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Volume 60 - No. 11

Analytical Focus

- World Merchant Fleet
- World Tanker Market
- World Bulk Carrier Market
- World Container and General Cargo Shipping
- World Merchant Fleet by Ownership Patterns
- World Passenger and Cruise Shipping / ISL Cruise Fleet Register
- World Shipbuilding and Shipbuilders
- **Major Shipping Nations**
- World Seaborne Trade and World Port Traffic

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Institute of Shipping Economics and Logistics ISL

Abbreviations

ARA	Antwerp/Rotterdam/Amsterdam range
b/d	Barrels per day
BHP	Brake horsepower
CESA	Community of European Shipbuilders
cgt	Compensated gross tonnage
cif	Cost, insurance, freight
CIS	Commonwealth of Independent States
COD	Country of Domicile
CPE	Centrally-planned Economies
CPI	Consumer price index
cST	Centi Stokes
cu.m	Cubic metres (also m3)
DB	Double bottom
DC	Developing Countries
DH	Double hull
DIS	Danish International Ship Register
DME	Developed market economies
DS	Double sides
dwt	Deadweight tons
d/y	Day/year
ECB	European Central Bank
EMEs	Emerging Market Economies
EU	European Union
FY	Fiscal year
FAO	Food and Agriculture Organization of the United Nations
fio	Free in and out
fob	Free on board
FT	Freight tons
ft	Foot
GATT	General Agreement on Tariffs and Trade
gt	Gross tonnage
HP	Horsepower
HT	Harbour ton
ibf	Intermediate bunker fuel
IEA	International Energy Agency
IMF	International Monetary Fund
IMO	International Maritime Organization
in.	Inch
ITF	International Transport Workers Federation
km	Kilometre
loa	Length overall
lbs	Pounds
LDT	Light displacement tons
LDC	Less Developed Countries
LNG	Liquefied Natural Gas
LPG	Liquefied Petroleum Gas
LT	Long ton
m	Metre
mbd	Million barrel per day
mdo	Marine diesel oil
MED	Mediterranean
MfA	Marine fishing area
mill	Million
M/T	Motor tanker
MT	Metric tons
mtd	per ton fob delivered
mth	Month
mtw	Per ton ex wharf
n.a.	Not available
NDRF	National Defence Reserve Fleet
n.e.c.	Not elsewhere classified
neg.	Negligible
NIS	Norwegian International Ship Register
no	Number
NODC	Non-oil Producing Developing Countries
nrt	Net register tonnage
nt	Net tonnage
NWE,NW	Northwest Europe
o.a.	Over all
OBO	Ore/bulk/oil carrier
OECD	Organization for Economic Cooperation and Development
O/O	Ore/oil carrier
OPEC	Organization of Petroleum Exporting Countries
OR	Ordinary Register
P/C	Products carrier
Pr/OBO	Product/ore-bulk-oil carrier
r	Revised
Ro/ro	Roll-on/roll-off
RT	Revenue ton
SAR	Special administration region
SBT	Ship segregated ballast tanks
SDR	Special drawing rights
SSMR	ISL Shipping Statistics and Market Review
ST	Short ton
t	Ton/tonne
TB	Tug/barge
TEU	Twenty feet equivalent unit
TKB	Tanker barge
T/S	Tanker/steam
T/T	Tanker/turbine
ULCC	Ultra large crude carrier
USAC	United States Atlantic Coast
USD	US Dollar
VLCC	Very large crude carrier
VLOC	Very large ore carrier
WS	Worldscale
WTO	World Trade Organization
YR, YRS	Year, Years

Symbols

...	Data not available
-	Nil
0/0.0	Less than half of unit employed
1995-2004	From 1995 to 2004 inclusive
2002/03	Crop year, fiscal year etc., beginning in 2002 and terminating in 2003

Billions means a thousand million

Detailed items in tables do not necessarily add to totals because of rounding

For further explanation (e.g. Glossary) please visit: www.infoline.isl.org

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Editorial Team: Reinhard Monden, Dieter Stockmann

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World merchant fleet at a glance

Mid of 2016, the global world merchant fleet (ships of 1,000 gt and over) comprised 42,193 merchant vessels of a combined 1.73 billion dwt, a year-on-year increase of 3.3 per cent in dwt terms. The capacity of the world merchant fleet has more than doubled since the start of 2004. Today, the merchant ships are registered in 150 nations and belong to owners from just about as much countries. Nevertheless, the world shipping scene is largely shaped by a small number of shipping countries with regard to ownership and registration. Mid of 2016, 57 per cent of the world's tonnage is controlled by owners in Greece (19.5 %), Japan (14.1 %), China (12.0 %), Germany (6.8 %) and South Korea (4.7 %). Most of the top shipping nations use a foreign flag for more than half of their tonnage (see Figure 3).

