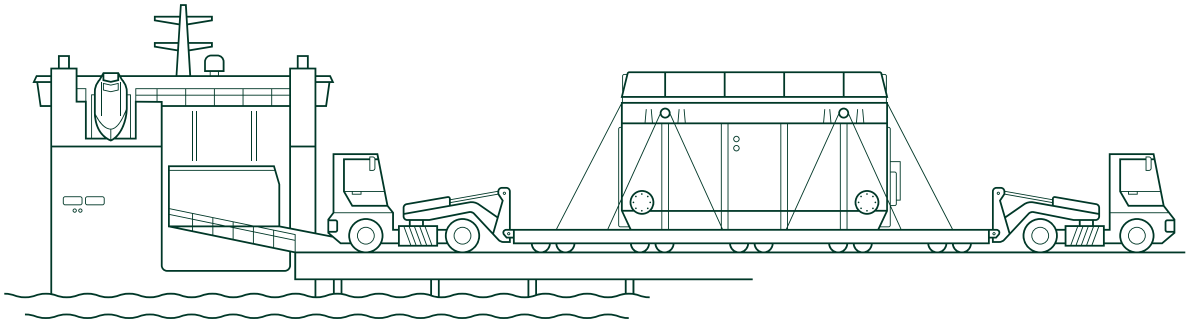
Wallenius Wilhelmsen Ocean

EUKOR We deliver

Customer guidelines for packing, marking and securing points

Ensuring a safe ocean voyage for your products is a key priority to us. We can guarantee that our qualified team of experts use certified lashing materials, provide tailormade lashing arrangements following Wallenius Wilhelmsen cargo handling instructions.

In this guide we provide advice on best practice for how you prepare your packing, marking, and securing points to ensure on-time, cost-efficient and safe ocean voyage.



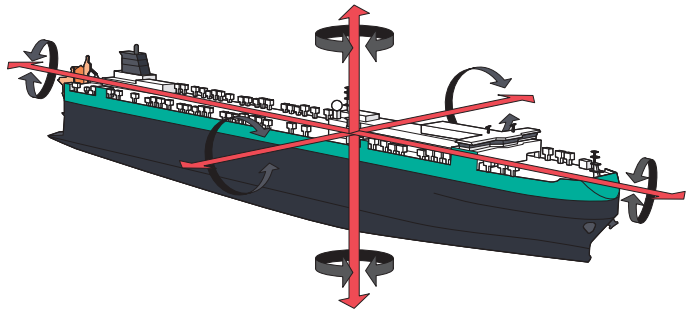
Ocean transport conditions

WHY ARE YOUR PREPARATIONS IMPORTANT? While our vessels and underdeck stowage will protect your product from wind and weather, a vessel at sea is exposed to multiple motions, accelerations and temperature variations. your preparations on packing, marking and securing points are important to withstand these acceleration forces.

The six different motions can occur simultaneously and are then combined into three different accelerations that must be taken into consideration for securing of the cargo.

WE FOLLOW IMO[1] REGULATIONS to ensure that cargo onboard the vessel is secured to withstand the following gravitational accelerations:

Vertical: 1.0 g*
(cargo must be secured with at least 100% of its weight.)
Transversal: 0.8 g
(cargo must be secured with at least 80% of its weight.)
Longitudinal: 0.4 g
(cargo must be secured with at least 40% of its weight.)



Linear motion

- Surging is motion along the longitudinal axis.
- Swaying is motion along the transverse axis.
- Heaving is motion along the vertical axis.

Rotational motion

- Rolling is motion around the longitudinal axis.
- Pitching is motion around the transverse axis.
- Yawing is motion around the vertical axis.

IMO regulations on shipper and carrier responsibilities

IMO's regulations related to safety at sea, clearly stipulate the respective responsibilities of the Shipper and the Carrier.

THE SHIPPER is responsible for preparing the cargo for the transport and ensuring that it is fit for the intended sea voyage and type of vessel.

The SOLAS[2] convention state as follows:

"The shipper shall provide the Master or his Representative with appropriate information on the cargo sufficiently in advance of loading to enable the precautions which may be necessary for proper stowage and safe carriage of the cargo to be put into effect. Such information shall be confirmed in writing and by appropriate shipping documents prior to the loading the cargo on the ship."

THE CARRIER is responsible for handling the cargo with care, stowing, securing onboard and delivering the cargo to its destination safely. the vessel's master have the final decision on accepting the cargo for loading.

