

Unit 4
TYPES OF SHIPS

CARGO LINERS

Basic terms

<i>liner service</i> <i>accommodation</i> <i>shipowner</i> <i>gear</i> <i>general cargo</i>	<i>fixed route</i> <i>coastal trade</i> <i>deep-sea trade</i> <i>cargo handling</i> <i>vehicle ferry</i> <i>sailing schedule</i>
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Liner shipping is the most efficient mode of transport for goods. In one year, a single large containership might carry over 200,000 container loads of cargo. While individual ships vary in size and carrying capacity, many container ships can transport up to 8,000 containers of goods and products on a single voyage. Similarly, on a single voyage, some car carrier ships can handle 7,600 cars. It would require hundreds of freight aircraft, many miles of rail cars, and fleets of trucks to carry the goods that can fit on one large liner ship.

- Containerships have the capacity to carry several large warehouses worth of goods on a single journey.
- Large containerships can be operated by teams of just thirteen people utilizing sophisticated computer systems.
- The ships' computer systems are highly advanced, enabling the precise routing, transport, loading and unloading of thousands of containers for every voyage.
- If all the containers from an 11,000 TEU ship were loaded onto a train, it would need to be 44 miles or 77 kilometers long.
- A container of refrigerators can be moved from a factory in Malaysia to Los Angeles -- a journey of roughly 9,000 miles or 14,484 kilometers -- in just 16 days.
- The cost to transport a bicycle from Thailand to the UK in a container is about US\$10. The typical cost for shipping a DVD/CD player from Asia to Europe or the U.S. is roughly US\$1.50; a kilogram of coffee just fifteen cents, and a can of beer - a penny.

The type of merchant vessel is determined basically by the traffic carried. Broadly speaking there are three main divisions: **liners**, **tramps** and **specialized vessels** such as tankers. These are vessels that *operate on a regular scheduled service between groups of ports*. **Liner services** offer cargo space or passenger accommodation to all shippers and passengers who require them. *They sail on scheduled dates, irrespective of whether they are full or not*. Therefore, in liner operation the regular scheduled service is the basis of this particular type of ships, and it is vitally important to the shipowner that everything is done to keep sailing and arrival dates.

A **cargo liner** therefore is a vessel which operates a regular scheduled service on a fixed route between designated ports and carries many consignments of different commodities.

Cargo liners, or **freighters** as they are often called in US, are ships designed to carry general cargo (conventional cargo), although a few of them can also have accommodation for up to twelve passengers. Such vessels operate on fixed routes, serving a group of ports and operate on fixed sailing schedules - the vessel departing whether she is full or not. Their capacity varies from 200 d.w.t. (deadweight) with two holds in the short sea and coastal trades, to 25,000 d.w.t. with six holds or more, in the Mediterranean and deep-sea trades.

Their speed varies from 13 to 22 knots in the deep sea and Mediterranean trades where the majority of the liners are found. They require efficient **cargo handling gear** to serve all hatches, including a jumbo derrick capable of dealing with heavy lifts. In many cargo liners, refrigerated accommodation, together with deep tanks for liquid cargo, is provided.

In the last three decades **container ships** capable of conveying up to 15,000 containers or TEUs (twenty-foot equivalent units) with a speed up to 23 knots have appeared in many liner cargo trades. This transformation will continue and probably the vessels will become larger. In the Short Sea Trades, vehicle ferries often described as roll-on/roll-off ships carrying cars, passengers, and road haulage vehicles are prominent.

Today there are almost 6,000 liners ships, mostly containerships, operating in **liner services** with most built since 1980. Liner ships have the capacity to carry several warehouses-worth of goods, which makes one journey very efficient. In an average year a large container ship travels three-quarters of the distance to the moon.

Some of the world's biggest container ships are about 1,300 feet long - that's nearly 400 meters or the distance around an Olympic running track - with a maximum width of 180 feet (55 meters). Their engines weigh 2,300 tons, their propellers 130 tons, and there are twenty-one storeys between their bridge and their engine room. They can be operated by teams of just thirteen people and a sophisticated computer system and carry an astonishing 15,000 20-foot containers.

Container ship operators can either deploy ships that they own, or they can charter the ships for operation from a ship broker. Most container ship operators deploy both owned and chartered ships.

