Circulars of the Maritime Safety Committee and of the Marine Environment Protection Committee

MSC/Circ.506/Rev.1

10 January 1990

Container packing certificates/vehicle packing declarations

1 The regulations governing the carriage of dangerous goods by sea are contained in chapter VII of the 1974 SOLAS Convention, as amended. Part A of chapter VII regulates the carriage of dangerous goods both in packaged form and in solid form in bulk. Regulation VII/1.3 prohibits the carriage of such cargoes in ships engaged on international voyages except when carried in accordance with the requirements of part A of chapter VII.

2 Regulation VII/1.4 requires that each Contracting Government issue, or cause to be issued, detailed instructions on safe packing and stowage of dangerous goods which include the precautions necessary in relation to other cargo.

3 The provisions of part A of chapter VII are supplemented by the IMDG Code, adopted by the Organization by resolution A.81(IV), and the relevant sections and related parts of appendix B of the *Code of Safe Practice for Solid Bulk Cargoes* (BC Code), adopted by the Organization by resolution A.434(XI), as have been or may be amended by the Organization's Maritime Safety Committee.

4 Information on the status of adoption and implementation of the IMDG Code is regularly disseminated through an MSC.2 circular.*

5 Regulation 5 of part A of SOLAS chapter VII regulates documentation. The shipping documents to be prepared by the shipper shall include, or be accompanied by, a signed certificate or declaration that the shipment offered for transport is properly packaged and marked, labelled or placarded, as appropriate, and in proper condition for transport.

6 The requirements for shipping documents are explained in the IMDG Code. Subsections 12.3 and 17.7 of the General Introduction to the Code recommend that, when dangerous goods are packed or loaded into a freight container or vehicle, the persons responsible for packing or loading the goods into the container or vehicle should provide a container packing certificate/vehicle packing declaration, the details of which are described in the Code. In addition, the container/vehicle/unit identification number(s) should be indicated.

7 The Maritime Safety Committee has been informed that members of the International Chamber of Shipping (ICS) had reported that, in a number of ports, some of which are located in countries which had advised the Organization that they had implemented the IMDG Code, it is difficult and often impossible to obtain container packing certificates. This creates great difficulties for ship operators and, where the flag State regulations require strict compliance with the IMDG Code, the cargo has to be refused if the certificate cannot be obtained. However, the most serious threat facing all ship operators is the risk that dangerous goods may be packed or loaded into a container which, because no packing certificate has been issued, may not be placarded to indicate the danger of its contents. Experience has shown that such a container can remain undetected during transport and may therefore be incorrectly stowed, thus creating a potential danger to the ship. Such a container also poses a serious threat to the safety of inland transport, container terminals and ports.

8 The Organization has also been informed that in a number of accidents involving containers packed or loaded with dangerous goods no information on their contents had been available.

9 Where there is reason to suspect that a unit into which dangerous goods have been packed or loaded is not in compliance with the provisions of the IMDG Code, or where a container packing certificate/vehicle packing declaration is not available, the unit should not be accepted for shipment.

10 The Maritime Safety Committee has agreed that an amendment to regulation VII/5 of SOLAS should be developed by the Sub-Committee on the Carriage of Dangerous Goods to include the provision of container packing certificates/vehicle packing declarations.

* Refer also to chapter 7.9 of the IMDG Code.

11 The Maritime Safety Committee has also decided that, in the interim, Governments should be urged to review their national legislation and take such measures as they consider necessary to require container packing certificates and vehicle packing declarations to be provided by the packer of the unit.

12 To assist Governments in the introduction, at national level, of appropriate legal requirements that such certificates and declarations are provided, the relevant extracts from the General Introduction of the IMDG Code are annexed.*

* The amended texts of subsections 12.3 and 17.7 of the General Introduction to the IMDG Code are not reproduced here.

MSC/Circ.860
22 May 1998

Guidelines for the approval of offshore containers handled in open seas

1 The Maritime Safety Committee, at its sixty-ninth session (11 to 20 May 1998), considered and approved draft revised Guidelines for the approval of offshore containers handled in open seas, as set out in the annex to this circular.

2 These Guidelines are based on the provisions contained in the annex to MSC/Circ.613, which have been updated to reflect more clearly the relevant provisions in the Recommendation on Harmonized Interpretation and Implementation of the International Convention for Safe Containers (CSC), 1972, as amended (CSC/Circ.100) and the IMDG Code and recent practice in the design of offshore containers.

