

## World seaborne container trade and port traffic

The following text is a short extract from the comment of the SSMR 6-2005. The complete comment includes 20 tables and 25 figures.

The ISL comment on the container and general cargo markets includes the following topics:

### 1. World container fleet

Tonnage supply 2006 – age, size and ownership

### 2. General cargo fleet

Tonnage supply 2006 – age, size and ownership

### 3. Shipbuilding industry

Container and general cargo ships on order

### 4. Supply/demand

Charter rates, broken-up tonnage and future tonnage

### 5. Global Insight World Trade Service (Summary)

Containerised trade forecast

### 6. ISL world container port analysis

The ISL SSMR Market Analysis focuses on world shipping markets. Comments dealing with supply and demand indicators highlighting the structural features of the tanker, bulk carrier and container market on a yearly basis. Besides these reports, supplementary online information can be ordered as well. Further SSMR topics are: shipbuilding market, cruise fleet, world port traffic. Moreover, the ISL Shipping Statistics Yearbook offers additional information for time series analysis.

## 1. THE WORLD CONTAINER FLEET

### Tonnage supply 2006

As of January 1<sup>st</sup>, 2006, the fully cellular container fleet stood at 3,514 ships with 111.6 mill dwt equal to 8.1 mill TEU total and the general cargo fleet comprised 16,544 ships with 97.4 mill dwt equal to 2.0 mill TEU.

During the year 2005, the fully cellular container fleet grew by 13.5 per cent (based on TEU). Compared with 1996, the fully cellular container fleet has more than doubled its TEU capacity (+ 203 per cent), whereby the disproportionate increase of the TEU capacity indicates the trend towards larger container ships.

In the period of 2002-2006, the TEU-capacity of the world container fleet grew per year on average by 11.4 per cent, whereas the number of the container

vessels rose by only 6.6 per cent and the deadweight tonnage by 10.0 per cent.

Fig. 1: Container fleet development as of January 1<sup>st</sup>, 1986 – 2006 (Index 1986 = 100)

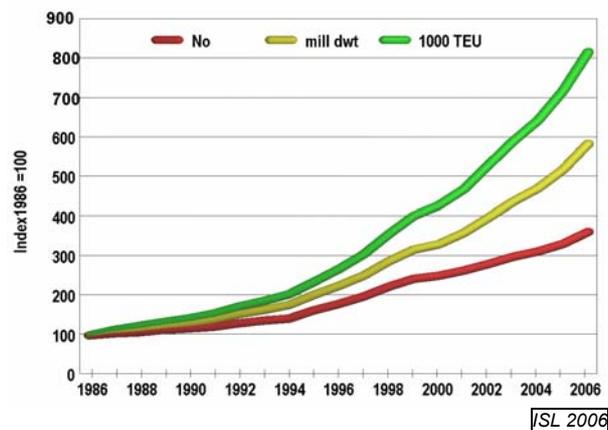
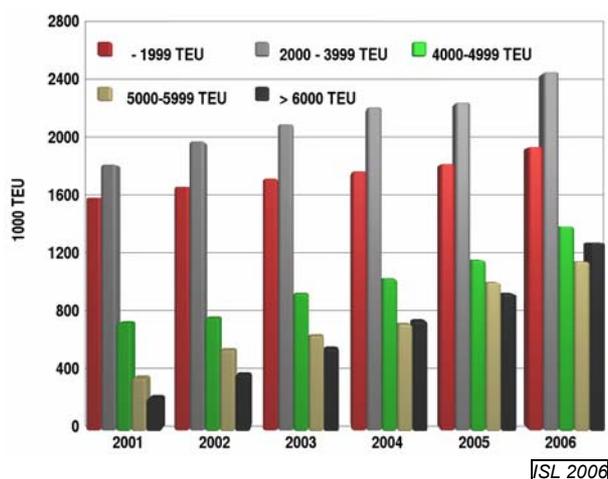


Fig. 2: Container fleet development by TEU-size classes as of January 1<sup>st</sup>, 2001 – 2006



Meanwhile, the first 9,178 TEU carriers with a capacity of 110,000 dwt are in service. The Swiss operator MSC employs these vessels in the Europe-Far East trade <sup>1</sup>.

