WORLD TONNAGE SUPPLY

According to latest ISL records the total world merchant fleet, comprising ships of 300 gt and over, stood at 39,932 ships with a tonnage of 880.0 mill dwt and 9.4 mill TEU. Compared with last year’s figures, the tonnage increased by 5.7 per cent and in TEU by 9.1 per cent.

In the period 2001-2005, the average growth rate for the total dwt tonnage supply was 3.3 per cent, which represents in absolute terms an increase of 109.3 mill dwt of the world merchant fleet.

Fig. 1: World merchant fleet – Annual tonnage changes 1996 – 2005 (dwt - per cent)

The yearly tonnage supply balance is determined by the level of demolitions and fleet additions (newbuildings).

Demolitions in 2004 had the lowest level over the past ten years with the result that demolition prices increased constantly. In the end, demolition prices reached a record high. After a peak in the first quarter with 6 mill dwt, the broken-up tonnage in 2004 stood finally at 14.4 mill dwt (732 vessels) representing the lowest level since many years. The ship type contribution was as follows: tankers 10.2 mill dwt (70.7 per cent), bulk carriers 2.1 mill dwt (14.4 per cent) and other types with 2.2 mill (14.9 per cent).

As far as the number of ships is concerned, scrapping concentrated on general cargo ships. With 518 units, they had a share of 45.6 per cent of all broken-up ships in 2004. Moreover the ISL analysis indicates that 49 container ships, mostly smaller units, with 1.0 mill dwt and a capacity of 51,600 TEU were scrapped. Only seven container ships had TEU capacities between 2000 and 3000 TEU.

During 2004, additions to the world merchant fleet\(^1\) reached a volume of 62.4 mill dwt (1,341 merchant vessels) compared with 54.5 mill dwt in 2003 (1,094 merchant vessels). The total newbuilding tonnage volume entering the world merchant fleet in 2004 increased by 14.5 per cent compared with deliveries in 2003. As in previous years, this increase results from oil and oil/products tankers. About 50 per cent of the newbuildings was attributable to this fleet segment (31.6 mill dwt), followed by bulk tonnage (19.7 mill dwt) and container tonnage (8.6 mill dwt).

In 2004 fleet additions, in terms of tonnage, exceeded demolitions by approx. 48 mill dwt.

Fig. 2: World tonnage additions and reductions\(^2\) 1994-2004 (in dwt)
As of January 1st, 2005, the world tanker tonnage (oil, products, oil/chemical, pure chemical and liquid gas) had a share of 41.4 per cent of the world merchant fleet with a capacity of 368.4 mill dwt. Expressed in dwt, this is an increase of 40.8 mill dwt compared to figures in 2001.

At the beginning of 2005, the bulk carrier fleet (incl. OBO carriers) had, in terms of tonnage, a share of 36.0 per cent of the world merchant fleet equal to 319.2 mill dwt, compared with 35.7 per cent or 278.1 mill dwt in 2001. In the period 2001-2005, the pure bulk tonnage (excl. OBO carriers) grew on average by 4.1 per cent yearly whereas the OBO carrier fleet was still shrinking in the same period by 9.0 per cent per year. Besides container vessels (+9.6 per cent) and liquid gas carriers (+5.2 per cent), the bulk carriers showed the strongest yearly growth rates within the past five years.

In the period 2001-2005, container tonnage\(^3\) (dwt) increased by 9.6 per cent yearly. As of January 1st, 2005, the capacity of the container fleet amounted to 99.2 mill dwt or 7.2 mill TEU. In terms of dwt the container fleet contributed 10.7 per cent to the world merchant fleet (2001: 8.8 per cent, 1990: 4.1 per cent).

During the last five years, 889 container ships with 2.9 mill TEU were added to the trading fleet whereby 244 container ships had a capacity of 5,000 TEU and above. Altogether, 316 ships were in this size category, thereof 15 vessels with a capacity of 8,000 TEU and above.

In the period January 1st, 2001-2005, the average growth rate for general cargo tonnage was –1.0 per cent. Considering various segments of the general cargo fleet, the average growth rates differ significantly. Multi-deck and reefer ships show negative growth rates (-5.1 per and -2.4 per cent respectively), whereas the ro-ro cargo ships grew yearly on average by +3.2 per cent.

As of January 1st, 2005, passenger ships\(^4\) had a tonnage share of 0.7 per cent of the total world merchant fleet. In the period 2001-2005, tonnage figures (dwt) increased on average by 2.7 per cent yearly. The level of deliveries since 2004 was about 62 per cent determined by cruise vessels, thereof five vessels of more than 100,000 gt.

