

Shipping background

Port of Melbourne and shipping

Port of Melbourne has over 3000 ship visits every year, bringing in imports and leaving with exports. In any year, around 6.6 million tonnes of exports are sent out from the port including dairy products, grains, oils and fats and manufactured goods. Victoria, and Australia, brings in many goods from around the world, manufactured items such as cars and mineral fuels (crude oil) are examples of major imports.

Types of shipping

Bulk carriers

Modern bulk carriers are used widely for specific cargoes and these ships have huge compartments inside called holds.

Cement powder, coal, iron ore and wheat are solids that can change their shape and are moved in and out of the holds using different methods. The Port of Melbourne has specialised facilities for pumping wheat and cement into ships. 1500 tonnes of wheat can be loaded each hour and 50,000+ tonnes can be loaded in a couple of days - it used to take weeks to load using mechanical shovels and cranes.



Breakbulk (general cargo) carriers

In the past this basic design was used for most cargo carriers. Everything used to be carried in the hold; loose e.g. coal; bundled in nets e.g. bolts of fabric; crated e.g. tea or in barrels e.g. whale oil. Men loaded everything on and off the ships by hand. This was often a lengthy process and in rough seas the cargoes could shift, causing the ship to list and even roll. Today, goods are rarely carried in this way.

However, some goods are still transported in bags and bales but in larger quantities than in the past. This is due to the availability of powerful lifting equipment and because there is a weight and size limit on what can be packed into containers. Wheat and other grains such as rice and barley can be packed into one tonne bulker bags which are lifted on pallets into compartments. Huge coils of wire, rolls of sheet metal, timber and machinery can also be transported this way. Breakbulk carriers often have a series of 'tween' decks within each hold

Tankers

There are two basic types of tanker:

1. Product tanker

These ships are designed to transport large quantities of mineral oils, either crude oils or the refined product. They can carry single cargoes of 100,000+ tonnes. The liquids are pumped in and out of compartments in the hold via the pipe-work seen on the deck. At the berth e.g. Holden Dock, pipes connect directly to refineries.



2. Parcel tankers

Have smaller individual compartments and can carry more than one product at a time. A facility at No.1 Maribyrnong pumps vegetable oils, molasses and tallow into compartmentalised holds. These thick liquids are heated to make them easier to move through pipes.

Ro-Ro (Roll on-Roll Off) Ships

Cars are imported and exported through Webb Dock. Ro-Ros are specialised ships like floating multi-storey car parks. They bring cars, trucks, mining equipment and agricultural machinery into Australia. Often the back of the ship (stern) drops down so the vehicles can be driven straight on and off the dock.



Container ships

Many of the ships visiting the port of Melbourne are of this type and are easily recognised by the containers stacked high on the deck. Nearly 40% of Australia's container traffic comes through the port of Melbourne. Containers around the world are a standard size and shape based on the old measurements of 20 and 40 foot lengths. The capacity of container ships is measured by how many 20-foot containers they can carry, e.g. 4124 TEU (TEU =Twenty foot Equivalent Units) means that the ship has room for 4124 20-foot containers or half that number of 40-foot containers. Some containers called reefers have built-in refrigeration units and are used to transport fruit and vegetables, dairy products and meat. Ships taking exports from Victoria often have a high capacity of reefer plugs because Victoria exports a lot of produce that requires refrigeration e.g. fruit.