### World container fleet by flag, country of domicile and ship operators 2006

At the beginning of 2006, the container tonnage (dwt) registered for OECD countries had a share of 32.2 per cent of the world fully cellular container fleet, whereas in 1991 their share stood at 44.3 per cent (ships of 1000 gt and over).

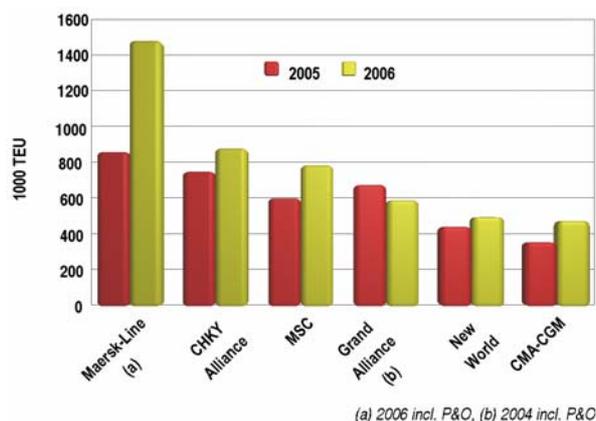
Looking at the **container ship operators** it is obvious that the container shipping industry has gone through

<sup>1</sup> As of April 1<sup>st</sup>, further two jumbo carriers with a capacity of 9,469 TEU are in service for the Chinese carrier COSCO.

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a period of massive concentration. As of April 2006, 15 operators control approx. 71 per cent of all fully cellular container ships above 1,000 TEU which is equal to 80 per cent of the global TEU capacity.

**Fig. 3: TEU-capacity of top ranking containership operators as of February 2005 and April 2006**



ISL based MDS Transmodal

## 2. WORLD GENERAL CARGO FLEET

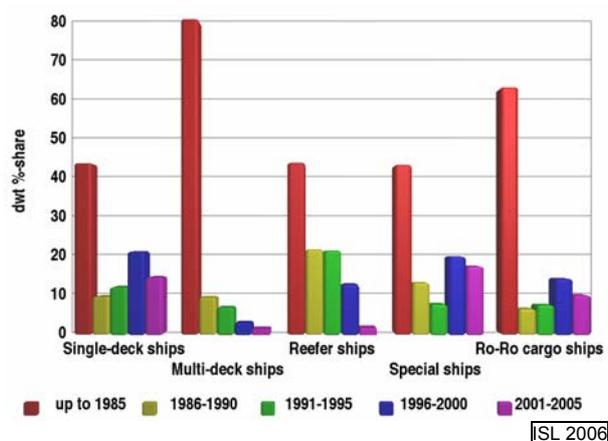
### Tonnage supply 2006

As of January 1<sup>st</sup> 2006, the world general cargo fleet consisted of 16,544 ships with 99.4 mill dwt and 2.0 mill TEU. In the period of 2002 – 2006 the world general cargo fleet in terms of dwt increased by 0.3 per cent yearly, whereas, in terms of TEU, the fleet increased by 1.6 per cent yearly.

During the period of 2001-2005, 1,686 general cargo ships with 14.4 mill dwt were reported to be broken-up, thereof 726 multi deckers with a tonnage of 8.1 mill dwt. During the same period 1,277 general cargo ships (new buildings and other entries) with 9.9 mill dwt were added to the fleet. In terms of tonnage these new entries were attributable to single-deck ships (67.4 per cent), special ships (20.7 per cent) and ro-ro cargo ships (6.8 per cent). With respect to tonnage, Single-deck ships grew steadily throughout the last five years. As already mentioned, some of the single-deck vessels are equipped with foldout decks and could also be used as multi-deckers.

Looking at the year 2005, fleet additions (newbuildings and other entries) exceeded demolitions by 1.8 mill dwt. As a result, the general cargo fleet increased, by 2.2 per cent comparing tonnage figures as of January 1<sup>st</sup>, 2005 and 2006.

