

Berthing Geared Ships

Terminals have preferred berthing directions for ships which depend on factors such as port infrastructure, quay transfer operations and environmental conditions like wind, tide and currents.

Berthing port side is when the ship's left hand side, looking from the bridge to the bow, is berthed closest to the quay wall, and berthing starboard side is when the ship's right hand side is berthed closest to the quay wall.

Fully cellular geared ships such as the Bright Sky seen here arriving in Rotterdam have cranes along the centreline and can be berthed port or starboard side as requested by the terminal. The berthing direction for multipurpose geared ships with cranes on their port or starboard side will depend on whether the ship will be worked by its own or the terminal's quay cranes.



If the ship's cranes are to be used and they are located on its port side then usually the ship will berth port side so its cranes are adjacent to the quay. If the terminal's cranes are to be used, then this ship will berth starboard side so its cranes can be swung out of the way over the water. However, if the ship's cranes are located on its starboard side, then the ship will usually berth starboard side if using its own cranes or port side if using the terminals'.

Berthing direction can have a major impact on quay transfer operations. Containers being loaded must have their doors facing the correct direction to meet shipping line requirements. For example, containers stowed above deck are generally stowed with doors facing aft to reduce the risk of water entering whilst at sea. The exception is reefer containers which are generally stowed with their doors facing forward to shelter their mechanical units from sea spray.

On discharge it is also necessary to manage the door direction of containers when they are transferred to the yard. So that when they are loaded onto a truck, train or ship to continue their journey their doors are in the correct direction.

Consequently, when a ship is not berthed in the preferred direction it alters the usual flow of equipment performing the quay transfer operation. This can be particularly awkward where terminals observe one-way traffic flows on the quayside and yard roadways.

Key Terms

- Berth
- Berthing direction
- Berthing port side
- Berthing starboard side
- Centreline
- Container door direction
- Fully cellular geared container ship
- Multipurpose geared ship
- One-way traffic flows
- Port
- Quay (quayside)
- Quay transfer operation
- Starboard
- Yard roadways

Glossary

Berth

A location along a quay where a ship can moor, often given a name or referencing method for easy identification

Berthing direction

The direction of a ship moored alongside a quay described in terms of either port side berthing or starboard side berthing

Berthing port side

When a ship berths with its port (left-hand) side closest to the quay wall

Berthing starboard side

When a ship berths with its starboard (right-hand) side closest to the quay wall

Centerline

Vertical line running the length of a ship from the fore to the aft

Container door direction

Direction that the container doors face when stowed in a yard, on a ship or other transport mode

Multipurpose geared ship

A ship equipped with its own cranes and built for a wide range of cargoes with moveable tween decks, a box shaped hold and hatch openings across the width of the hold

One-way traffic flows

Form of traffic management that may be used in terminals to reduce likelihood of collisions and improve traffic flows

Port

Left hand side of a ship when facing forward

Fully cellular geared container ship

A ship designed with its own cranes to specifically carry containers both above and below deck, incorporating structures such as cell guides and lashing bridges

Quay (quayside)

Area between the container yard and the waterfront - used to support the loading and discharge of ships

Quay transfer operation

Process of transferring containers between the quay and the container yard and vice versa

Quayside (quay)

Area between the container yard and the waterfront - used to support the loading and discharge of ships

Starboard

Right hand side of a ship when facing forward

Yard roadways

Paved surfaces in a terminal yard used by trucks and mobile equipment