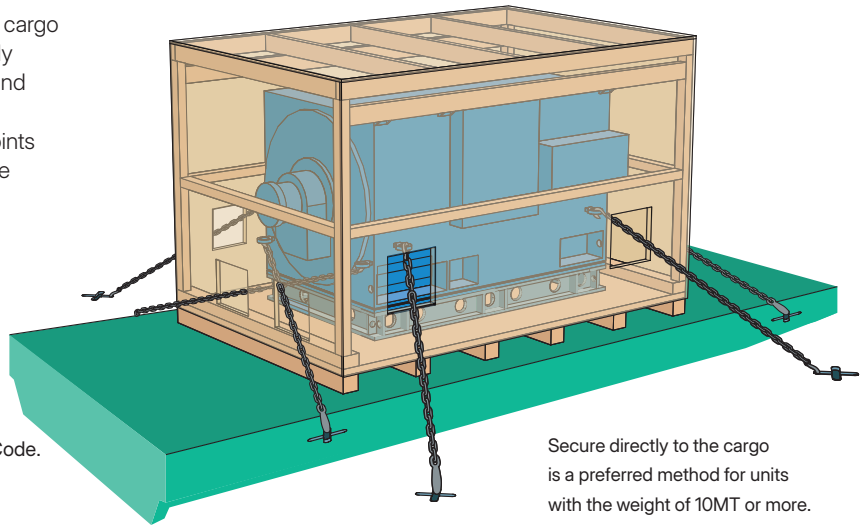
The CSS Code[3] state as follows:

"The shipper is responsible to provide all necessary information about the cargo to enable the shipowner or ship operator to ensure that the different commodities to be carried are compatible with each other or suitably separated; the cargo is suitable for the ship, the ship is suitable for the cargo, its stowage may be properly planned for handling and transport and can be safely stowed and secured onboard the ship under all expected conditions during the intended voyage."

*Footnote: g from gravitational is a measurement of acceleration felt as weight.
1) IMO – the International Maritime Organization – is the United Nations specialized agency with Responsibility for the safety and security of shipping and the prevention of marine pollution by ships.
2) SOLAS (IMO's International convention Safety of Life at Sea)
3) IMO's "Code of Safe Practice for Cargo Stowage and Securing" – the CSS-Code

Packing and securing points

THE SECURING POINTS ARE CRITICAL FOR LASHING your cargo onboard the vessel. The securing points shall be attached directly to the cargo inside the packing or from the packing if the cargo and packing can be considered one solid unit (e.g. bolted together) This may be done in a variety of ways as long as the securing points are accessible and of sufficient size and strength to withstand the cargo weight. Lifting points are not appropriate securing points and must be marked accordingly.

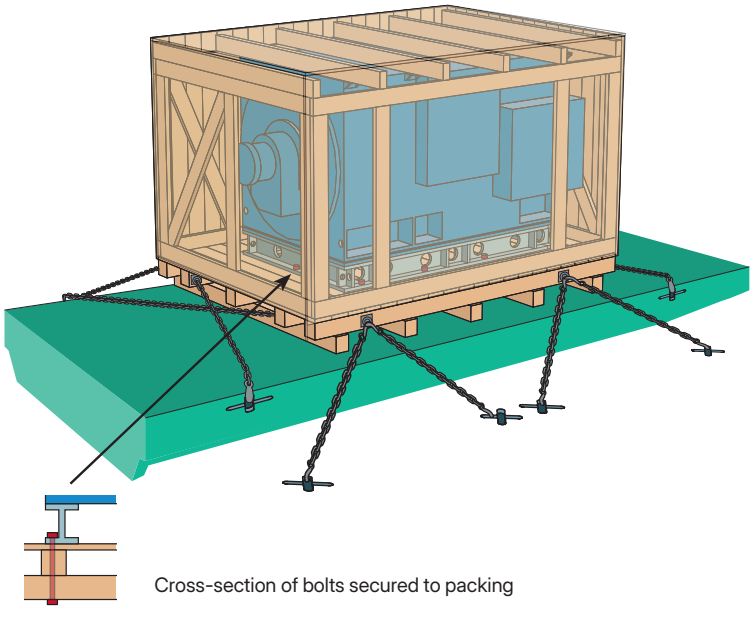


Secure directly to the cargo is a preferred method for units with the weight of 10MT or more.

1. For cargo with lashing points (10MT or more)

- Direct securing is a preferred method and is required by IMO CSS Code. Exceptions may be granted by Wallenius Wilhelmsen.
- The total MSL (maximum securing load) of the lashing points must correspond to own weight of the cargo
- Top over lashing should NOT be considered as securing method according to CSS code annex 13.
- Position of lashing points must be suitable to secure the cargo in all directions.

An exception to having direct lashing points can be made if the following is fulfilled and approved by authorized Wallenius Wilhelmsen employee.