**Fig. 4: General cargo fleet by ship type and division of age as of January 1<sup>st</sup>, 2006 (dwt %-share)**



At the beginning of 2006, general cargo ships had an average age of 22.6 years.

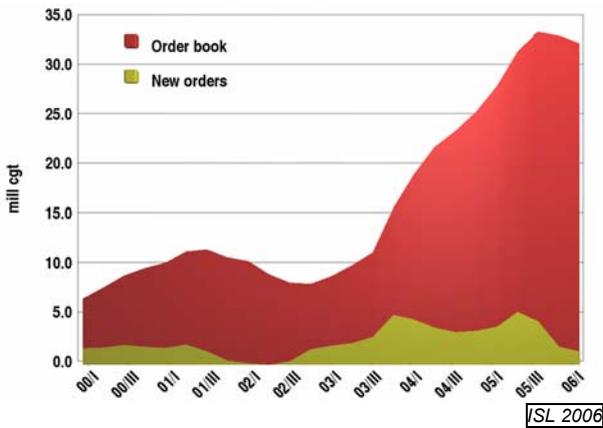
## 3. SHIPBUILDING INDUSTRY - CONTAINER AND GENERAL CARGO SHIPS ON ORDER

Order activities for general cargo and fully cellular container ships are an indicator for the “market climate”. As already pointed out, for both market segments ordering of new tonnage developed positively.

At the beginning of 2006, the order book reached a level of 31.7 mill cgt for container ships and 10.8 mill cgt for general cargo ships. Compared with previous years' cgt figures, the order book for container ships increased by 15.3 per cent (after 46 per cent one year before), whereas the increase for general cargo ships stood at 34.3 per cent. The order book at the beginning of 2006 comprised 95 container ships in the size class between 8,000 TEU and 8,999 TEU, and 46 ships with a capacity of 9,000 TEU and over. This 141 ships totalling 8.6 mill cgt and have a cgt share of 27.2 per cent on the total container order book. There are further 16 ships with a official capacity of 7,668 TEU, on order for Odense-Lindo yard (the estimated capacity should be at least about 10,000 TEU).

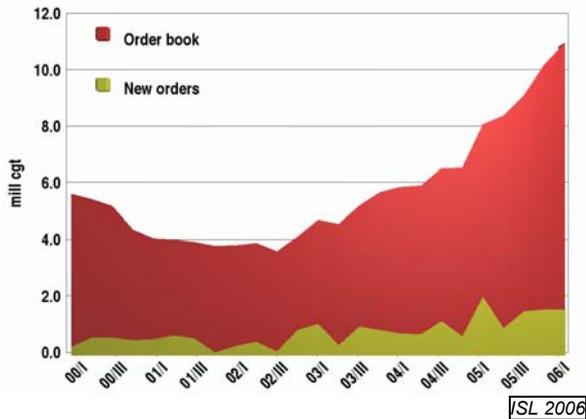
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Fig. 5: Container ships– Quarterly order book and new orders 2000 - 2006



ISL 2006

Fig. 6: General cargo ships– Quarterly order book and new orders 2000 - 2006



ISL 2006

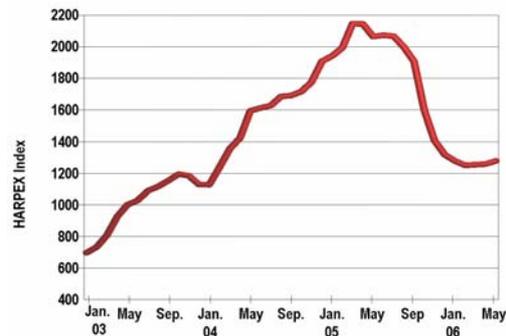
In the first quarter 2006, order activities for container ships reached not the previous year level. 103 new orders with 1.9 mill cgt were placed compared with 198 vessels with 5.2 mill cgt in the first quarter 2005. As of April 1<sup>st</sup>, 2006, the order book for container vessels stood at 1,160 vessels with 30.6 mill cgt, a decrease of over 3.2 per cent compared with figures for January 2006.

