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## **CARGO STOWAGE AND SECURING - Safe Stowage and Securing of Specialised Vehicles**

**Notice to all Ship Owners, Ship Operators, Terminal Operators, Port Authorities, Classification Societies, Masters, Officers and Crews of Merchant Ships and all Other Parties concerned.**

*This notice should be read with The Merchant Shipping (Carriage of Cargoes) Regulations 1999; MCA Roll-on/Roll-off Ships-Stowage and Securing of Vehicles Code of Practice; MGN 418 (M) Roll-on/Roll-off Ships: Stowage and Securing of Vehicles; Code of Safe Practice for Cargo Stowage and Securing (CSS Code); and Chapters VI and VII of SOLAS.*

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### **Summary**

The purpose of this Marine Guidance Note is to draw to the attention of industry, the potential hazards when carrying Specialised Vehicles.

### **Introduction**

1. The purpose of this Marine Guidance Note concerning the safe stowage and securing of Specialised Vehicles, is to draw attention to the fact that in some cases, vessels are unsuitable for the cargoes they are carrying, that some of the cargo is inadequately secured and the crew and shore side personnel may be inexperienced in the handling of this type of cargo.
2. This MGN is a reminder to operators of the appropriate UK Regulations and guidance that address the concerns about the possible shifting of cargo.



## Specialised Vehicles

3. Track laying vehicles such as bulldozers and cranes are prone to sliding when parked on bare steel decks owing to the low degree of frictional resistance between the track and deck. Where practicable, these vehicles should be stowed on dunnage, soft boards or rubber mats before being secured. The deck area should be cleaned prior to applying the matting to ensure the rubber adhesion is not compromised in any way.
4. Low-loader trailers with bare steel landing parts should be landed on rubber mats or dunnage.
5. Where the stowage of cargo in a freight vehicle results in a relatively high position of the centre of gravity, there is a danger of tipping. Whenever practicable, they should be located in positions of least movement i.e. on the centre line, towards amidships and on a deck near the waterline.
6. Cargo information provided by shippers must include dimensions, weight, location(s) of securing points and centre of gravity for all cargo to be loaded.

## Carriage of the Cargo Securing Manual

7. Those involved in carrying this type of cargo should ensure that the vessel has been provided with an approved ship specific Cargo Securing Manual (CSM) which is a mandatory requirement of the Merchant Shipping (Carriage of Cargoes) Regulations 1999, Chapters VI and VII of SOLAS and the Code of Safe Practice for Cargo Stowage and Securing. The manual shall be approved by the vessel's Flag State or Recognised Organisation on behalf of the Flag State in accordance with MSC.1/Circ.1353/Rev.1 or any future amendments thereto.
8. The purpose of the CSM is to set out the procedures and standards for securing cargo which will take into account the type of cargo which is being carried, the differing characteristics of the vessel and the conditions which may be encountered during the voyage it will be making.
9. Every ship has unique hydrostatic characteristics and sea keeping qualities. Furthermore, the quantity of cargo, the cargo itself and the stowage patterns used are unique not only for different ships but also for the same ship on different voyages.

## Suitability for Transport by Sea

10. Shippers, forwarding agents and any party presenting such vehicles for shipment, should appreciate that vehicles can be subjected to forces of great magnitude, particularly in the transverse direction and especially in adverse weather conditions.
11. Vehicles should be provided with adequate and clearly marked securing points or other equivalent means of sufficient strength to which lashings may be applied.

## Lashings

12. The maximum securing load (MSL) of lashings should not be less than 100 kN and they should be made of material having suitable elongation characteristics. However, for vehicles not exceeding 15 tonnes Gross Vehicle Mass (GVM), lashings with lower MSL values may be used. The required number and MSL of lashings may be



calculated according to Annex 13 to the Code of Safe Practice for Cargo Stowage and Securing (CSS Code), taking into consideration the criteria mentioned in paragraph 1.5.1 of the Code.

### **Cargo distribution**

13. The cargo should be distributed so as to ensure that the stability of the ship throughout the entire voyage remains within acceptable limits so that the hazards of excessive accelerations are reduced as far as practicable.
14. Cargo distribution should be such that the structural strength of the ship is not adversely affected throughout the voyage and cargo units can be inspected for verification of securing arrangements.

### **Conclusions**

- Ships should ensure that cargo is stowed and secured in accordance with the approved CSM before the ship leaves a berth.
- During the voyage, lashings should be inspected at intervals appropriate to the length of voyage and weather conditions expected to ensure that vehicles remain safely secured.
- Lashings should not be released for unloading before the ship is secured at the berth, without the Master's express permission.
- Cargo should be so distributed that the ship has a metacentric height in excess of the required minimum and, whenever practicable, within an acceptable upper limit to minimise the forces acting on the cargo keeping in mind that large metacentric height could cause the ship to roll violently in adverse sea conditions.
- Sudden change of course and or speed may create adverse forces acting on the ship and the cargo. This is especially relevant for vessels fitted with high lift rudders, where moderate to high rudder angles may result in high forces being generated.
- The crew should be familiar with the requirements contained within the approved CSM.
- Ships' officers and managers should carry out checks on lashings during audits and inspections to ensure that bad practices are not taking place, especially where operations are rapid and very repetitive.
- The condition of lashing systems should be monitored closely.
- There should be an effective maintenance programme for all the portable and fixed securing devices. Web lashings are to be marked and limited to a maximum working life.



## More Information

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