3 Member Governments are invited to bring these Guidelines to the attention of all parties concerned with the approval, manufacture, inspection and operation of offshore containers.

4 This Circular replaces MSC/Circ.613 dated 18 June 1993.

Annex
Guidelines for the approval of offshore containers handled in open seas

1 The Maritime Safety Committee, at its sixty-second session, approved amendments to the Recommendation on Harmonized Interpretation and Implementation of the International Convention for Safe Containers, 1972 (CSC). The revised Recommendation was circulated as CSC/Circ.100 dated 30 June 1993 and has been included as a supplement in the 1996 edition of the CSC.

2 Paragraph 3.3 of the revised Recommendation on Harmonized Interpretation and Implementation of the CSC states that the Convention does not apply to offshore containers that are handled in open seas. There are several reasons for applying special design and testing parameters to offshore containers:

.1 the tests set out in Annex II to the CSC are designed to cover the forces on containers encountered in general marine transport, loading and unloading in ports and in inland transport. However, offshore containers are used to supply offshore installations and are typically shipped on the open deck of purpose-built supply vessels and are lifted onto and off the offshore installation by cranes on the installations. Such operations may often take place in very unfavourable weather and sea conditions;

.2 spreader beams, as used for lifting ordinary containers, cannot be used when lifting offshore containers; and

.3 the types of offshore containers used are often purpose-built and include closed and open dry cargo containers, dry bulk cargo containers and portable tanks. Offshore containers, unlike ISO containers, are not standardized with regard to sizes or gross mass; many have a smaller base area than the 7 m^2 in the lower limiting definition of a container in the CSC.

3 Sections 12 and 13 of the General Introduction to the International Maritime Dangerous Goods (IMDG) Code recognize the special nature of offshore containers and portable tanks. These sections state that the design and testing of offshore containers and offshore tank-containers should take into account the dynamic lifting and impact forces that may occur when a container or tank is handled in open seas in adverse weather and sea conditions and that the requirements for such containers and tanks should be determined by the approving competent authority.

4 For the purposes of these guidelines, "offshore containers" should be taken to mean portable units specially designed for repeated use in the transport of goods or equipment to, from or between fixed and/or floating offshore installations and ships. Such units include containers and portable tanks for dangerous goods as defined in sections 12 and 13 of the General Introduction to the IMDG Code.

5 These guidelines are intended to assist approving competent authorities in developing detailed requirements for offshore containers. For the purposes of these guidelines, the "approving competent authority" includes organizations duly authorized by the Administration.

Approval

6 Approving competent authorities should base their approval of offshore containers both on calculations and on testing, taking into account the dynamic lifting and impact forces that may occur when handling in open seas.

Design

7 Offshore containers should be fitted with special pad eyes, suitable for the attachment of purpose-built slings connected with shackles. Where ISO corner fittings are mounted in conjunction with pad eyes, these corner fittings are not intended for lifting offshore.

8 In order to facilitate handling in open seas, offshore containers should be pre-slung. Such slings should be permanently attached to the container and considered to be part of the container. The dynamic forces which occur when handling containers in open seas will be higher than those encountered during normal quayside handling. This should be taken into account when determining the requirements for slings on offshore containers by multiplying the normal safety factor for slings by an additional factor. The fact that light containers will be subject to relatively higher dynamic forces than heavier containers should also be taken into account. Minimum material requirements for impact toughness should be specified when high-strength steel is used in, e.g. chains, links and shackles.

9 Since offshore containers may not always be secured on supply vessels, such containers should be designed so as to withstand 30° tilting in any direction when fully loaded. Cargo may normally be assumed to be evenly distributed with the centre of gravity at the half height of the container, but on containers for dedicated transport (e.g. special bottle rack containers for gas bottles in fixed positions) the actual centre of gravity should be used.

10 Protruding parts on an offshore container that may catch on other containers or structures should be avoided. Doors and hatches should be secured against opening during transport and lifting. Hinges and locking devices should be protected against damage from impact loads.

11 Strength calculations should include lifting with the attached lifting sling and any other applicable means of handling (e.g. lifting with fork-lift trucks). Impact loads on the sides and bottom of containers should also be considered in these calculations and impact properties should be included in the requirements for structural steel materials. However, calculations, including static equivalency of point loads, in combination with the tests as set out in paragraph 13 should normally be considered sufficient.