The proportion of vessels flying a flag that is different from the nationality of their owner (foreign-flagged vessels) has grown continuously from 50 per cent at the start of 1996 to 75 per cent mid of 2016. A large share of the foreign-flag tonnage is sailing under open registers. The tonnage of the top ten open registry flags stood at 953 million dwt in July 2016, representing a share of about 55 per cent in the total world merchant fleet. The Panamanian flagged fleet remains the largest in the world with 6,233 vessels of a combined 326 million dwt, followed by Liberia (207 million dwt) and the Marshall Islands (201 million dwt). Almost 43 per cent of the world merchant fleet's tonnage is registered in the mentioned three open registries.

With regard to the scrapping of tonnage in 2015/2016H1, 95 per cent of all scrapped tonnage found their way to the beaches in India, China, Bangladesh and Pakistan. Chinese and Greek owners accounted for 35 per cent of global demolitions in 2015/2016H1.

Major shipping nations

The "country of control" information included in the ISL survey indicates where the controlling interest of the fleet is located, i.e. the home country of the interests behind the primary reference company ("real nationality").

As of July 2016, the top 10 leading shipping countries represented nearly three quarters of the total world merchant fleet (based on dwt). Over the last decade, leading shipping countries like China, Korea and Singapore could expand their markets shares in the world merchant fleet while Germany, Norway, Japan and the United States lost market shares. Five of the top ten shipping nations are from Asia, four are European, and one is from the Americas.

Today, almost one fifth of the world fleet capacity in terms of dwt belongs to Greek owners. Greek has been the largest ship-owning nation in terms of dwt since the start of 2010. Since then, the size of the Greek-owned merchant fleet has grown by 80 per cent to 337 million dwt mid of 2016 (4,500 merchant ships).

Tab. 1: Controlled fleets of major shipping nations 2012-2016 (in million dwt)

Countries	Jul 1st 2012	2015	2016	% change over prev. year
1 Greece	260	313	337	7.7
2 Japan	230	244	243	-0.3
3 China, PR of	161	194	206	6.3
4 Germany	131	124	118	-4.8
5 Korea, Rep. of	80	83	81	-2.3
6 Norway	59	62	64	2.7
7 US	47	56	61	8.6
8 Singapore	48	55	51	-5.8
9 Taiwan	45	47	47	0.3
10 Italy	40	44	46	4.4
Sub Total	1101	1222	1255	2.7
Others	**430**	**455**	**478**	**5.1**
World Total	**1531**	**1676**	**1732**	**3.3**

Tab. 2: Development of major open registry flags 2012–2016 (in million dwt).

Major open flags	Jul. 1st 2012	2015	2016	% change over prev. year
1 Panama	327	326	326	0.2
2 Liberia	193	198	207	4.3
3 Marshall Islands	125	182	201	10.5
4 Malta	67	87	98	13.0
5 Bahamas	63	63	68	6.9
6 Cyprus	30	33	33	1.7
7 Antigua & Barbuda	14	12	11	-7.0
8 Cayman Islands	4	4	4	-1.9
9 Gibraltar	3	4	3	-9.0
10 Vanuatu	2	2	1	-9.3
Sub Total	**828**	**910**	**953**	**4.8**
Others	**702**	**766**	**779**	**1.7**
World Total	**1531**	**1676**	**1732**	**3.3**

Fig. 1: Controlled fleet of major shipping nations as of July 1st, 2016 (dwt 2016 and average yearly dwt growth 2012 - 2016