At the beginning of April 2006, the order book for general cargo ships stood at 920 vessels with 11.2 mill cgt, an increase of nearly 3.3 per cent compared with figures for January 2006. Altogether, the order book for general cargo vessels increased by 41.8 per cent comparing tonnage figures as of January 1<sup>st</sup>, 2005 and 2006.

## 4. SUPPLY/DEMAND - CHARTER RATES, BROKEN-UP TONNAGE AND FUTURE TONNAGE

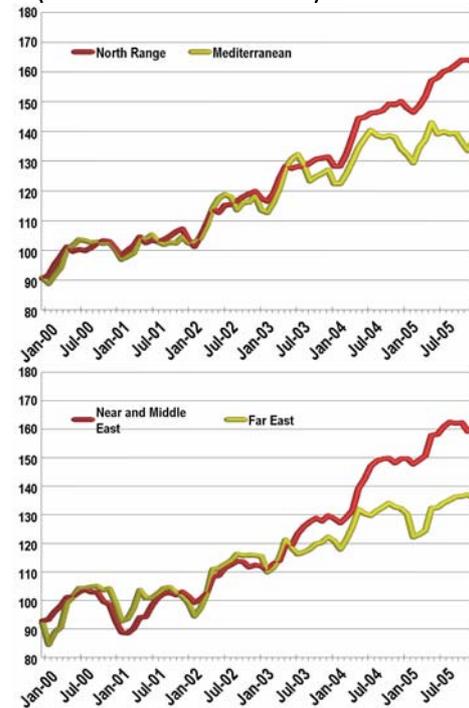
Cargo upturns in container trades are also reflected in traffic statistics of leading world container ports as well as container freight/charter rates.

Fig. 7: Monthly HARPEX container charter rate index up to May 2006



ISL based on Harper Petersen & Co

Fig. 8: Monthly port container traffic 2000-2006 (TEU - Index 2000=100)<sup>2</sup>



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During 2005, 583 container vessels with a capacity of 1.6 mill TEU were contracted. This represents a new record high with regard to number of ships, but about 100,000 TEU under the previous years' figures. At the beginning of 2006, the container ship order book (ships of 300 gt and over) stood at 1,167 ships with 52.5 mill dwt and 4.2 mill TEU.

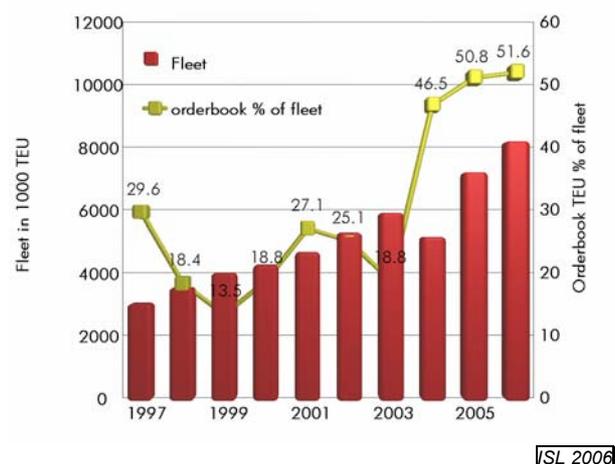
<sup>2</sup> US Pacific: Los Angeles, Long Beach, Oakland, Seattle; US Atlantic: New York, Port of Virginia, Savannah and Charleston; European Northrange Ports: Rotterdam, Antwerp, Hamburg, and Bremen/Bremer-haven; Mediterranean: Gioia Tauro, Genoa, Valencia and Algeiras; Far East ports: Hong Kong, Busan, Kaohsiung and Nagoya; Near and Middle East ports: Dubai, Singapore and Laem Chabang

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In terms of tonnage, the order book of fully cellular container ships increased by 14.5 per cent compared with dwt-tonnage figures at the beginning of 2005

The order book represents a TEU-share of 51.6 per cent related to the existing container fleet (January 1<sup>st</sup>, 2006).

**Fig. 9: Container orderbook as per cent share of existing fleet as of January 1st, 1997-2006 (in TEU)**



In 2005, only 185 general cargo ships with a total tonnage of 1.1 mill dwt were sold to breakers, the lowest tonnage since over 10 years. During 2005, 649 general cargo ships with 5.4 mill dwt were added to the order book (ships of 300 gt and over).