12 Containers are sometimes temporarily used on floating or fixed offshore installations as storage space, laboratories, accommodation or control stations, etc. When used this way, the container will also be subject to the regulations applicable for the offshore installation in addition to transport-related requirements based on these guidelines.

Testing

13 At least one offshore container of each design type should be subjected to the following tests:

.1 *4-point lifting test*

Internal load: a uniformly distributed load such that the total mass of the container and test load is equal to 2.5*R*, where *R* is the maximum allowable combined mass of the container and its cargo. The container should be lifted with a lifting sling attached to each of its four pad eyes with an angle to the vertical equal to the design angle.

.2 *2-point lifting test*

Internal load: a uniformly distributed load such that the total mass of the container and test load is equal to 1.5*R*. A container fitted with four pad eyes should be lifted from only two pad eyes situated diagonally opposite each other.

.3 *Vertical impact test*

Internal load: a uniformly distributed load such that the total mass of the container and test load is equal to *R*. The container should be suspended at an inclined angle with the lowest corner at least 50 mm above a rigid floor. The container should then be quickly released so that it will have a speed of at least 1 m/s on initial impact.

.4 *Other tests*

Other tests, designed to demonstrate the ability of a container type to withstand other handling or transport forces, such as those described in relevant standards or the CSC, may also be required by the approving competent authority.

14 The tested offshore container should suffer no permanent damage or deformation in any of the tests which would render it incapable of being used for its designed purpose.

15 In order to ensure that offshore containers of the same design type are manufactured to the approved design, the approving competent authority should examine and test as many units as it considers necessary.

16 Offshore containers that have been designed, manufactured, tested and approved according to these guidelines should be clearly marked “Offshore Container” on an approval plate in accordance with the appendix. The details shown in the appendix represent minimum requirements.

Inspection

17 Offshore containers should be inspected at least annually, as deemed appropriate, by the approving competent authority. The date of inspection and the mark of the inspector should be marked on the container, preferably on a plate fitted for this purpose. The inspection plate may be combined with the approval plate (paragraph 16) and any other official approval or data plates on a single base plate. It should be noted that the inspection plates on offshore containers commonly show the date of the last inspection, unlike Safety Approval Plates on containers subject to the CSC which are marked with the date when the first periodic examination is due and in the case of containers covered by a periodic examination scheme (PES), with the date by which the next examination is due.

Standards and rules

18 The following standards and rules on offshore containers, not all of which cover all aspects of the design and testing in these guidelines, are known to exist or be under preparation and should be consulted as appropriate:

- BS 7072: British Standard Code of Practice for Inspection and Repair of Offshore Containers;
- Det Norske Veritas (DNV): Certification Note 2.7-1, Offshore Containers;
- Det Norske Veritas (DNV): Certification Note 2.7-2, Offshore Service Containers; and
- pr EN 12079: Offshore Containers – Design, construction, testing, inspection and marking (under preparation by the European Committee for Standardization (CEN)).

Appendix

OFFSHORE CONTAINER

Name of manufacturer:		
Month/year of manufacture:		
Identification No:		
Maximum gross mass:	kg	lb
Tare-mass:	kg	lb
Payload:	kg	lb
Approval No:		

Approval plate

MSC/Circ.1087
18 June 2003

Guidelines for partially weathertight hatchway covers on board containerships

1 The Maritime Safety Committee, at its seventy-seventh session (28 May to 6 June 2003), recognizing the need to standardize the conditions for the fitting of partially weathertight hatchway covers on containerships and to develop recommendations on installation of such covers on containerships, and having considered proposals by the forty-fifth session of the Sub-Committee on Stability and Load Lines and on Fishing Vessels Safety (SLF), the seventh session of the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC) and the forty-seventh session of the Sub-Committee on Fire Protection (FP), approved the Guidelines for partially weathertight hatchway covers on board containerships, as set out in the annex.

2 Member Governments are invited to bring the annexed Guidelines to all the parties concerned for their application, as appropriate, urging them, in particular, to apply the measures for construction and equipment contained in sections 1 and 2 of the Guidelines to ships constructed on or after 1 January 2004 and to implement the operational measures contained in section 3 of the Guidelines as soon as possible for all ships.