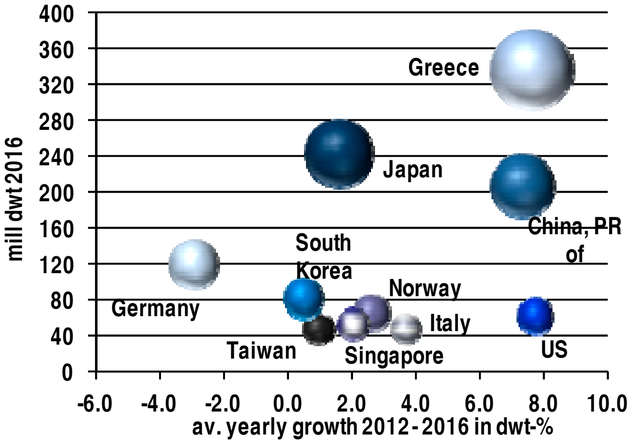
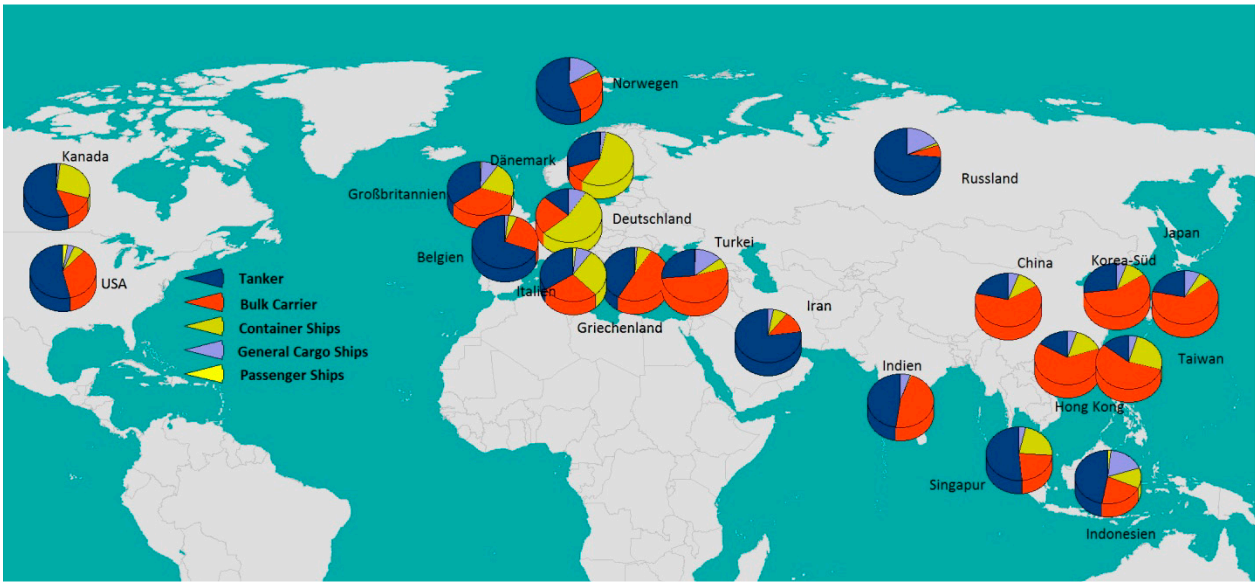


Fig. 2 The Top 20 Shipping nations 2016



Second to Greece is Japan – for many years ranked first - which owns 4,200 merchant vessels of a combined capacity of 243 million dwt, followed by China with 206 million dwt, Germany with 118 million dwt and South Korea with 81 million dwt. The German controlled fleet continues to decline. Within the top 10 shipping nations, only the German controlled fleet decreased between 2012 and 2016 (see Table 1). Table 5 shows the dominance of Greek owners in the dry bulk and tanker sector. Japan has a strong position in the dry bulk market, whereas German ship owners are traditionally involved in the container sector.

The foreign flag shares of the top ranking shipping nations differ markedly. Of the 4,500 merchant vessels, owned by Greek owners, only 752 ships of a combined 71 million dwt were registered under national flag, i.e. 79 per cent of the Greek owned fleet is flagged out. Mid of 2016, about 25,200 vessels with a combined 1.3 billion dwt of the world merchant fleet were using foreign flags. The flagged-out tonnage share for the top ten countries stood at 75 per cent. Countries like Japan and Germany registered 88 per cent and 91 per cent respectively of their controlled tonnage under foreign flags (see Figure 3).

