

What's new in tankers

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

Prestige lifts construction to record highs

Crude oil and product tankers are topping the newbuilding popularity charts as shipowners worldwide are currently embarked on the biggest ordering spree of all time. The knock-on effects from the Prestige sinking last November are the main driver, as the likelihood of a further acceleration of the phaseout schedule for older, single-hull tankers looms and several European governments announce they will not let older, single-hull tankers carrying heavy oil to enter their ports.

Tanker owners are keen to book available building berth space, and this has panicked owners of other ship types, particular container ships, to reserve whatever berth slots are available. While the political problems in the Middle East may be causing jitters, they are not dampening enthusiasm for new ships.

Newbuilding plans which call for the delivery of ships before the end of 2005 are now in jeopardy as their current orderbooks will keep the major yards of Japan and Korea busy for at least the next 30 months. Chinese shipbuilders, particularly those that have modernised their yards in recent years, are benefiting from the order overspill, but even at these facilities capacity is getting short.

Hyundai Heavy Industries, the world's largest shipbuilder, has led the way for orders gained in 2003. Over the first two months of the year, the Korean yard had secured contracts for \$1.4bn worth of new ships, almost half of the \$3bn in sales which is its goal for this year. The other major Korean shipyards are also off to a good start. Samsung signed contracts for \$1.1bn of new ships in January and February, putting the yard well on the way to its \$3.5bn target for the year.

STX Shipbuilding, which specialises in Handymax and Panamax size tankers, had secured orders for 26 ships totalling \$750m in the first two months of the year. Most of these are product tankers. Daewoo is off to a slow start by comparison, with only \$440m worth of new ship orders in January and February, against a 2003 target of \$2.8bn. However, the builder is confident of meeting this target and, in any case, has few slots left for 2005 delivery.

New jetty mooring system for Singapore VLCC terminal

Strainstall has supplied integrated jetty monitoring systems for the new oil import terminal at Jurong in Singapore. The systems monitor a vessel's speed and angle of approach and then, once the ship is safely berthed, provide constant monitoring of the mooring lines to ensure that the tension of the lines remains within predefined parameters.

The facility comprises two berths, each capable of handling a very large crude carrier (VLCC). One berth is operated by ExxonMobil and the other by Tanker Mooring Services. Strainstall, which has been designing and installing berthing systems since the 1970s, provided a separate system for each berth.

Although each system is fully integrated, they both comprise three proven Strainstall subsystems: the DockAlert laser vessel docking system, the MoorAlert mooring load monitoring system and the Berth Manager data logger and real-time display package. The Strainstall DockAlert, by means of two laser beam sensors mounted at each end of the berth, provides both the jetty operator and the ship's pilot and crew with a continuous, real-time readout of the vessel's speed of approach, angle of approach and distance from the berth. Distance accuracies of ± 1 cm in 200 metres and speed measurement accuracies of ± 1 cm/s in the range 0-99 cm/s are provided, while the precision increases with decreasing target distance to ensure the highest accuracy when it is most critical.

The Strainstall MoorAlert measures and records the tension in vessel mooring lines, thus detecting any changes in the predetermined values caused by the action of wind, tide and wash from passing ships. Data from the system enables the berthing manager or the vessel master to continuously assess the efficiency of the mooring pattern and to take appropriate action to ensure that maximum mooring safety is maintained at all times.

The Strainstall Berth Manager logs and records the data from DockAlert and MoorAlert as well as from another subsystem which monitors meteorological and ocean data. Berth Manager presents this data in the form of an onscreen, real-time, graphic display of the vessel's approach and, when berthed, the current mooring status of each and every mooring line. The alarm parameters for each line can be individually changed as required.

ECO Phoenix modernises fleet

ECO Phoenix Holding, the St Petersburg bunker company, has added the 1,730 dwt, ice-class bunker barge Ecomarin to its fleet, thus enhancing the ability to deliver marine fuel to customers throughout the year. The introduction of the vessel represents the first stage of a project to upgrade the operational and environmental protection capabilities of the ECO Phoenix fleet.