**AGE AND SIZE PROFILE OF THE WORLD MERCHANT FLEET 2005**

As of January 1st, 2005, 58.6 per cent of all merchant ships representing 34.8 per cent of the total tonnage (dwt) were older than 15 years, i.e. they were built before 1990. Looking at the number of ships especially general cargo ships, cargo passenger ships and oil tankers are attributable to this age category.

- 6,682 general cargo ships representing 32.5 per cent of all general cargo ships were older than 25 years (built before 1980). Nearly 50 per cent of the multi-deck tonnage was in this age segment.
• 4,077 oil tankers (including products tankers) equal to a share of 53 per cent of the total number of oil tankers were older than 15 years. The average dwt-size in this age segment was 21,000 dwt, whereas the average dwt size of oil tankers build in the period 2000-2004 was nearly 84,000 dwt. So, in terms of tonnage, only 27.2 per cent of the oil tanker fleets’ tonnage-capacity is trading for more than 15 years.

27.6 per cent of all container ships were built during the last five years. In terms of TEU and dwt, this is equal to 40.8 per cent of the total TEU capacity and 38.0 per cent of the total deadweight tonnage.

At the beginning of 2005, the world merchant fleet had an average age of 19.1 years, compared to 18.4 years in 2001.

The average ship size of the world merchant fleet is increasing. Within a five years’ period the average size increased from 19,964 to 22,038 dwt. At the beginning of 2005, about 28,700 ships equal to 71.9 per cent (2000: 75.2 per cent) of all merchant ships (300 gt and over) belonged to the size segment up to 19,999 dwt. The majority of ships in these size classes are general cargo ships. Moreover, 9,428 of all merchant ships and 48.3 per cent of the total deadweight tonnage aggregated to size classes between 20,000-99,999 dwt.

According to ISL fleet records the “Knock Nevis” (ex Jahre Viking), built in 1976 with a deadweight tonnage of 564,763, is the largest ship of the world merchant fleet. The largest bulk carrier, the “Berge Stahl”, with a dwt-capacity of 364,767, registered under Norwegian international flag, is trading since 1986. The largest container vessels are Maersk ships classed with approx. 8,500 TEU5, the CSCL vessel “CSCL Asia” with 8,470 TEU and the P&O Nedlloyd “Mondrian” with 8,450 TEU.

**SPECIAL FOCUS:**
**OECD FLEET DEVELOPMENT 2005**

As of January 1st, 2005, 11,805 ships (300 gt and over) with a total of 210.9 mill dwt were registered under OECD flags representing a dwt share of 23.7 per cent of the world merchant fleet. Shares in 1993 and 2001 stood at 31.0 and 24.3 per cent, respectively. Fleet figures show that OECD registered tonnage (dwt) has lost in various fleet segments.

The registered OECD fleet increased, in terms of tonnage, by 3.7 per cent comparing the January figures for 2004 and 2005, whereby especially container ships and passenger (cruise) vessels showed growth tendencies.

**FUTURE TONNAGE SUPPLY/DEMAND**

2004 was a record year in shipping in all market segments. As in previous years the booming demand from China influenced freight and charter rates positively.

Throughout 2004 the demand for tanker tonnage was determined by the increasing oil imports of China and other non-OECD Asian economies. End of 2004 tanker freight rates came down substantially due to the trimmed OPEC production, the decrease in Black Sea congestion and the expansion of the tanker fleet resulting from deliveries.

**Fig. 11: Monthly tanker time charter equivalents 2002-2004**

---

5 Formerly classed with approx. 6,418 TEU
The tonnage supply for the years to come is determined by the phasing-out of substandard tankers and single hull vessels (MARPOL scheme). About 32 mill dwt of Category 1 tankers (i.e. vessels which do not comply with Marpol 1978/83) will be phased out until 2005. In addition, remaining single hull tankers would be phased out until 2010/2015.

During 2004, 863 tankers with 51.9 mill dwt were added to the order book. As of January 1st, 2005, the order book for tankers of 300 gt and over stood at 1,468 tankers with 99.0 mill dwt, the highest level since 25 years (1975). Thus, high tonnage volumes will be delivered to the tanker fleet throughout the next two years.

The tanker order book at the beginning of 2005 corresponds, in terms of tonnage, to 19.8 per cent of the total tanker fleet.

Factors, influencing the rise in dry bulk freight rates during 2004 are largely related to the world steel production, which is the major driver for the dry bulk market development. Fearnleys estimates that the steel industry accounts for approx. 50 per cent of the total dry bulk tonnage demand, namely shipments of iron ore, cooking coal, scrap as well as steel products.

In 2004 only 58 bulk carriers with 2.0 mill dwt were scrapped, whereas new orders reached a new peak. During 2004, 457 bulk carriers with 37.2 mill dwt were added to the world order book. This was about 22.0 per cent more than in 2003.

