

# Transportation and Stockpiling of Crude Oil

In addition to taking consideration to preserve the ocean environment when crude oil is being transported by sea, we strive to reduce tanker fuel expenditure.

## Prevention of oil spills

Crude oil is carried on tankers, through the Straits of Malacca, to Japan. For this voyage tankers have carefully selected, experienced crew, together with the latest technology such as collision prevention equipment and double hulls, with the aim of reducing to the minimum the chance of accidental oil spills. Great care is also devoted to preserving the ocean environment during loading and unloading of tankers, for example by ensuring that oil booms are used.



A practice drill for preventing the spread of an oil spill using an oil boom

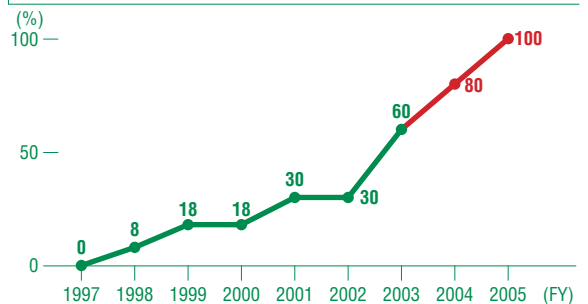
## Prevention of oil spills by double hull structure in case of accidents

Since 1998 we have been converting to double-hulled tankers in order to be ready for the contingency of maritime accidents. In the case of the double hull structure, even if the outer hull is breached, the oil will not leak from the tanks located within the inner hull. As of March, 2004, of our 10 time chartered VLCC (Very Large Crude Carriers), 6 are double-hulled, and we plan to have all of our time chartered tankers double-hulled during 2005.

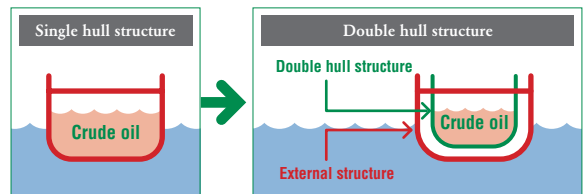


Double-hulled tanker

### Ratio of double-hulled tankers on regular line



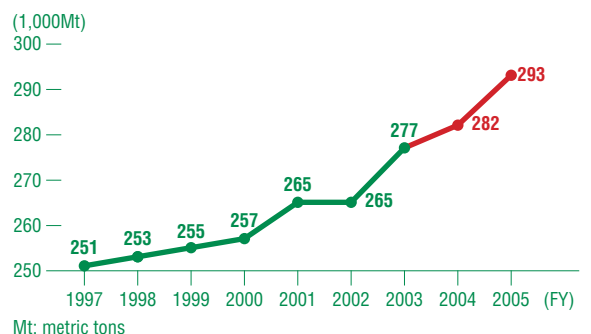
### Diagram of double hull structure



## Efficiency in transport

It takes 20 days for oil tankers from the oil producing countries to reach Japan. The contents of a 300,000-ton class tanker can fulfill Japan's total oil demand for half a day. In order to increase the efficiency of our transport operations, we are pursuing economies of scale by switching from 200,000-ton class tankers to 300,000-ton class tankers, and by combining shipments with the Nippon Oil Corporation, with which Cosmo Oil established the Nippon Global Tanker Company. Such upsizing and more efficient allocation of tankers also serve to decrease the amount of fuel required to operate tankers.

### Average load weight



## Stockpiling of crude oil

In order to secure a stable supply during emergencies, Japanese oil importers and refiners are required to maintain a stockpile of 70 days' supply of petroleum products, and as of the end of March, 2004 the stockpile is 74 days' supply. The government also maintains a stockpile of 88 days' supply, so the total private and public stockpile is 162 days' supply.