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MSC/Circ.385
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IMO

Ref. T3/2.04

CONTAINERS AND CARGOES (BC)

CARGO SECURING MANUAL

1 In accordance with resolution A.489(XII), ships other than cellular container ships which carry cargo units and other entities should be provided with a Cargo Securing Manual.

2 Every ship is unique in its hydrostatic characteristics and behaviour under different weather conditions. The quantity and nature of the cargo and the stowage pattern used are also unique for each voyage, even of the same ship. The provisions set out in the annex hereto, which are to be included in the Cargo Securing Manual, are of a general nature only and are intended to provide a standardized layout for such a manual.

3 It has not been found desirable or necessary to prescribe the use of any specific type of cargo securing gear, even taking into account the great variety of the different types.

4 Administrations are invited to circulate the provisions set out in the annex to all concerned, with the aim that Cargo Securing Manuals be prepared as soon as possible and carried by all ships referred to in paragraph 1 above.

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ANNEX

PROVISIONS TO BE INCLUDED IN THE CARGO SECURING MANUAL
TO BE CARRIED ON BOARD SHIPS

1 Preamble

1.1 In accordance with resolution A.489(XII), Recommendation on the Safe Stowage and Securing of Cargo Units and other Entities in Ships other than Cellular Container Ships, Governments should issue guidelines on the safe stowage and securing of cargo units and other entities in such ships and recommend the carriage of a Cargo Securing Manual in accordance with the following guidelines.

1.2 The object of the guidelines is to provide a uniform approach to the preparation of Cargo Securing Manuals, their layout and content.

1.3 Every ship is unique in so far as its hydrostatic characteristics and behaviour in different weather and sea conditions are concerned. Furthermore, the quantity of cargo, the cargo itself and the stowage pattern used are unique not only for different ships but also for the same ship on different voyages.

1.4 Nevertheless, the cargo securing arrangements and gear on board ships should be designed in accordance with common criteria and the same relevant information regardless of which cargo securing gear is chosen. It is, however, important that such securing gear should meet the minimum functional and strength criteria applicable to the ship and its cargo. It is also important that the officers on board are fully aware of their correct application and use, the order of forces involved and securing gear limitations. The crew and other persons employed for the securing of cargoes should also be instructed in the correct application and use of the cargo securing gear on board the ship.

2 General

2.1 The Cargo Securing Manual should contain the following general information:

.1 This Cargo Securing Manual is developed pursuant to resolution A.489(XII), Recommendation on the Safe Stowage and Securing of Cargo Units and other Entities in Ships other than Cellular Container Ships, adopted by the International Maritime Organization (IMO).

.2 This Cargo Securing Manual specifies arrangements and securing gear provided on board the ship for the correct application to and the securing of cargo units, vehicles and other entities, based on transverse, longitudinal and vertical dynamic forces which may arise during adverse weather and sea conditions.

.3 It is imperative to the safety of the ship and the protection of the cargo and personnel that the securing gear is used as specified in this Cargo Securing Manual.

.4 The cargo securing gear should be adapted to the quantity and properties of the cargo to be carried and when required, additional gear should be provided.

.5 There should be a sufficient quantity of reserve cargo securing gear on board the ship.

.6 Information on the safe working load of any specific item of cargo securing gear should be provided. The cargo securing gear should be maintained in a satisfactory condition. Items worn to such an extent that their quality is impaired should be renewed.

Chapter 1: Details of fixed cargo securing arrangements and their location

1.1 This Chapter should indicate and where necessary illustrate the number, type and working load of the fixed fittings used to secure cargo units and vehicles. The Cargo Securing Manual should as a minimum contain the following information:

.1 fixed securing facilities on bulkheads, web frames, stanchions, etc. and their types (e.g. pad eyes, eyebolts, etc.,) where provided, including their strength;

.2 fixed securing facilities on decks and their types (e.g. elephant feet fittings, container fittings apertures, etc.) where provided, including their strength; and

.3 fixed securing facilities on deckheads, where provided, their types and strength.

Chapter 2: Location and stowage of portable cargo securing gear

2.1 This Chapter should contain details of the location and stowage arrangements for portable securing gear.

Chapter 3: Details of portable cargo securing gear, inventory of items provided, including their strength

3.1 This Chapter should describe the functional and design characteristics of the cargo securing gear carried on board the ship, and should be supplemented by suitable drawings and sketches. It could also be of value to include information such as the manufacturers and the type identification. It should, as appropriate, contain the following information:

.1 container stacking fittings, fittings for interlocking of containers, bridge-fittings, etc., their strengths and use;

.2 chains, wire ropes, rods, etc., their strengths and use (the safe working load of chains should be related to the initial yield and not to the breaking strength);

.3 tensioners (e.g. turnbuckles, chain tensioners, etc.), their strengths and use;

.4 securing gear for cars and other vehicles (type), their strengths and use;

.5 tresties and jacks, etc., for vehicles (trailers) where provided, including their strengths and use; and

.6 anti-skid material (e.g. soft boards) for use with cargo units having low frictional characteristics.

Chapter 4: Correct application of portable securing gear on various cargo units, vehicles and other entities carried on board the ship

4.1 This Chapter should describe the correct application of portable cargo securing gear. The text should, where necessary, be supplemented by suitable drawings and sketches to facilitate the correct understanding and proper application of the shipborne cargo securing gear to various types of cargo and cargo units. It should be pointed out that for certain cargo units and other entities with low friction resistance, it is advisable to place softboards or other anti-skid material under the cargo to increase friction between the deck and the cargo.

4.2 The provisions contained in this Chapter should be interpreted as minimum requirements.

4.3 Guidance should be included in this Chapter as to the recommended location, method of stowing and securing containers, trailers and other cargo carrying vehicles, palletized cargoes, unit loads and single cargo items (e.g. pulp, paper rolls, etc.), heavy weight cargoes, cars and other vehicles.

4.4 The master should, in applying portable securing gear, take into account the following factors:

.1 duration of the voyage;

.2 geographical area of the voyage;

.3 sea conditions which may be expected;

.4 size, design and characteristics of the ship;

.5 dynamic forces under the expected weather conditions;

.6 type of cargo units including vehicles to be carried;

.7 intended stowage pattern of the cargo units including vehicles; and

.8 mass of the cargo units and vehicles.

Chapter 5: Indication of the magnitude of forces expected to act on cargo units in various positions on board the ship

5.1 This Chapter should include the following information:

.1 tables or diagrams giving a broad outline of the accelerations which can be experienced in various positions on board the ship in adverse sea conditions;

.2 examples of the forces acting on typical cargo units when subjected to the accelerations referred to in paragraph 5.5.1; and

.3 examples of the number and strength of portable securings required to counteract the forces referred to in paragraph 5.1.2.

5.2 If required the formulae for calculating the forces working on cargo units including vehicles should be included.

5.3 Where only a limited number of cargo unit types is intended to be carried, e.g. trailers on a short sea trade ro-ro ship, the information provided in this Chapter may be limited to the number and disposition of securings of a given strength required for various stowage positions and for variations in GM or roll period.

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