The top ten open registry flags

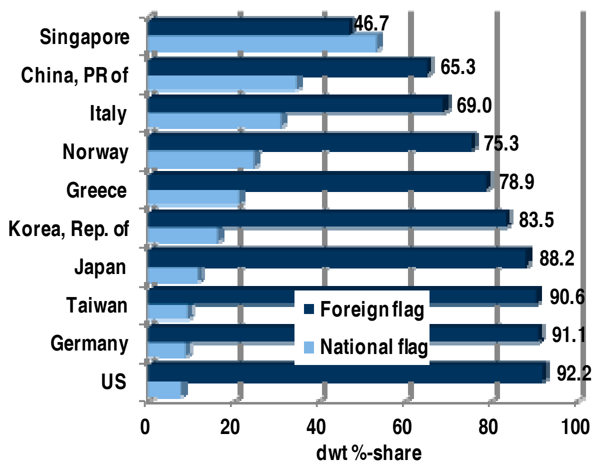
The flag-related ownership analysis shows an increasing concentration on foreign flag tonnage – today, 75 per cent of the world's tonnage is foreign flagged. A large share of this tonnage is sailing under open registries (flags of convenience). Mid of 2016, the combined tonnage of the **top ten** open registry flags stood at 953 mill dwt (see Table 2), representing a share of 55 per cent in the total world merchant fleet (ships of 1000 gt and over). The major open registries such as Panama, Liberia and the Marshall Islands dominate the world merchant fleet by flag. About 42 per cent of the world's tonnage is registered in the mentioned three countries.

Fig. 3: **Flag and ownership patterns of the total merchant fleet mid of 2016 (top 5 owner vs. top 5 flags in million dwt))**

Flag	Owner Country: Greece 336.9 Mio. dwt	Japan 243.2 Mio. dwt	China, PR of 206.4 Mio. dwt	Germany 117.9 Mio. dwt	Korea, Rep. of 81.1 Mio. dwt	Others 746.5 Mio. dwt
Panama 326.2 Mio. dwt	29.0	152.0	26.5	1.5	42.9	74.2
Liberia 206.9 Mio. dwt	64.0	12.9	5.7	48.3	0.1	76.0
Marshall Islands 201.5 Mio. dwt	61.6	10.0	4.2	12.8	17.8	95.5
Malta 98.2 Mio. dwt	54.8	0.9	1.9	7.1	0.0	33.5
Bahamas 67.5 Mio dwt	17.8	5.4	0.1	0.7	0.2	43.4
Others 831.6 Mio dwt	109.7	61.9	168.0	48.0	20.0	Others/Others: 423.9 M. dwt

Note: Figures excluding ships of which the country of controlling interest is unknown and which are sailing under national flag

Fig. 4: **National and foreign flag tonnage shares (dwt) attributable to countries of control as of July 1st, 2016**



Panama remains the world's largest flag registry with 326 million dwt, followed by Liberia with 207 million dwt and the Marshall Islands with 201 million dwt. Of the top 10 open registries, the Marshall Islands flag has seen the fastest growth. Since 2005, the deadweight tonnage of the Marshall Island's registry has grown almost fivefold (+447 %.) It is also one of the youngest fleets with an average age of 7.5 years. Also noteworthy is the growth of the Maltese register with 10.1 per cent per year in the period 2012-2016 (see Table 4).

Looking at the ship type distribution of the "top ten major open flags" the following highlights can be summarised:

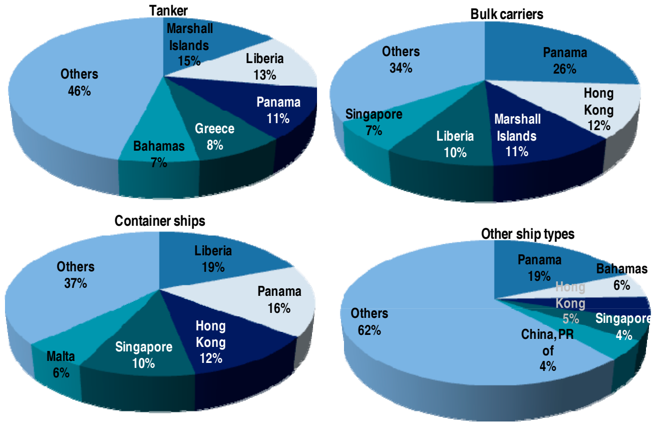
- Between 2012 and 2016 the tonnage volume of the top ten major open registry flags increased by 3.6 per cent annually.
- The impressive development of the Marshall Islands register (RMI) is largely attributable to Greek ship owners: ~31 per cent of the RMI tonnage belongs to Greek owners.
- The substantial yearly increase of the Marshall Island's register over the last five years results mainly from additions in bulk carrier tonnage (45 million dwt, equal to 51 per cent of all ship additions to the register).
- The open registry fleet is largely composed of bulk carriers and in the tankers, which have a share of 47 per cent and 34 per cent, respectively.
- The largest flag state for tanker tonnage was Liberia, comprising 13 per cent of the world oil tanker fleet.
- Panama's flag comprises large shares of bulkers (26 %) and general cargo vessels (20 %).
- Liberia was also the largest flag state in terms of TEU-capacity of the global container fleet with a share of 19 per cent.
- The Register of the Marshall Islands has a strong position in the tanker market for US (18 million dwt), Greek (17 million dwt) and Norwegian ship owners (11 million).

Top scrapping countries

After 37 million dwt in the full year 2015 (769 merchant vessels), in the first six months of 2016 a total of 28 million dwt (498 merchant ships) were reported as broken up so far, an increase of 14 per cent year-on year. Chinese and Greek owners accounted for 35 per cent of global scrapping in the period 2015/2016H1 (23 million dwt), followed by South Korea (5.8 million dwt) and Germany (3.9 million dwt). Over 50 per cent of the tonnage sold to breakers in the mentioned period was registered under the top open registry flags, mainly in Panama (23 %) and Liberia (17 %). But also countries like St Kitts, Comores or Niue appear in the flag list of scrapping.

The Indian subcontinent continued to be the major ship-breaking region. Today, most ship-breaking yards are in Bangladesh, in India, in Pakistan and next to them in China. About 95 per cent of the global demolition

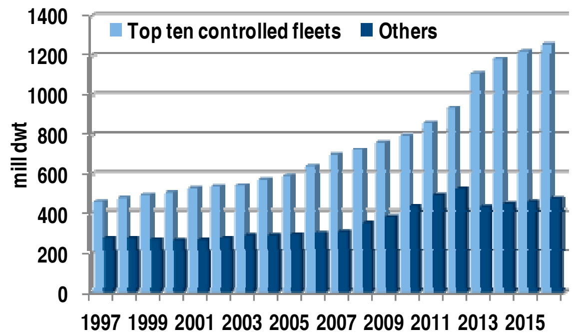
Fig. 5: Favourite registry flags by ship type as of July 1st, 2016 (dwt %-shares)



Tab. 3: Tonnage shares (dwt) of the ten top ranking countries of control in the world merchant fleet by ship type as of July 1st, 2016

Country of control	Tankers	Bulk carriers	Container ships	General cargo ships	Passenger ships	Total
1 Greece	22.9	22.2	10.0	3.3	4.8	**19.4**
2 Japan	8.6	20.8	5.8	17.2	6.4	**14.0**
3 China, PR of	7.2	16.9	9.4	10.3	7.5	**11.9**
4 Germany	2.8	3.5	25.6	10.2	2.9	**6.8**
5 Korea, Rep.	3.6	6.1	3.4	3.8	1.6	**4.7**
6 Norway	5.6	2.4	0.8	8.6	2.6	**3.7**
7 US	5.6	2.6	1.4	1.5	26.3	**3.5**
8 Singapore	4.9	1.6	3.2	1.6	0.3	**3.0**
9 Taiwan	1.0	3.5	4.9	1.9	0.1	**2.7**
10 Italy	2.4	1.7	5.5	3.4	11.4	**2.6**
Subtotal	**64.6**	**81.3**	**70.0**	**61.8**	**63.9**	**72.4**
Others	35.4	18.7	30.0	38.2	36.1	27.6
World Total	100.0	100.0	100.0	100.0	100.0	100.0
(mill dwt)	**614**	**758**	**246**	**107**	**6**	**1732**

Fig. 6: Controlled tonnage (dwt) of the world merchant fleet attributable to the top ranking countries of control



Source: Up to 2011 based on IHS Fairplay, since 2012 on Clarkson Research Services Limited (CRSL). Please note: The sharp decrease of tonnage of other owner countries than the top ten is mainly caused by some reclassifications from Hong Kong to China.