### 6. WORLD PORT CONTAINER TRAFFIC

The following analysis focusses on the regional development patterns of world container ports<sup>3</sup>.

The total container traffic volume of the top container ports, with a container traffic of more than one mill TEU analysed here, reached 297 mill TEU in 2005 and increased by 10.9 per cent compared with results in 2004. The 2005 analysis includes 77 ports (38 Asian/Oceania ports, 19 European ports, 18 American ports and 2 ports located in Africa).

In 2005, approx. 65 per cent of the world container traffic, in terms of TEU, were attributed to Asian ports, whereby the top 8 Chinese ports alone represented 26.5 per cent of the total container traffic. Europe

<sup>3</sup>ISL provides detailed information on container traffic development of major world container ports. Information is based on the ISL port data base and a special inquiry. Comments on the presented tables and completions of missing data and additional statistics will be much appreciated. These figures are a basic indicator for maritime trade developments in 2004/2005. The monthly traffic figures are based on our new service, the ISL Monthly Container Port Monitor.

had a share of 18.5 per cent of the world container port traffic and America 15.2 per cent.

The top Chinese mainland container ports (without Hong Kong) grew on average by more than 25 per cent yearly. Their annual container traffic summed up to 13.4 mill TEU in 1999 and 58.5 mill TEU in 2005, respectively.

**Fig. 10: Major Chinese Container ports in 2005 (in 1000 TEU)**



After period of accelerated development, the two leading Chinese Mainland ports namely Shanghai and Shenzhen, "only" showed growth rates of less than 15 per cent compared the first quarters of 2005 and 2006. Shanghai and Shenzhen, with growth rates in the range between 20 and 30 per cent up to 14.6 mill TEU and 13.5 mill TEU respectively in 2004.

In 2005 these two ports handled 18 mill TEU and 15.9 mill TEU respectively. On a yearly basis, this is equal to an increase of 24.2 and 17.6 per cent respectively.

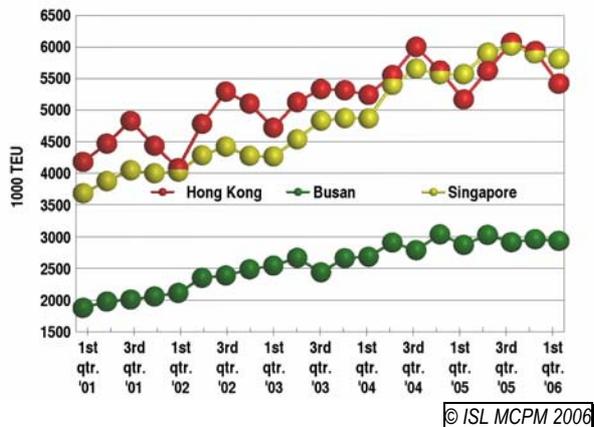
According to Port of Shanghai officials, growth will increase, when the new Yangshan Deepwater Port begins operations. Up to now, the access channel to the Waigaoqiao terminal can only be passed by Pan Max vessels at high tide. Yangshan can be reached by ships with a maximum draught of 15 meters.

In 2005, container traffic of the two top ranking world ports increased 8.7 per cent (Singapore) and 2.8 per cent (Hong Kong). In 2005, Singapore was the biggest container port of the world. The third ranking port, now Shanghai, grew by 24.2 per cent up to a traffic volume of 18.1 mill TEU in 2005.

The top five Japanese ports (Tokyo, Yokohama, Nagoya, Kobe and Osaka) handled 13.3 mill TEU in 2005, equal to an increase of 11.6 per cent. Especially Kobe and Osaka, showing a plus of 22.7 per cent both, are benefiting from Japanese growing trade with its neighbours.