According to Alphaliner, the global **container fleet** had a total capacity of almost 17 million TEU in July 2013. Container ships come in a variety of sizes and have grown increasingly larger over time. This resulted from two things: the first was the increased use of containerization - as more cargo was converted to containers, there were more containers for the ships to carry; the second was that there were certain efficiencies - like improved fuel efficiency - that could be realized with larger ships. Those efficiency improvements often reduced the operating cost

About 20 percent of liner vessels are ships other than container ships. Liner ships also include some **car and truck carriers** designed specifically to handle passenger vehicles and trucks, but which can often also accommodate buses, commercial trucks, tractors bull dozers and the like. Some **ro/ro ships** are also included. They can handle not only the drivable vehicles that are accommodated on car carriers, but

usually project and heavy lift cargo as well. This cargo is typically too large or too heavy to be moved on container vessels.

General cargo vessels and **multi-purpose vessel** often operate on liner services. The holds of these vessels can usually accommodate both containers and break-bulk cargo, and sometimes they are equipped with their own crane for loading and unloading cargo. This makes them self-sustaining because they do not require shore-side cranes for port operations.

A. Comprehension & vocabulary

A.1 Tick the sentences to show which are true or false.

1. Liners sail only when they are full.
2. Freighters can also carry a dozen passengers.
3. Liners are not used in deep-sea service.
4. Cargo liners carry bulk cargo.
5. Liners operate on fixed routes.
6. Container ships are used in the liner trade.
7. Ro-ro ships carry both vehicles and passengers.
8. Container ships use their own cargo gear to load and unload containers.

TRUE	FALSE

A.2 Supply the following missing terms:

- car-ferries • conventional • merchant ships • schedule • routes
- service • liners • departure • short-sea • containerized
- deep-sea

1. _____ can operate as liners.
2. These ships are employed on regular _____ and on fixed _____.
3. The dates of their arrival and _____ are published in sailing lists or cards.
4. _____ sail whether they are full or not.
5. Cargo liners sail on _____ and _____ routes.
6. Liners are employed today to carry both _____ and _____ cargo.
7. _____ also operate as liners carrying passengers, cars and road vehicles across channels on a daily or weekly _____.

A3 Supply the missing term

The type of merchant vessel is determined basically by the _____ carried. Broadly speaking there are three main divisions: liners, tramps and specialized vessels such as _____. These are vessels that operate on a regular _____ service between groups of ports. Liner services offer _____ or passenger _____ to all shippers and passengers who require them. They _____ on scheduled dates, irrespective

of whether they are full or not. Therefore, in liner operation the regular scheduled _____ is the basis of this particular type of ships, and it is vitally important to the shipowner that everything is done to keep sailing and arrival _____.

A cargo liner is a vessel which _____ a regular scheduled service on a fixed _____ between designated ports and carries many _____ of different commodities.

A4 Supply the missing part of the sentence

Cargo liners, or freighters in US, are ships designed to carry general cargo (conventional cargo), although a few of them can also have accommodation for up to twelve passengers. Such vessels operate, serving a group of ports and operate on fixed sailing schedules - the vessel departing Their capacity varies from 200 d.w.t. (deadweight) with two holds, to 25,000 d.w.t. with six holds or more, in the Mediterranean and deep-sea trades.

Their speed varies from 13 to 22 knots in the deep sea and Mediterranean trades They require efficient cargo handling gear, including a jumbo derrick capable of dealing with heavy lifts. In many cargo liners, refrigerated accommodation,, is provided.

- *whether she is full or not*
- *as they are often called*
- *together with deep tanks for liquid cargo*
- *to serve all hatches*
- *on fixed routes*
- *in the short sea and coastal trades*
- *where the majority of the liners are found*

A5 Supply the missing information:

- Containerships have the capacity to carry several large
- Large containerships can be operated by teams of just thirteen people utilizing
- The ships' computer systems are highly advanced, enabling the precise routing, transport, loading and
- If all the containers from an 11,000 TEU ship were loaded onto a train, it would need to
- A container of refrigerators can be moved from a factory in Malaysia to Los Angeles -- a journey of roughly 9,000 miles or 14,484 kilometers -- in
- The cost to transport a bicycle from Thailand to the UK in a container is about US\$..... . The typical cost for shipping a DVD/CD player from Asia to Europe or the U.S. is roughly US\$.....; a kilogram of coffee just, and a can of beer - a

B. Grammar

B.1 Find the subjects to the following verbs in the text and "write them down, The first two sentences have been done for you:

SUBJECT (noun group)	PREDICATE (verb group)
The type of merchant vessel	is determined
These ... vessels	operate
	offer
	sail
	is done
	operate
	varies
	are found
	is provided
	have appeared
	will continue

B.2 Find objects or adverbial adjuncts to the verbs below. The first two examples have been done for you:

SUBJECT	PREDICATE/ VERB	OBJECT/ ADV. ADJUNCT
The type of merchant vessel	is determined	by the traffic carried
These ... vessels	operate	on a regular scheduled service
	offer	
	sail	
	is done	
	operate	
	varies	
	are found	
	is provided	
	have appeared	
	will continue	

B.3 Turn the above sentences (Ex. B.2) into a the negative and b the interrogative form:

EXAMPLE

a = The type of merchant vessel is not determined by the traffic carried.

b = Is the type of merchant vessel determined by the traffic carried?

