting formats.

HSE Global points out that the new package enables shipowners to meet regulatory requirements, improve their loss control and crew safety regimes, reduce the number of products and suppliers, and facilitate stock control and work schedules.

### **Seagull certifies its first security officer**

Captain Rolf Schmidt, master of the chemical tanker Christian Essberger, is the first person to achieve a ship security officer (SSO) certification following completion of the ship security course offered by onboard training specialist Seagull. Capt Schmidt completed the training whilst his ship was enroute from Porvoo in Finland to Rotterdam, and the certification per se is awarded to Transocean Shipmanagement GmbH, the master's employer and an affiliate of the John T Essberger Group, the tanker's owner.

A key requirement of the International Ship and Port Facility Security (ISPS) Code, which enters into force on July 1, 2004, is for the people with security responsibilities - specifically, SSOs and company security officers (CSOs) - to be appropriately trained to carry out their duties.

Capt Schmidt's performance was monitored by Capt Dierk Hermann, Transocean Shipmanagement's onboard assessor for SSO training, who is not only a fully trained CSO but also the ship management company's corporate quality assurance manager and ISPS project manager.

Seagull's ship security course package includes three computer-based training (CBT) courses - covering security awareness, the role of SSOs and automatic identification systems (AIS) - and the SSO course workbook.