Cross-section of bolts secured to packing

2. For cargo without lashing points (10MT or more)

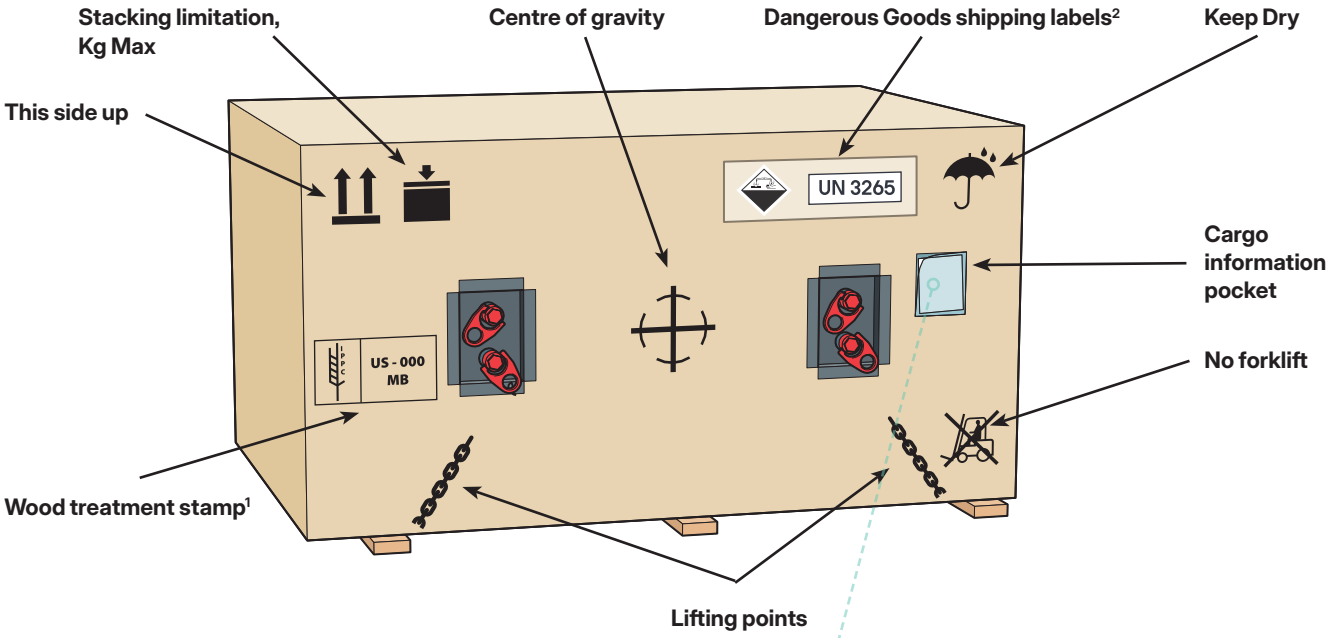
- Drawings and pictorial descriptions of the actual cargo must be displayed outside of the packing and or sent via email
- Cargo needs to be properly secured inside the packing.
- Clear documentation of securing arrangement inside the packing must be provided.
- The documentation must prove that the securing arrangement inside the packing is sufficient.
- Codes and/or standards that the packing complies to must be provided.
- Any bolting and/or blocking must be verified if of sufficient size and quality. Document of material as well as size and capacity of bolts must be presented.
- Lashing points of sufficient strength and number must be fitted to the outside of the case. MSL correspond to own weight of the cargo on each side of the case.
- Suitable lashing positions must be marked on the packing or advised.

3. For all weights, it must be clear that:

- Cargo is safely secured inside package. Unit is possible to secure.
- Package is rigid and can transfer forces from securing and supports to the cargo inside.

Marking on packing

MARKINGS ON PACKING PROVIDES important information to the carrierand stevedores a nd must comply with international standards. The examples below are important symbols for marking, but other markings may be added when relevant.



The following cargo information must be made available in a plastic pocket or stamped on the packing:

- Port of load / Port of discharge
- Wood treatment[1]
- Consignee
- Dimensions: Length x Width x Height
- Gross mass
- Position of centre of gravity
- Transport drawings /picture of cargo

The following information regarding securing points should be considered:

- Where are the securing points located?
- What is the maximum securing load of the securing points?
- Do you have Codes and/or standards that the packing complies to?

1) Wooden treatment: All wood packing material including dunnage must be manufactured, treated, and marked according the ISPM regulations (International Standards for Phytosanitary Measures). If package is not treated and/or clearly marked with the international ISPM marking, there is a risk for refusal of import to port from destination.

2) Dangerous Goods shipping labels and markings (IMDG): All cargo containing any classified Dangerous Goods by the IMDG Code must be marked with shipping labels and markings according the IMDG Code, Chapter 5. It is the shipper's responsibility to announce to the carrier if the cargo

For more detailed instructions on how to pack cargo, please contact your local customer care before you start the packing or delivery to the terminals.