

Queuing up for the Bosphorus

Tankers have been delayed this winter at the entrance of the Black Sea, due to bad weather and the switchover to a new vessel traffic system

The Turkish Straits tanker choke point has come back sharply into focus this winter, as shipping delays force tanker freights upwards and refiners in Southern Europe to either plan ahead or look for alternative sources of supply.

The delays - of up to two weeks for Aframax and Suezmax tankers in both a northerly and southerly direction - have been building since November.

They are attributed to a combination of new security guidelines and bad weather, including seasonal fog in the Straits and storms at the Russian Black Sea loading port of Novorossiysk.

High sea swells stemming from the storms have forced the closure of the Novorossiysk's fixed point mooring system on several occasions in recent months.

These shutdowns, in turn, have necessitated cutbacks in rail tank car deliveries as well as the temporary closures of one Russian pipeline and the Caspian Pipeline from Kazakhstan whenever the terminal storage tanks have been filled to capacity.

Most of the current rapid growth in the number of ship movements is due to an expansion in exports of oil from the Black Sea by tanker as the oil-rich Caspian states commission the additional infrastructure links with Russian loading ports that are needed to bring their product to world markets.

The number of laden and unladen tankers passing through the Straits topped 9,000 in 2002, up from 6,100 a year earlier. Furthermore, the rapid growth in tanker traffic is continuing. The volumes of oil from Former Soviet Union states passing along the waterway in tankers in third quarter 2003 was running at over 2.9 million barrels per day (bpd), equivalent to about 150 million tonnes per annum. In contrast the 2002 average was 2.5m bpd.

Vessel traffic system

Europe's refiners have laid some of the blame for the delays on the transition to a new Turkish Straits vessel traffic administration.

The previous system for managing ship passages was abolished on December 31, 2003, when the Coastal Safety and Salvage Administration assumed responsibility for ensuring the safety of vessels transiting the Straits.

The Administration has at its disposal a new \$45 million radar-based vessel traffic management and information system (VTMIS), the first part of which was commissioned in summer 2003 and thereafter run on a trial basis for a period of several months.

The full system, comprising two central control and 13 unmanned radar stations, and encompassing the Bosphorus Strait, the Marmara Sea and the Dardenelles, is now fully operational.

The new VTMIS is able to not only track vessels as they pass along the full extent of the Turkish Straits but also to notify craft facing danger. The system has been installed to help ensure the safety of the increasing volume of shipping traffic moving along the waterway.

Bosphorus focus

Of all the parts of the Turkish Straits, that which is most critical and that which is of most concern to the Turkish maritime authorities is the Bosphorus Strait.

The 30-kilometre stretch of water bisects Istanbul, a city of some 12 million people, and is already busy with commuter ferry traffic and a large fleet of local fishing vessels.

Each day 1.5 million people commute across the waterway in 2,000 crossings by ferries and other small boats.

Transiting the Bosphorus - from a Greek word meaning "ox ford" - requires 12 major course changes along its length, including one involving a blind turn and an 80 degree swing, and making frequent adjustments to compensate for the strong surface and subsea currents.

The waterway has an average width of 1.5 km and at its narrowest point the waterway is only 700 metres wide.

Stricter controls

Accident records show that there are 6 ship accidents per million transit miles in the Bosphorus versus 3 in the Suez Canal and 0.2 in the Mississippi River, highlighting the fact that the waterway is one of the most dangerous in the world.

Casualty statistics for the Bosphorus Strait in the 1990s show an initial significant improvement followed by some slippage. The number of casualties, including collision, engine breakdown, fire and stranding incidents, fell from a high of 49 in 1991 to a low of 4 in 1995, but have since been creeping back up again. In 1999 16 accidents were recorded.

One of the most notorious incidents during the first half of the 1990s was the collision, in March 1994, of the cargo vessel Shipbroker with the tanker Nassia and the ensuing five-day fire onboard the tanker.

Following this accident, in which 26 lives were lost, a set of regulations covering maritime traffic through the Turkish Straits was adopted. The new regime included a traffic separation scheme which was implemented by IMO on a fast track basis in November 1994.

Other aspects include daylight transits for larger and deep-draught ships; speed limits; recommended pilotage; and closure of the Straits to ships carrying hazardous cargoes when the visibility is less than one mile.

A revised set of Turkish Straits rules, incorporating experience gained over the previous four years, was implemented in November 1998. An additional requirement was implemented in November 2003, namely that vessels over 50,000 dwt transiting the Dardanelles channel must have a Turkish pilot onboard.

Under the 1998 rules, any ship exceeding 300 metres in length requires the permission of the Turkish authorities before entry into either the Bosphorus or the Dardanelles will be allowed.

When such a ship is passing through the Bosphorus, traffic both up and down the strait is halted. For vessels of more than 250 metres in length, one lane of traffic is stopped.

Caspian Pipeline Consortium

In 2001 the new 1,600 km crude oil pipeline linking the giant Tengiz field in western Kazakhstan with Novorossiysk was commissioned. The line, operated by the Caspian Pipeline Consortium (CPC), represents the first major infrastructure project for exporting Caspian Sea oil to international customers.

From its inaugural capacity of 560,000 bpd, the throughput of the CPC pipeline has slowly been increased towards the maximum of around 1.5m bpd, a volume which represents a significant chunk of new trans-Bosphorus tanker traffic.

The Turkish government is concerned about the ability of the congested Straits to accommodate any additional tanker traffic necessitated by the exploitation of new Caspian fields in future. That is why Turkey is supporting another major oil pipeline, from Baku on the edge of the Caspian across the eastern part of the country to the Mediterranean port of Ceyhan on the southern Turkish coast.

Bypass the Bosphorous

The Baku-Tbilisi-Ceyhan (BTC) pipeline project, which is being promoted by a BP-led, 11-member consortium, would ensure that new oil from Baku bypasses the Bosphorus.

It is envisaged that the line will be open in 2005 and that it will have a capacity of 1m bpd.

The two development banks set to back the project approved the necessary preliminary funding in November 2003.

The current Bosphorus tanker traffic jam and the fact that further new and expanded oil pipeline projects requiring increased loadings at Black Sea ports are currently being developed makes it even more critical that the BTC plan proceeds.