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Fig. 11: Quarterly container traffic of Hong Kong, Busan and Singapore from January 2001 to March 2006 (in 1000 TEU)

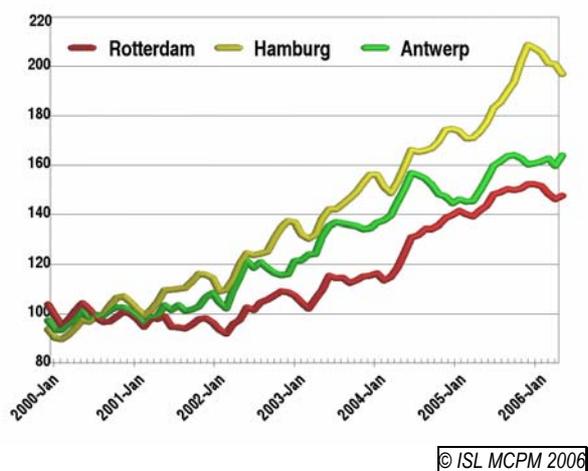


The major transshipment ports in the Near East are Dubai Ports, Khor Fakkan in the UAE, Salalah in Oman and Jeddah in Saudi Arabia.

All major container ports in the US, showed substantial traffic gains. This is especially true for the West Coast ports of Long Beach, (plus 16.1 per cent), Seattle (plus 17.4 per cent), Tacoma (plus 14.8 per cent) and Oakland (plus 11.1 per cent).

In 2005, Rotterdam, the top European container port, increased its traffic by 12.3 per cent. Rotterdam and Hamburg, with a plus of 15.5 per cent far above the average of the North Range Ports, won market shares from Antwerp, Bremen/Bremerhaven and Le Havre. Le Havre's container traffic decreased again, in the period 2004/2005 by 1.2 per cent.

Fig. 12: Monthly container traffic of major North Range ports 2000-2006 (TEU - Index 2000=100)



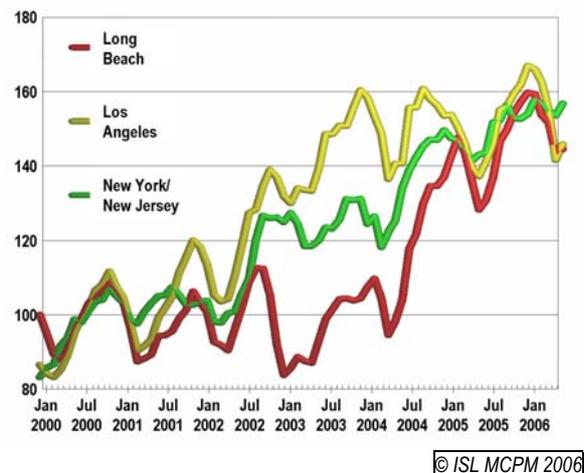
Container traffic of the top five Mediterranean ports, namely Gioia Tauro, Algeciras, Valencia, Barcelona and Genoa increased by 4.7 per cent. This growth is mainly determined by the three Spanish ports

Algeciras, Valencia and Barcelona, showing an increase of 8.3 per cent (Algeciras up to 3.2 mill TEU in 2005), 11.8 per cent (Valencia up to 2.4 mill TEU in 2005) and 8.4 per cent (Barcelona up to 2.1 mill TEU in 2005).

The analysis of container port traffic by continent shows differences of ports with view to their trade relations. This is especially true for European North Sea ports and Far Eastern ports.

Rotterdam lost market shares of the intra European traffic to Hamburg, Bremen/Bremerhaven, and Antwerp. This is especially true for the transshipment market, which is differently for the major North Range Ports. According to a market study carried out by ISL and Global Insight, the transshipment markets indicate a strong market segmentation. The biggest transshipment hub within the North Range is Hamburg due to its proximity to markets in the Baltic Sea Area.

Fig. 13: Monthly container traffic of major North American Pacific ports 2000-2006 (TEU - Index 2000=100)



North American West coast ports have strong relationships to Far Eastern ports. Their traffic is to more than 90 per cent distributed to and from the Far East. This interrelation is underlined by the analysis of monthly container traffic of North American West Coast ports. But also for the North American East Coast ports the Asian market is of growing importance. The ports of New York/New Jersey's top trading partners are located in Asia. About 50 per cent of the ports container traffic in 2005 was trade with Asia.

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