Tab. 4: Demolitions by country of scrapping 2014, 2015 and 2016

Country of scrapping	2014 1000 dwt	2014 dwt - %	2014 ship size	2015 1000 dwt	2015 dwt -%	2015 ship size	2016 (Jan. - Jun.) 1000 dwt	2016 (Jan. - Jun.) dwt - %	2016 (Jan. - Jun.) ship size
India	9268	27.7	31741	8483	22.8	43726	8887	31.2	48037
China, PR of	8170	24.4	40850	5895	15.9	41511	3077	10.8	51288
Bangladesh	6601	19.7	35298	12408	33.4	62042	9381	32.9	73863
Pakistan	6318	18.9	70200	7975	21.5	80551	6175	21.7	84586
others/unknown	3102	9.3	11663	2365	6.4	19075	957	3.4	18051
Total	**33460**	**100.0**	**32328**	**37126**	**100.0**	**48914**	**28476**	**100.0**	**57181**

tonnage in 2015/2016H1 was reported for the four mentioned countries. Bangladesh was in the lead with 21.8 million dwt followed by India (17.4 million dwt), Pakistan (14.1 million dwt) and China (9.0 million dwt). Scrap yards in Bangladesh have benefitted from the increase in bulk carrier demolition. Of the 22 million dwt reported scrapped in 86 per cent belongs to the bulk carrier segment (average size was about 70,000 dwt).

Chinese owners mainly use domestic breakers. Of the vessels reported scrapped at Chinese ship-breakers in the mentioned period, almost 87 per cent of the tonnage has been Chinese owned.

Country of registration indicates the country of the port of registry of a country (flag). The country of control is defined as the "Real Nationality", i.e. the home country of the interests behind the primary reference company. All fleet information in this comment is applicable to merchant fleet vessels of 1000 gt and above.

Statistical details " Top ten major shipping countries"

- *World merchant fleet by regions and countries of control* — p. 9-16
- *Top ten major shipping countries* — p. 17-26

See also SSMR issue No 7 (World Merchant Fleet by Ownership Patterns)

- *World merchant fleet by national and foreign flag and ship type* — p. 16-22
- *World ships on order by major ship type and country of control and ship type* — p. 25

Statistical details " Top ten major shipping countries"

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- *Top ten major shipping countries - Greece* — p. 17
- *Top ten major shipping countries - Japan* — p. 18
- *Top ten major shipping countries –Germany* — p. 20
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Guide to relevant market information:

Shipping & Shipbuilding Market

- *ISL: Shipping Statistics and Market Review: www.isl.org/infoline*
- *International Maritime Organisation (IMO): http://www.imo.org*
- *International Transport Workers Federation (ITF): http://www.itfglobal.org/seafarers*
- *ISL: Shipping Statistics Yearbook 2016*

Sources:

If not otherwise mentioned, the source for tables and figures concerning the world merchant fleet, special ship type features and order book information is "ISL based on Clarkson Research Services Limited (CRSL)", please quote accordingly.

Fleet and New Construction Data

Country of registration and country of control
Country of registration indicates the country of the port of registry of a country (flag). The country of control is defined as the "Real Nationality", i.e. the home country of the interests behind the primary reference company. None of the information regarding ownership is intended to confirm or otherwise the legal status of the companies or the ships associated with them

Denmark includes Faeroes, Greenland.

France includes New Caledonia, French Polynesia, Réunion, Wallis and Futuna Islands.

Netherlands includes Netherlands Antilles, Curacao.

Portugal includes Madeira.

Spain includes Canary Islands.

UK includes Isle of Man and Falkland Island.

US includes Puerto Rico.