Annex
Guidelines for partially weathertight hatchway covers on board containerships

1 Location of hatchways, height of coamings and weathertightness of hatchway covers

1.1 Introduction

Requirements relating to the height of coamings and to the weathertightness of hatchway covers located above the superstructure deck are left to the discretion of the Administration, pursuant to regulation 14(2) of the International Convention on Load Lines (LL), 1966. This section of the Guidelines is intended to serve as a guide when decisions are made on whether to accept partially weathertight hatchway covers on board containerships, in accordance with regulation 14(2) of the 1966 LL Convention.

1.2 Design considerations and criteria

1.2.1 Coamings and hatchway covers to exposed hatchways situated above the second superstructure tier or its equivalent, or above the third tier or its equivalent, in the forward quarter of the ship's length, may be regarded as being situated above the superstructure deck, for the purpose of giving effect to regulation 14(2) of the 1966 LL Convention. Partially weathertight hatch covers fitted to hatchways situated in such locations may be accepted subject to the following conditions.

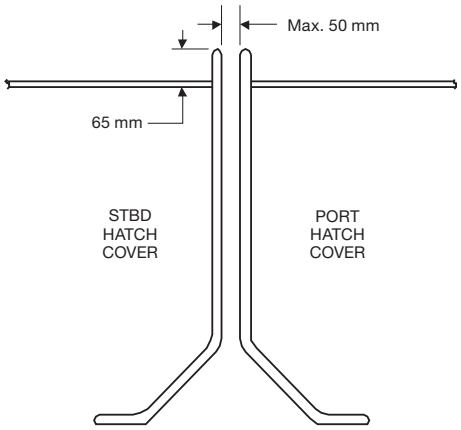
1.2.2 Coamings and hatchway covers may be fitted to hatchways located on exposed decks situated at least two standard superstructure heights above the actual freeboard deck or an assumed freeboard deck, on the basis of which a calculation of the freeboard may be made corresponding to the draught, which should be not less than that which would correspond to the freeboard actually assigned to the ship. If any part of the hatchway is forward of a point located a quarter of a ship's length (0.25*L*) from the forward perpendicular, this hatchway should be located on an exposed deck which is situated at least three standard superstructure heights above the actual or assumed freeboard. It should be noted that use is made of a notional freeboard deck solely for the purpose of measuring the height of the deck on which hatchways are located; it may consist of an imaginary or a virtual deck which, under such circumstances, is not used for the actual assignment of the freeboard. The freeboard of the ship should be assigned on the basis of an actual deck, referred to as the *freeboard deck*, which should be determined in accordance with the provisions of the 1966 LL Convention and of IACS Unified Interpretation LL39, as contained in LL.3/Circ.77.

1.2.3 The height of the hatchway coamings should not be less than 600 mm.

1.2.4 Non-weathertight gaps between the hatchway covers should be regarded as unprotected openings with respect to the requirements relating to intact stability and damage stability calculations. The gaps should also be as small as possible

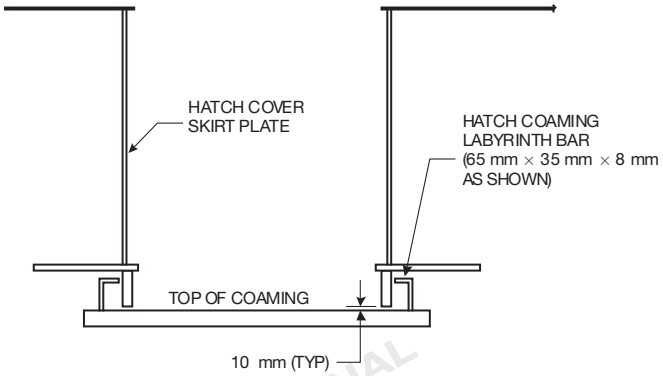
and proportional to the capacity of the bilge pumping system and the estimated amount of water penetration, as well as to the capacity and the operational efficiency of the fire-extinguishing system, and in any case should be not more than 50 mm.

1.2.5 Labyrinths, gutters or other equivalent means should be fitted close to the edges of each hatch cover at right angles with the openings in order to reduce to a minimum the quantity of water that might penetrate into the hold from the upper surface of each cover. Figures 1.2.5-1 and 1.2.5-2 are examples of labyrinth and gutter arrangements.