B4 Put the verb in the right place in the sentence

In more recent years container ships capable of conveying up to 15,000 containers or TEUs (twenty-foot equivalent units) with a speed up to 23 knots have appeared in many liner cargo trades (*conveying, appeared*). This transformation will and probably the vessels will larger (*become, continue*). In the Short Sea Trades, vehicle ferries often as roll-on/roll-off ships cars, passengers, and road haulage vehicles are prominent (*described, carrying*).

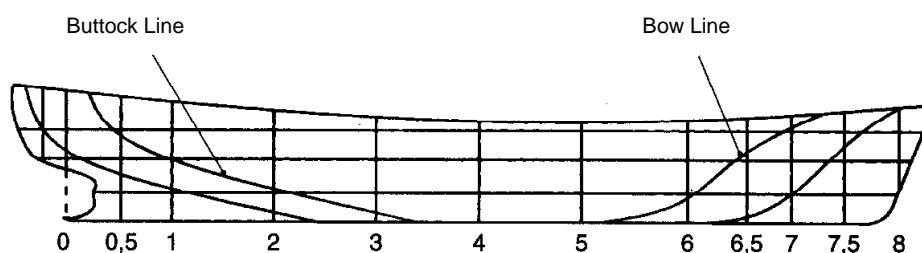
Today there are almost 6,000 liners ships, mostly containerships, in liner services with most since 1980 (*operating, built*). Liner ships have the capacity to several warehouses-worth of goods, which one journey very efficient (*carry, makes*). In an average year a large container ship three-quarters of the distance to the moon (*travels*).

C. Writing skills

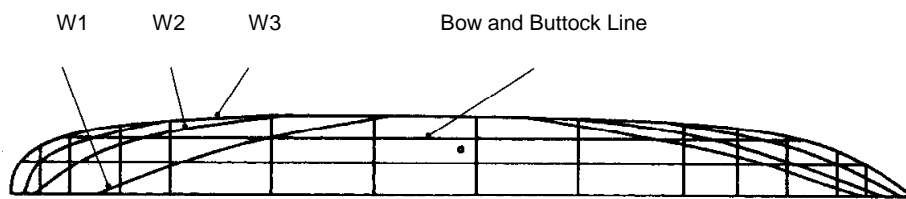
C.1 Summarize the reading text by answering the following questions

1. What are the main divisions of merchant vessels?
2. Where do liners operate?
3. What do liner services offer?
4. What is the basis of the liner service?
5. What kind of cargo do liners usually carry?
6. What are some of the basic design features of such vessels?
7. What is used in the loading/discharge of cargo liners?
8. Are freighters also designed to carry refrigerated cargo?
9. What are the recent types of liners?
10. What is a vehicle ferry?
11. What are vehicles ferries also called?
12. What does TEU stand for?
13. What is this unit used for?

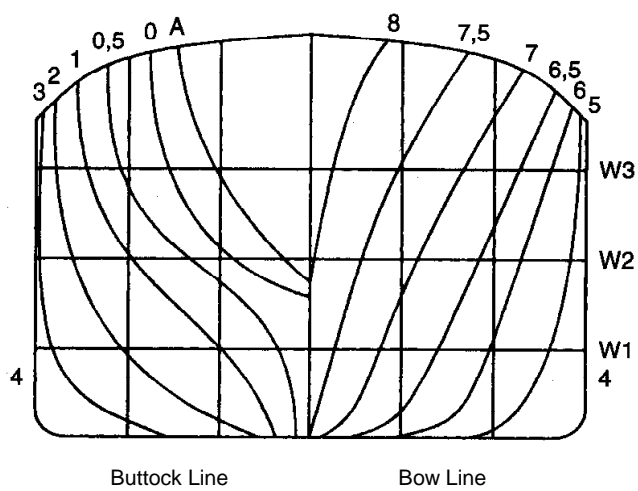
Lines plan



Sheer Plan



Half Breadth Plan



Body Plan