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Broken-up Tonnage

includes ships sold for breaking. Figures on broken-up tonnage are not revised if vessels reported for breaking are trading again.

Merchant Ship Type Structures

Based on „An International Classification of Ships by Type" (ICST (1994)

Definition of terms used in merchant ship structures type classification.

Tankers: Single-deck vessel constructed and arranged for the carriage of liquid cargoes in tanks integral to the hull and include crude oil or non-hazardous (IMO code) refined products.

Chemical tankers: Vessel constructed and arranged for carrying hazardous (IMO code) cargoes in special tanks.

Liquid gas tankers: Vessel constructed and arranged for the carriage of liquefied gases either in integral tanks or independent
tanks under pressure or refrigerated.

Dry Bulk carriers: Dry cargo vessel. One deck, machinery aft with topside tanks capable of carrying a variety of self-trimming cargoes.

Ore Carriers (Bulk Carriers): Dry cargo vessel, one deck, strengthening for ore cargoes.

Ore/Bulk/Oil Carriers (OBO): Bulk carrier arranged for the carriage of either bulk dry cargoes or liquid cargoes in the same cargo spaces but not simultaneously.

General Cargo ships: Single or multi-deck general dry cargo vessel with facilities for loading/ discharging cargo.

Specialised Carriers (Special Ships): Dry cargo vessel specially designed for the carriage of particular cargoes, incl. car-carriers.

Reefer ships: Specialised dry cargo vessel with 80 % or more insulated cargo space.

Ro/Ro Cargo Ro/Ro Passenger ships: Vessel arranged for Roll-on Roll-off loading / discharging of vehicles (road and/or rail) as cargo and / or passenger conveyances.

Container Ships (Fully Cellular Container Ships): Vessel fitted throughout with fixed or portable cell guides for the carriage of containers above and below the weather deck.

Passenger ships: Vessel which carries more than 12 fare paying passengers whether berthed or unberthed (ferries).

Basic Ship Type Structure and ISL Ship Type Aggregates

MERCHANT SHIP		STRUCTURES	ISL SHIP TYPES Special Fleet Report	Broken-up tonnage etc.
LIQUID	**Oil tankers**	- Crude oil tankers - Crude oil and product tankers - Product tankers	Oil tankers " "	Tankers " ""
	Oil / Chemical tankers	- Oil chemical tankers - Chemical tankers - Other tankers	Oil / Chemical tankers " "	Tankers "
	Liquid gas tankers	- LNG carriers - LPG carriers - Other liquid gas carriers	Liquid gas tankers " "	Tankers " "
DRY BULK	**Bulk carriers**	- Bulk carriers - Other bulk carriers incl. ore carriers - Ore/bulk/oil carriers - Ore/oil carriers - Bulk/oil carriers	Bulk carriers "	Bulk carriers " " " " "
OTHER DRY CARGO	**General cargo ships**	*of which* - Conventional Cargo ships - Special ships - Pure car carriers - Reefer ships - Ro/Ro cargo ships	General cargo ships, *of which* Conventional Cargo ships Special ships Pure car carriers Reefer ships Ro/Ro cargo ships	General cargo ships, *of which* Conventional Cargo ships (a) (a) (a)
	Container ships	- Fully cellular container ships	Container ships	Container ships
	Passenger and passenger cargo ships (b)	*of which* - Passenger ships - Ro/Ro cargo passenger ships	Passenger and cargo passenger ships, *of which* Passenger ships Ro/Ro cargo passenger ships	Passenger ships " "

(a) Included in General Cargo Ships.
(b) Including ships (berthed and unberthed) for passenger transport and passenger carrying vessels like general cargo passenger ships, ro/ro passenger ships (ferries).

For further explanation (**e.g. Trade and Traffic Statistics**) please visit: www.isl.org/infoline

ISL Statistical publications - price list 2017

Product Feature	Net price	Prices including VAT in case of standard shipping free of charge Germany and EU without VAT number	other Europe/World: standard-mail	other Europe/World: airmail
ISL Shipping Statistics Yearbook (2016)				
print copy	365 €	390.55 €	365 €	402 €
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ISL Shipping Statistics and Market Review (SSMR) Vol. 61 (2017)				
print copy	540 €	577.80 €	540 €	594 €
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