INTERFACE BETWEEN PORT AND STARBOARD HATCH COVERS (LOOKING AFT)

Figure 1.2.5-1



HATCH COVER INTERFACE WITH HATCH COAMING LABYRINTH BAR (LOOKING INBOARD)

Figure 1.2.5-2

1.2.6 Scantlings for hatchway covers and the components of clamping devices used to secure the covers to the structure supporting them and the coamings should be at the very least equivalent to those applying to weathertight hatchway covers and be in accordance with the relevant provisions of a recognized organization* or with the appropriate national standards established by the Administration and which provide for an equivalent level of safety.

2 Increase of carbon dioxide fire-extinguishing media for fixed gas fire-extinguishing systems

2.1 Introduction

This section of the Guidelines is intended to serve as a guide when decisions are made on whether to accept partially weathertight hatchway covers on board containerships in accordance with SOLAS regulations II-2/10.7.1.1 and II-2/ 20.6.1.1, and the relevant provisions of the Fire Safety Systems Code (chapter 5, paragraph 2.2.1.1), taking into account the leakage of carbon dioxide fire-extinguishing media through clear gaps between hatchway covers.

2.2 Increase of carbon dioxide fire-extinguishing media

If a container cargo hold fitted with partially weathertight hatchway covers is protected by a fixed carbon dioxide fire-extinguishing system, the amount of carbon dioxide for the cargo space should be increased in accordance with one of the following formulae, as appropriate:

$$CO_2{}^{INC}{}_{30\%} = 60 \cdot A_T \cdot \sqrt{\frac{B}{2}} \qquad (2.2\text{-}1)$$

$$CO_2{}^{INC}{}_{45\%} = 4 \cdot A_T \cdot \sqrt{\frac{B}{2}} \qquad (2.2\text{-}2)$$

where:

$CO_2{}^{INC}{}_{30\%}$ increase of carbon dioxide for cargo spaces not intended for carriage of motor vehicles with fuel in their tanks for their own propulsion (kg);

$CO_2{}^{INC}{}_{45\%}$ increase of carbon dioxide for cargo spaces intended for carriage of motor vehicles with fuel in their tanks for their own propulsion (kg);

A_T total maximum area of clear gaps (m^2); and

B breadth of cargo space protected by the carbon dioxide fire-extinguishing systems (m).

* *Recognized organization* means an organization that has been recognized in accordance with SOLAS regulation XI/1.

3 Stowage and segregation of cargo transport units containing dangerous goods

3.1 Introduction

This section of the Guidelines is intended to serve as a guide when decisions are made on the stowage and segregation of cargo transport units (CTUs) containing dangerous goods on containerships fitted with partially weathertight hatchway covers. For the purpose of the stowage and segregation of CTUs containing dangerous goods on containerships fitted with partially weathertight hatchway covers, the effect of clear gaps, as defined below, should be taken into consideration. The effects of other structures such as labyrinths are not considered, as no clear path exists into the hold.

3.2 Definitions

For the purpose of the application of this section of the Guidelines:

.1 *clear gap* means a clear unobstructed passage between hatchway covers that provides a path for dangerous goods to enter the cargo hold;

.2 *effective gutterbar* means a gutterbar the height of which is not less than 50 mm and also includes labyrinth bar; and

.3 *sensitive vertical line* means a vertical line under deck within one container space from a clear gap in athwartships direction(s) as specified by "C" in figures 3.2.3-1 and 3.2.3-2 below or equivalent.

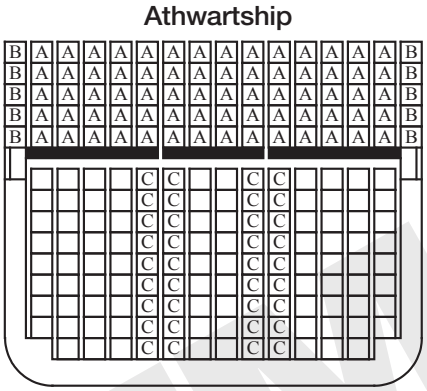


Figure 3.2.3-1 – *Illustration of vertical lines*

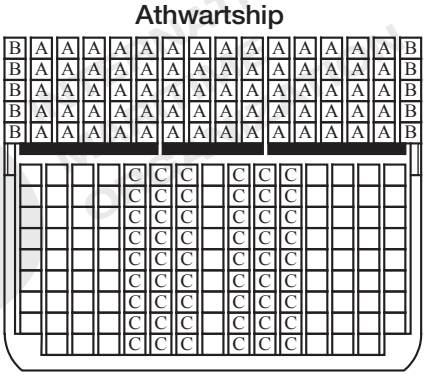


Figure 3.2.3-2 – *Illustration of vertical lines*

Note: Vertical row positions "on-deck", not directly above clear gaps between hatchway covers, are specified by "A". Vertical row positions with less than 50% footing on the hatch are specified by "B". Where containers are placed in the outermost vertical row, positions with more than 50% footing on the hatch cover are deemed to qualify as position (s) "A".

