

What's new in tankers

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

Sovcomflot tanker programme nears completion

The current Sovcomflot 20-ship fleet renovation programme, with its heavy emphasis on new tankers, is now entering its final phase. The programme has added considerably to the Russian company's cargo-carrying capacity in the Suezmax, Aframax and product tanker sectors.

The Sovcomflot tanker fleet now comprises 31 Suezmax, Aframax and product tankers totalling 2.96m dwt. Tankers represent 44% of all Sovcomflot vessels on a numerical basis but 94% in terms of tonnage. The newbuilding programme is helping reduce the low age profile of the Sovcomflot tanker fleet still further; the average ship age is 6.45 years and all vessels have double hulls.

While the majority of the tankers have been built in Japan, South Korea and Croatia, Sovcomflot has recently turned to the Admiralty Shipyards in St Petersburg for a pair of 47,700 dwt product tankers, the first of which, Troitsky Bridge, will be delivered in September 2003. While Russian shipyards are unable to build larger size tankers, it is expected that Sovcomflot will be returning to Admiralty for the construction of product tankers in future.

In October 2002 Sovcomflot took delivery of the 106,500 dwt tanker Petrovavlovsk from Japan's Tsuneishi Shipyard. She is the first of three sister ships, the second and the third vessels being scheduled for August 2003 and February 2004 deliveries. Petrovavlovsk entered service on charter to Fortum carrying Russian oil to Finland. Sovcomflot also has two similar-sized Aframax tankers carrying Russian oil in the Baltic Sea.

Earlier this year Sovcomflot took delivery of the 159,000 dwt SCF Valdai from Hyundai Heavy Industries Co Ltd. This Suezmax tanker is the last in a series of six such vessels built at the Korean yard for the owner, and brings the total Sovcomflot Suezmax fleet to 12 ships.

Amongst other things, the new Suezmax tankers will be employed in carrying oil produced from the Tengiz field in western Kazakhstan to western markets. The oil is transported via the new 1,580 kilometre Caspian Pipeline Consortium (CPC) pipeline to the CPC marine terminal at the Black Sea port of Yuzhnaya Ozereevka near Novorossiysk for loading onboard tankers for export.

This arrangement was formalised in spring 2002 when ChevronTexaco and Sovcomflot agreed to further the joint activities of the two companies. The scope of the cooperative agreement includes a long-term contract of affreightment, the transportation of a number of crude oil shipments from CPC using Sovcomflot tankers, technology transfer, participation in a variety of advanced training programmes for employees from both companies, and a joint resolution of shipping safety issues.

ChevronTexaco has a 15% interest in the \$2.65bn CPC pipeline which will be able to carry up to a maximum of 28m tonnes of crude a year in its initial phase. Moscow-based Sovcomflot, the largest Russian shipping company, celebrates its 30th anniversary this year.

First Malaysian VLCC

Malaysia International Shipping Corporation Berhad (MISC) took delivery last month of the 300,000 dwt Bunga Kasturi from the Ariake, Japan yard of Universal Shipbuilding Corporation (USC), formerly known as Hitachi Zosen Corporation. The ship is the first very large crude carrier (VLCC) in the company's fleet and the largest vessel yet to fly a Malaysian flag.

A subsidiary of Petronas, the Malaysian state oil and gas company, MISC is expanding its presence in the oil tanker sector to augment its strong positions in the liquefied natural gas (LNG) carrier, chemical tanker and bulk carrier fields. The company has decided to exercise its option on a second VLCC to be built at USC. The crude oil tanker fleet now stands at 10 ships, including six 105,000 dwt Aframax tankers built in the late 1990s. MISC also operates five product tankers. The Malaysian shipowner has also recently ordered two Aframax tankers and two LNGCs at Samsung Heavy Industries in Korea. The order brings to six the number of LNGCs currently under construction for MISC in Japan and Korea. Once these ships are completed, MISC will have a fleet of 21 LNGCs, reinforcing its position as the largest owner of this type of ship.

The 330-metre long Bunga Kasturi is the 127th vessel in the MISC fleet and will be fully manned by Malaysians.