The total order book at the beginning of 2005 stood at 824 bulk carriers with 64.0 mill dwt, in terms of dwt 20.7 per cent of the existing bulk fleet (15.6 per cent in 2004).

Box and charter rates are increasing steadily, and the full ships have encouraged a sharp increase in the
orderbook stretching deliveries out to 2007. Container charter rates reached a record high during 2004. The weighted Charter Rate Index from Howe Robinson increased more than 62 per cent during the year 2004. Port delays, especially in the US West coast ports, tightening up vessel capacity and thus, had a beneficial effect on charter markets. This positive market climate led to a massive increase in orders.

During 2004 514 new orders with 1.7 mill TEU and 23.2 mill dwt were placed, thereof 51 new orders for container ships above 8,000 TEU.

As of January 1st, 2005, the order book for container vessels stood at 903 ships with 3.6 mill TEU and 45.9 mill dwt. representing a TEU-share of 50.8 per cent related to the existing container fleet.

The above market indicators highlight that new orders placed by shipowners in 2004 reached a new record high with 2,279 ships with a tonnage volume of 116.0 mill dwt compared to 1,870 ships with 107.2 mill dwt in 2003.

In 2003, the average age of major ship types to be broken-up ranges between 27.3 (bulk carriers) and 37.6 years (passenger/ferry vessels). At the beginning of 2005, about 8,000 merchant ships of the existing world fleet with a total capacity of 33 mill dwt were in these age categories and therefore in the medium term scrap candidates. According to ship types the scrapping potentials in 2005 based on the average age of broken-up ships amounted to:

- tankers with 8.5 mill dwt and according to the new IMO phase-out schedule further 26 mill dwt have to be phased out until 2005.
- bulk carriers with 14.2 mill dwt
- container ships with 1 mill tdw
- general cargo ships 8.8 mill dwt

WORLD SHIPBUILDING

The world order book, in terms of dwt, grew by 32.8 per cent compared to last years’ January results. As of January 1st, 2005, the order book stood at an all-time record including 3,948 ships with 215.7 mill dwt and 91.5 mill cgt. The tanker tonnage clearly dominates the world order book. As of January 1st, 2005, tankers had a share of 39.7 per cent in terms of cgt, followed by container ships (30.0 per cent), bulk carries (16.4 per cent), general cargo ships (8.8 per cent) and passenger/ferry vessels (5.0 per cent).

Nearly all ship segments saw a, partly massive, increase compared to last years cgt-figures: container ships (46.2 per cent), liquid gas tankers (76.0 per cent), chemical tankers (44.5 per cent), general cargo ships (38.5 per cent), bulk carriers (38.5 per cent), passenger/Cruise vessels (25.1 per cent) and oil tankers (16.2 per cent).

The above market indicators highlight that new orders placed by shipowners in 2004 reached a new record
As in the last decade, South Korean and Japanese yards still dominated the worldwide shipbuilding activities. Tanker and container shipbuilding is largely attributable to Korean yards, whereas Japanese yards are leading in the bulk carrier segment. Nearly two-thirds of the current world order book (in terms of cgt) was attributable to these two shipbuilding countries. Within 10 years, the cgt-share of Chinese yards increased from 4.3 per cent to 13.6 per cent at the beginning of 2005.

The order book as of January 1st, 2005, showed that South Korea is in the lead with 34.7 mill cgt equal to 37.9 per cent of the total world order book, followed by Japan with 25.6 mill cgt (28.0 per cent) and China 12.4 mill cgt (13.6 per cent). Within one year South Korea, Japan and China expanded their cgt tonnage by 8.3 mill cgt, 6.5 mill cgt and 3.6 mill cgt. Hyundai alone, as the world largest shipyard, received orders for 257 vessels during 2004 totalling 7.9 mill cgt after 7.7 mill cgt in 2003. Due to restricted building capacities deliveries of Asian shipbuilders are scheduled for 2007. German and Polish shipyards benefited from the “full order books” in Asia as more new orders for container ships were placed at German and Polish yards.

New orders placed for OECD shipyards during 2004 are shown in table 12. The 1,567 new entries of the order book mainly consisted of tankers (645), bulk carriers (329) and containerships (319). New entries, in terms of cgt, increased by 12.2 per cent comparing figures for 2003 and 2004.

As of January 1st, 2005, OECD countries had, expressed in cgt-shares, a share of 78.4 per cent of the total world order book. Looking at the order book of container ships the by far largest shares are attributable to South Korea, followed by Japan, Italy and Germany.

Figure 22: Container orderbook – market shares of major shipbuilding countries as of January 1st, 2005 (cgt-per cent)

Christel Heideloff, Senior Economist
Reinhard Monden, Economist