6. Merchant Vessels

– Vocabulary assessment.

Use the vocabulary development scale to rate the following words:

5 can explain and use in different contexts
4 use in a limited way in speaking/writing
3 understand the "gist" of it
2 recognise but don't understand
1 unknown to me

Decline	Container securing	Routes
Collision	Pipeline	Massive
Edible	Replaced	Convenient
Cargo shifting	Removable	Bunkering
Prevent	Rapidly	Grounding
Available	Installed	Maintained

Which of these words are definitely part of Maritime English terminology?

Types of merchant vessels

– The bulk carrier

Today, modern commercial vessels are highly specialized, designed to carry specific types of cargo. The names of ships tell us what type of cargo they are designed to carry. As their name suggests, bulk carriers, also known as "Bulkers" or "Bulkies", transport their cargo in bulk. They carry bulk cargo, "loose" cargo, either "dry bulk" such as coal, grain, iron ore, fertilisers, cement, sugar, light minerals or "liquid bulk" such as a range of chemicals including petroleum products.

Dry bulk carriers

- have huge under-deck specialized [ ] where the bulk products are poured and stored.
- come in different sizes, from the so-called "handysize" bulk carriers of about 25,000 to very large carriers of up to 220,000 dwt, with a typical speed of no more than 15 knots.
- can have deck [ ] or simply deck hatches
- have longitudinal and cross walls, called [ ].

– The tanker

The tanker is one of the most important vessels in the world's merchant fleets today. Tankers carry liquid cargo in tanks. Their size is growing rapidly in recent years. The best known are the [ ] tankers. They come in two kinds: the [ ] carrier, which carries crude oil, and the [ ] tanker, which carries refined products such as petrol, gasoline, aviation fuel, kerosene and paraffin.

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Tankers range in all sizes from small [ ] tankers of 1,000 dwt, used for refueling larger vessels, to the real giants, the [ ] of 200,000 - 300,000 dwt and the [ ] of over 300,000 dwt., the biggest ships afloat. The most common type of tankers today are the VLCCs, accounting for 50% of the world tanker fleet. Their large [ ] limits their sailing routes. There are only a few ports that supertankers can enter and so they are mostly loaded and unloaded from off-shore pumping stations. They operate at normal speeds of around 16 knots.

LNG carriers carry [ ] at temperatures below minus 160°C in free standing spherical tanks with domes visible above the deck. This means that they carry extremely hazardous cargo, so safety measures on board have to be very strict. The LPG is designed to carry [ ] at very low temperatures.

- Tankers have [ ] on deck.
- For safety and ease of walking a [ ] is provided.
- The cargo space is divided into tanks with transverse and longitudinal bulkheads.
- Tankers must have large [ ] to move the cargo out of the tanks.
- Some of them have [ ] to prevent pollution in case of a collision.

– The general cargo ship

Until a few decades ago, the most important cargo ship was the break-bulk carrier, sometimes called the general cargo ship or [ ]. The cargo is carried in break bulk form i.e. it is loaded into and broken out of the ship piece by piece. General cargo ships are different from bulk carriers as they can transport cargo in various shapes and sizes, for instance [ ] products, heavy [ ] items, etc.

- The size of these ships is between 10 to 20,000 dwt, and normally they operate at speeds between 16 to 20 knots.
- They have [ ] tanks, which are used for storage of fuel and water.
- The hull is divided by transverse bulkheads to form holds, typically four to six.
- The holds are further divided by one or two [ ] with hatch ways that may be folded on sides.
- The general cargo ships may sometimes have one or two holds as "reefer holds" to carry [ ] cargo.

Even though it still takes a lot of time to load and unload general cargo ships, over the years there are changes in the cargo handling equipment. Cranes and heavy lifting equipment have replaced the [ ] Also, the design and operation of [ ] covers is now much better and this makes operations easier and faster.

– The container ship

The first container ship was built in the 1960s and since then it has revolutionized shipping. Container vessels are designed to carry cargo placed inside containers of a [ ] size. The [ ] (twenty-foot equivalent) unit is used to measure container volume and it refers to a container with external dimensions of 8×8×20. Volume is sometimes measured by [ ]s, forty-foot equivalents (8×8×40), as well. In the past couple of years, the largest container vessels have grown in [ ] up to 19,500 TEU. Fully containerized vessels ([ ] vessels) have permanently installed [ ] which not only guide the containers in [ ] one on top of the other, but also provide adequate securing.

Containers can be filled with just any type of cargo, from refrigerators to fruit or meat. They are usually stowed on the deck of the ship or inside. At the container terminals these ships can quickly load and discharge by means of large [ ] cranes called [ ] cranes. The cranes lift the containers off or onto the quay or trucks and off or onto the ship's deck. While a conventional dry cargo vessel may take 3-4 days to load or discharge, a container ship can do the same in a matter of hours. Also, the higher speed of around 26 knots is the main advantage of container vessels over other cargo ships.

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