"We will use the Ecomarin for deliveries not only within the port of St Petersburg but also in the roads and at other Gulf of Finland ports, including Viborg, Ust-Luga and Visotsk," states Ludmila Jouravleva, general manager of ECO Phoenix. "The LU3 ice class of the tanker enables it to operate in winter conditions without the assistance of an ice breaker."

Ecomarin was built in Holland and bought by ECO Phoenix in November 2002. The ship has recently been the subject of a major upgrade project at the Rijeka yard in Croatia which has included the provision of two 120 m³/hour pumps. Many ships, including numerous cruise vessels, are expected to visit St Petersburg over the coming months as part of the celebrations marking the 300th anniversary of the founding of the port.

As a result of measures proposed by the European Union following the sinking of Prestige in November 2002, bunkering companies in the region are likely to have to switch to double-hull bunker tankers within a short space of time.

"That process will probably take longer in Russia," points out Ms Jouravleva, "but it will happen and it will require considerable investment by Russian bunker companies. Acquiring Ecomarin puts us ahead of the game in St Petersburg where there are few double-hull bunkering vessels. The next phase of our modernisation strategy is to acquire two modern, double-hull barges."

Biometric seafarer identification from Liberian registry

The Liberian International Ship & Corporate Registry (LISCR) unveiled the world's first biometric seafarer identity cards at the International Maritime Organization (IMO) in London last month. The identity cards are part of LISCR's initiative to help improve maritime security by providing a counterfeit-proof document.

Datastrip, an identification technology specialist, is using its 2D Superscript two-dimensional bar code as the core technology for the project. Each LISCR seafarer's card will include a tiny Datastrip bar code containing either one or two fingerprint templates, a digitised version of the cardholder's photograph, and several pages of encoded personal information.

Identity verification will be performed on vessels and at ports of entry with Datastrip's DSVerify2D, the first portable biometric ID card reader capable of decoding fingerprints, text and photographs with one swipe. The reader includes an optical fingerprint scanner that can match the stored fingerprint template with the cardholder's live fingerprint on the spot, preventing identity fraud.

LISCR expects to have 2,000 seafarer identity cards completed for use in the programme's initial six-month testing phase. Thereafter, the plan is to introduce the scheme throughout the entire Liberian flag fleet of 2,000 ships totalling 54 million gross tons.

Newbuilding equipment at a keystone

ShipyardsXchange AS (SYX) and Instituttet for Merkantil Informasjon (IMI) are to cooperate in the field of e-procurement with a view to providing access to a full range of marine equipment suppliers via the internet.

While IMI maintains a supplier database, with detailed company and product information, SYX, in only its first year of operation, has become the leading e-procurement portal for the commercial shipbuilding industry in Europe. It also has a significant presence in the North and South American markets. More than 3,000 requests for quotation have so far been distributed through SYX, and orders for more than EUR 90 million have been awarded participating suppliers.

Shipyards, equipment suppliers and maritime research institutions have participated in the development of SYX. The major stakeholders in the company are Aker Yards, Aker RGI, Sener SA, Awilco, Rolls-Royce Marine and Marintek.

Nexen security for Yemen terminal

Nexen Inc of Calgary, Canada is supplying the Yemeni government with a package comprising monitoring systems, boats and training for coast guards to help thwart future terrorist attacks on tankers loading oil at the Al Dhaba export terminal.

Al Dhaba is the location where the VLCC Limburg was attacked by terrorists using a small launch laden with explosives in October 2002. The blast killed one crewman and injured 12 others, while 8,000 tonnes of crude oil escaped from the hole blown in the tanker's hull.

Nexen runs the terminal which is situated on the Gulf of Aden near Al Mukalla, 500 miles southeast of Sanaa, the Yemeni capital.

GE Shipping tankers clear ballast hurdle

The Great Eastern Shipping Co Ltd (GE Shipping) has become the largest private sector shipping company in India to receive Lloyd's Register's ShipRight ballast water management plan (BWMP) descriptive note. GE Shipping has received certification for both its tanker and gas carrier fleets, 17 ships in total.