North Sea gas tankers - with a difference

Statoil, the Norwegian state oil and gas company, is poised to establish a new joint venture tanker company for the carriage of liquefied carbon dioxide (CO₂) by sea to Norwegian fields in the North Sea. Once the ship is on station, the CO₂ can be injected into the oil and gas wells to help enhance field production performance. The use of CO₂ not only obviates the need for using valuable commodities such as water and natural gas as a means of maintaining field pressure and extracting hydrocarbons but also helps Norway meet its environmental obligations under the Kyoto Treaty. Vapours generated during oil and gas processing now make up 17 percent of Norwegian gas emissions measured as CO₂ equivalents. These emissions have increased by 50% since 1990, according to figures from the Norwegian Pollution Control Authority. In contrast, the Kyoto Treaty commits the country to ensure emissions in the 2008-2012 period are no more than 1% above the 1990 levels.

Statoil plans to transport CO₂ extracted from the flue gases generated at power stations and other industrial plants in special tankers under pressure and at a temperature of -50°C to offshore oil and gas fields. The ships will be similar in construction to liquefied petroleum gas (LPG) tankers, and will be "more flexible and less costly" than a dedicated CO₂ pipeline. In fact, one design under review is a 22,000 cu m tanker that would be able to carry LPG from the oil field to the shore terminal where it would discharge the cargo and replace with carbon dioxide for the return journey to the offshore field to repeat the cycle.

There is already one CO₂ carrier in service, the small, 1,250 m³ Coral Carbonic built in 1999 and operated by Anthony Veder. The ship can carry CO₂ cargo at pressures up to 18 bar g and at temperatures as low as -40°C. The ship is ice-strengthened and built to ice class 1A to enable trading within the Baltic Sea and North West European waters.

CCA joins INTERTANKO

Following discussions between the Chemical Carrier Association's (CCA) Board of Directors and the International Association of Independent Tanker Owners (INTERTANKO), CCA has merged with INTERTANKO. The CCA Board and its membership believes that this collaboration will help to ensure that the chemical tanker industry receives the necessary level of representation on a global basis. INTERTANKO has altered its internal structure to accommodate the new membership and to carry forward a strong, unified message on behalf of the chemical tanker sector. INTERTANKO's Chemical Tanker Owners Advisory Group (CTOAG) has been changed and is now a committee reporting directly to the INTERTANKO Council. Margaret Kaigh Doyle, formerly CCA executive secretary, is now the INTERTANKO Chemicals Manager. Margaret will be assisting Captain Howard Snaith on all chemical issues as well as supporting Dragos Rauta who

represents INTERTANKO in their Washington, DC office. In addition, she will also head up the INTERTANKO American Chemical Tanker Subcommittee, which will focus on the US regulatory and operational issues traditionally handled by CCA.

Oil spills in perspective

Recently published figures from the US National Research Council (NRC) show that, contrary to popular opinion, tanker spills account for a relatively small amount of the oil entering the sea each year. Of the 1.3m tonnes of petroleum hydrocarbons reaching the sea annually during the 1990s, approximately 85% was due to natural seepage from the seabed and land-based run-off, including from industrial plants and roads. In contrast, about 8%, or 100,000 tonnes annually, stemmed from tanker accidents.

In the March 2003 issue of its publication, *Ocean Orbit*, the International Tanker Owners Pollution Federation Ltd (ITOPF) combines the NRC results with its own charts to highlight how the number and volume of tanker spills have continued to decline. Tanker spill figures can be significantly inflated by a single incident; indeed, were it not for the Erika sinking in 1999 and the Prestige accident in 2002, the volume of oil lost in tanker spills since 1998 would hardly have registered on the chart.

ITOPF states that the majority of the incidents to which it currently responds to involve the loss of bunkers from non-tankers rather than tanker spills. The relative number of spills involving non-oil hazardous and noxious substances is also increasing.

Hot work for Bureau Veritas

Tanker newbuildings dominated world orderbooks over the last year, with a rush for double-hull vessels following the Prestige break up. Bureau Veritas took a substantial market share, especially in high technology vessels, and also published new guidelines to help owners through the complex maze of choices which face them when contracting a newbuilding.

Significant orders for BV included a vlcc for Chinese owner Sea Fortune, two vlccs for Ming Wah to be built at Japan's Universal yard, and a panamax crude oil tanker for Formosa Plastics, but it was at the more sophisticated end of the tanker scale that BV took most orders.

The National Iranian Tanker Company chose BV to class a three plus two series of 35,000 dwt oil/chemical tankers IMO Type III to be built at Mipo, and Italy's D'Amico chose BV to class two 45,800 dwt product tankers to be built at STX in Korea.

Turkish yards took a major share of the world chemical tanker order book, and BV was chosen to class twelve chemical carriers of different sizes for Turkish owners. BV again demonstrated its leadership with very hot cargoes by taking orders to class three asphalt carriers, two for UK's Sargeant Marine in Croatia and one for Petronav in China. BV dominates the market for specialist tankers for hot cargoes like asphalt, coal tar and creosote, and all these are getting hotter. Temperatures in the range of 200°C to 250°C are common. These temperatures impose huge thermal stresses on tankers. The best way to avoid fracturing of the structure is to use independent cargo tanks.

The tank supports of independent cargo tanks have to absorb the temperature difference between the cargo load and the ship's structure. Furthermore the supports have to be able to allow the expansion of the cargo tank and to support the tank while absorbing the forces generated by the vessel's movement.

On many of these ships BV works closely with Netherlands-based BEELE Engineering, which has developed the ULEPSI tank supports. They consist of a plate of ULTEM glass filled rigid plastic measuring which is capable of carrying a load of 300 kN at a temperature of 175°C. Underneath the ULTEM plate, a plate of silicon

rubber is placed to bring the temperature down to about 100°C. A plate of EPDM rubber underneath the silicon plate, reduces the temperature further to below 70°C. Twelve years experience has proven that ULEPSI tank supports are really maintenance free. Maintenance costs on the structure of the tank have also been reduced substantially. BV is proud to have issued the Type Approval for the supports. BV's Guidelines for Tankers are aimed at helping the technical staff of shipowners managing new construction projects. The Guidelines identify the main structural design factors of any newbuilding project and guide the managers through the choices that face them and the rules that govern those choices. The Guidelines are developed from structural design studies carried out on typical tankers, and cover the steel grades, spacing of primary supporting members and ordinary stiffeners and design of transverse bulkheads. The governing factors are reviewed, in the light of strength and regulatory considerations including selection of design loading conditions, ultimate strength of the hull girder, fatigue of structural details and strength of the crossing arrangement between different structures such as longitudinal and transverse bulkheads. There is detailed advice on drawing up specifications.

Industry in focus at INTERTANKO spring meeting

The Washington Tanker Event in the US capital on April 6-9, 2003 proved to be another prestigious gathering in the series international spring annual meetings launched by the International Association of Independent Tanker Owners (INTERTANKO) seven years ago. Despite the global uncertainties pertaining at the time, the event was supported by a large audience anxious to discuss the many issues of topical concern to the global tanker industry. The Association's chairman, Lars Carlsson, welcomed over 250 members, associate members and guests in Washington.

Amongst the administrative matters agreed at the event was the approval at INTERTANKO's Annual General Meeting of an amendment to the articles of association that increases the maximum number of INTERTANKO's Executive Committee members from 12 to 15, and alters the tenure of the Executive Committee members to a maximum of six years' continuous membership.

The INTERTANKO Council also adopted, as a practical measure following the loss of the tanker *Prestige*, a requirement for members to have in place emergency response arrangements for damaged stability scenarios from January 1, 2004.

At the meeting Lars Carlsson of Concordia Maritime was re-elected INTERTANKO chairman for another year. In addition, the Council approved the membership applications of nine tanker-owning companies with a registered overall fleet of 113 tankers aggregating 4,105,911 tons deadweight.

The new INTERTANKO members are Barclay Shipping Company Ltd, Jo Tankers BV, LGR di Navigazione, Magnus Carriers Corporation, Odfjell ASA, Seabulk Tankers, Searland Shipping Management GmbH, Titan Ocean Pte Ltd and Varun Shipping Company Ltd. Five companies were welcomed as new associate members. The principal issues covered during the open conference sessions at the Washington Tanker Event are reviewed elsewhere in this issue. (See page 21).

ASP looks to Star performance

ASP Ship Management (ASP) of Australia has chosen Star Information Systems (SIS) to supply fleet management software for its global operations. Seeking maximum efficiency through a single maintenance management system, the software contract is for 20 vessels and ASP's Melbourne office with option for eventual SIS software deliveries to other worldwide offices.

The ASP managed fleet is technically diverse, encompassing, as it does, crude, product and LPG tankers, FPSOs and FSOs, bulk carriers, container, ro-ro and

reefer vessels, passenger ferries, high speed catamarans, car carriers, research vessels and even sail training ships.