Tankers accounted for 92 per cent of GE Shipping's profits last year. The company currently has five tankers totalling 450,000 dwt under construction, with deliveries scheduled between April 2003 and March 2005.

Vipin Sachdeva, designated person and management representative for GE Shipping, says: "We have been proactive in our efforts to implement IMO regulations in line with our strategy to be a preferred service provider from India. In June 2002 Lloyd's Register approved the plans of two of our product tankers, and today, through a seamless process, our entire tanker and gas carrier fleets are now approved, even though the relevant regulations have not yet become mandatory."

Lloyd's Register's descriptive note follows the guidelines set out in the International Maritime Organization's (IMO) Resolution A.868(20), "Guidelines for the control and management of ship's ballast water to minimise the transfer of harmful aquatic organisms and pathogens". The descriptive note considers the environmental impact of ballast water management methods, such as exchange and treatment, and takes into account the effects of ballast water exchange on a ship's strength, stability and operational performance.

A total of 401 vessels operate under or are preparing to receive the LR ShipRight BWMP descriptive note. To date, 48 shipping companies have achieved the descriptive note.

Security officers training package

Videotel Marine International and the West of England Shipowners Mutual Insurance Association have launched a new distance learning training package especially designed for training ship and company security officers. Comprising a video and backup written material, the package is designed for training security officers in accordance with the new IMO security regulations, as laid down in Chapter XI-2 of the SOLAS convention "Special measures to enhance maritime security", as well as the requirements of the International Ship and Port Facility Security (ISPS) Code.

Epoxy choice made easier

Progressive Epoxy Polymers, Inc. has posted a new web page that explains how to compare different marine epoxies from a chemical composition point of view, rather rely upon the basic specified properties of the coating. This, in turn, will help the purchaser choose the epoxy coating most appropriate for a particular application. The web page is: <http://www.epoxyproducts.com/mepoxies.html>

Nigerian oil flowing in west African early production first with FPSO Falcon on Yoho field

The use of a temporary floating, production, storage and offloading (FPSO) vessel, FPSO Falcon, as an early production system (EPS) has enabled the first oil from the Yoho field off the coast of Nigeria to flow almost two years ahead of full field startup. FPSO Falcon is the former VLCC Amazon Falcon ICS which has been converted for the purpose. Installed in 60 metres of water, FPSO Falcon is equipped with an external turret mooring system and production facilities capable of producing 100,000 barrels per day of oil and 100 million cubic feet per day of natural gas.

The vessel is one of three West African FPSO conversion projects the oil major ExxonMobil is implementing in order to develop offshore oil fields earlier than would normally be possible by using EPS technology. It is the first deployment of an EPS in west Africa.

In the other two projects the VLCC Amazon Eagle is being converted into FPSO Eagle for installation in the Zafiro field offshore Equatorial Guinea at a 515-metre water depth and the VLCC Atlantic is being converted into FPSO Atlantic for installation in the Xikomba field offshore Angola at a water depth of 1300 metres. The Zafiro FPSO is scheduled for August 2003 while FPSO Atlantic will be placed on station in November 2003.

Single Buoy Moorings has undertaken the design, procurement and construction of the trio of FPSOs on behalf of ExxonMobil, while ABS is providing the classification and certification services, including condition assessment of the tankers, technical design review and surveys during the refurbishment, conversion and hookup and commissioning of the three FPSOs.

As each of the VLCC-to-FPSO conversions is completed, the vessels are assigned a new class notation - X A1 Floating Offshore Installation - and issued an IMO MODU safety certificate on behalf of the flag administration.

Each of the projects will be subject to an upgrading of facilities at a later date to enable full field development. In the case of the Yoho field, for example, this will involve additional wellhead platforms, a central production platform, a living quarters platform and a floating, storage and offloading (FSO) vessel to replace the EPS, for startup in late 2004.