"One of the problems with ship management in the past has been that different shipowners have different shipboard management systems which are inherited by the ship managers, who then have to deal with very wide variations for planned maintenance and procurement," comments Bob Bird, ASP chief operating officer.

"The ideal for maximum efficiency, including providing performance data to our customers and achieving savings on hardware, software and the time and effort needed to train personnel, is to have the same system operating on every ship, with direct linkage to the shore office. The SIS system will enable us to institute uniform procedures for virtually all aspects of ship management throughout the fleet."

Environmental certificate for World Tankers

World Tankers Management Ltd Pte has become the first tanker operator in Singapore to have its fleet certified by Lloyd's Register Quality Assurance (LRQA) to the ISO 14001:1996 environmental management standard.

The ISO14001:1996 certification is a recognised industry standard providing a structured and auditable method of ensuring that shipping companies manage their environmental risks while controlling and mitigating impacts. The aim is to give owners, charterers, flag states and the general public the assurance that the highest standards of environmental protection are being applied at sea.

World Tankers operates a fleet of 12 tankers. Amongst the services that Lloyd's Register also provides to the Singapore operator are ship emergency response advice available 24 hours a day; application of the Condition Assessment Programme (CAP) to provide an independent evaluation of the fleet's structural and operational quality; and ballast water management planning which ensures that all water ballast procedures are conducted in an environmentally responsible manner which also ensures the vessel's structural integrity.

Of the 3,100 companies worldwide certified by Lloyd's Register to the ISO 14000 standard to date, more than 40 are shipping companies.

Bunker charges, weather hit Stolt tankers

Stolt-Nielsen Transportation Group's (SNTG) chemical parcel tanker division reported income from operations of \$16.1m in the first quarter of 2003 compared to \$20.4m in the first quarter of 2002.

The Stolt Tankers Joint Service Sailed-in Index in the first quarter of 2003 was 7% lower than in the comparable quarter of 2002 and 5% lower than in the fourth quarter of 2002. Stolt reports that the decline in its in-house index is almost exclusively attributable to higher bunker costs and weather-related delays in the most recent quarter rather than a weakening in the market.

On the positive side, the volumes of liquid cargoes carried remained strong, while spot rates continue to be steady, due in part to the strong product tanker market. Contracts of affreightment are being renewed at close to rollover levels; new business has been won; and some existing contracts have been extended.

SNTG has also entered into long-term time-charter agreements for two 31,200 dwt stainless steel tankers with Japanese owners. The Group now has long-term, flexible time charter agreements for a total of nine ships being delivered between 2003 and 2006. These ships will replace tonnage that the owner expects to scrap over the next several years.

Overall first quarter 2003 results for the Stolt-Nielsen SA parent company were adversely affected by poor performances in the offshore engineering and fish farming activities. SNSA posted a net loss of \$13.0m on net operating revenues of \$764.2m for the latest quarter, compared to a net loss of \$3.7m on net operating revenues of \$611.2m for the first quarter of 2002.

Floating production in a nutshell

Despite the stuttering world economy and clouds over UK North Sea prospects, Douglas-Westwood Ltd and Infield Systems are still upbeat on the future of floating oil production in their third annual study of the sector. The World Floating Production Report, 2003-2007 states that there are 131 prospective installations over the five-year period, of which 116 have a good chance of proceeding.

Of those with good potential, 77 will involve floating production storage and offloading vessels (FPSOs), 16 will utilise tension leg platforms, 13 will feature spar loading and 10 will be production semi-submersibles. The authors believe that 32 of the FPSO projects will make use of newbuilding vessels while the others will utilise either converted tankers or redeployment of existing vessels.

The total spend on the 116 projects is estimated at \$31.6bn, down marginally on the \$32.2bn five-year capital expenditure put forward in last year's second edition of the study. One of the main reasons for the reduced spend estimate is the more sanguine view of European prospects, particularly the UK North Sea. Whereas 18 new floaters were installed in European waters in the 1998-2002 period, only four are expected to be commissioned over the coming five years.

West African offshore waters are set for the greatest activity levels. A total of 34 floating installations are likely to go ahead, all but a handful of which will involve FPSOs.

Further details about the report are available from the following web site:

<http://www.dw-1.com>