3.3 Partially weathertight hatchway covers fitted with effective gutterbars

Partially weathertight hatchway covers fitted with effective gutterbars can be regarded as "resistant to fire and liquid" for the purposes of stowage and segregation of CTUs containing dangerous goods on containerships fitted with such hatchway covers. Therefore, no special provision, other than those set out in paragraph 3.4, applies to the stowage and segregation of CTUs containing dangerous goods on or under the hatchway covers fitted with effective gutterbars. Gutterbars showing any visible structural damage, which would reduce their effectiveness, do not meet the definition in paragraph 3.2.2.

3.4 Special requirement for "on-deck" stowage

3.4.1 *Prohibition of stowage directly above clear gaps*

CTUs containing dangerous goods should not be stowed in the vertical lines specified by "X" in figure 3.4.1, above cargo holds fitted with partially weathertight hatchway covers having a clear gap, unless the cargo hold complies with the relevant requirements for the class and flashpoint of the dangerous goods in SOLAS regulation II-2/19. When "not in the same vertical line unless separated by a deck" is required in the IMDG Code and CTUs containing dangerous goods are stowed in position "X", as shown in figure 3.4.1 below, CTUs containing incompatible dangerous goods should not be stowed under deck in vertical lines indicated by "C" in figures 3.2.3-1 or 3.2.3-2.

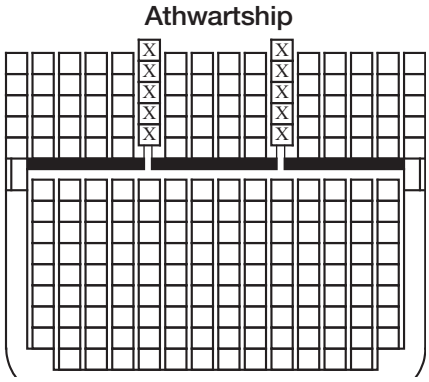


Figure 3.4.1 – *Illustration of prohibited stowage of dangerous goods*

3.4.2 ***Special requirement for on-deck stowage of CTUs above hatchway covers without effective gutterbars***

Where hatchway covers are not fitted with effective gutterbars, CTUs containing dangerous goods should not be stowed in the vertical lines specified by "A" in figures 3.2.3-1 and 3.2.3-2, above cargo holds fitted with partially weathertight hatchway covers, unless the cargo hold complies with the relevant requirements for the class and flashpoint of the dangerous goods in SOLAS regulation II-2/19.

3.4.3 ***On-deck stowage of CTUs above cargo hold with effective gutterbars***

Where hatchway covers are fitted with effective gutterbars, CTUs containing dangerous goods can be stowed in all vertical lines specified by "A" and "B" in figures 3.2.3-1 and 3.2.3-2 except as provided in paragraph 3.4.1, above cargo holds fitted with partially weathertight hatchway covers, regardless of whether the cargo hold under the hatchway cover complies with the relevant requirements in SOLAS regulation II-2/19.

3.5 Special requirement for segregation

3.5.1 ***Special requirement for segregation and stowage of CTUs on partially weathertight hatchway covers without effective gutterbars***

Where "not in the same vertical line unless separated by a deck" is required in the IMDG Code, the following applies:

.1 when the reference CTU is stowed on deck in positions specified by "A" in figures 3.2.3-1 and 3.2.3-2, CTUs containing incompatible dangerous goods should not be stowed within the relevant sensitive vertical lines under deck. Examples are illustrated in figures 3.5.1-1 and 3.5.1-2; and

.2 when the reference CTU is stowed under deck in positions as specified by "C" in figures 3.2.3-1 and 3.2.3-2, CTUs containing incompatible dangerous goods should not be stowed on the hatches above the hold. Example is illustrated in figure 3.5.1-3.

3.5.2 ***Segregation of CTUs related to hatchway covers with effective gutterbars***

Where hatchway covers are fitted with effective gutterbars, segregation of CTUs containing dangerous goods on board containerships should be in accordance with the segregation requirements in paragraph 7.2.3.2 of the IMDG Code for containerships.

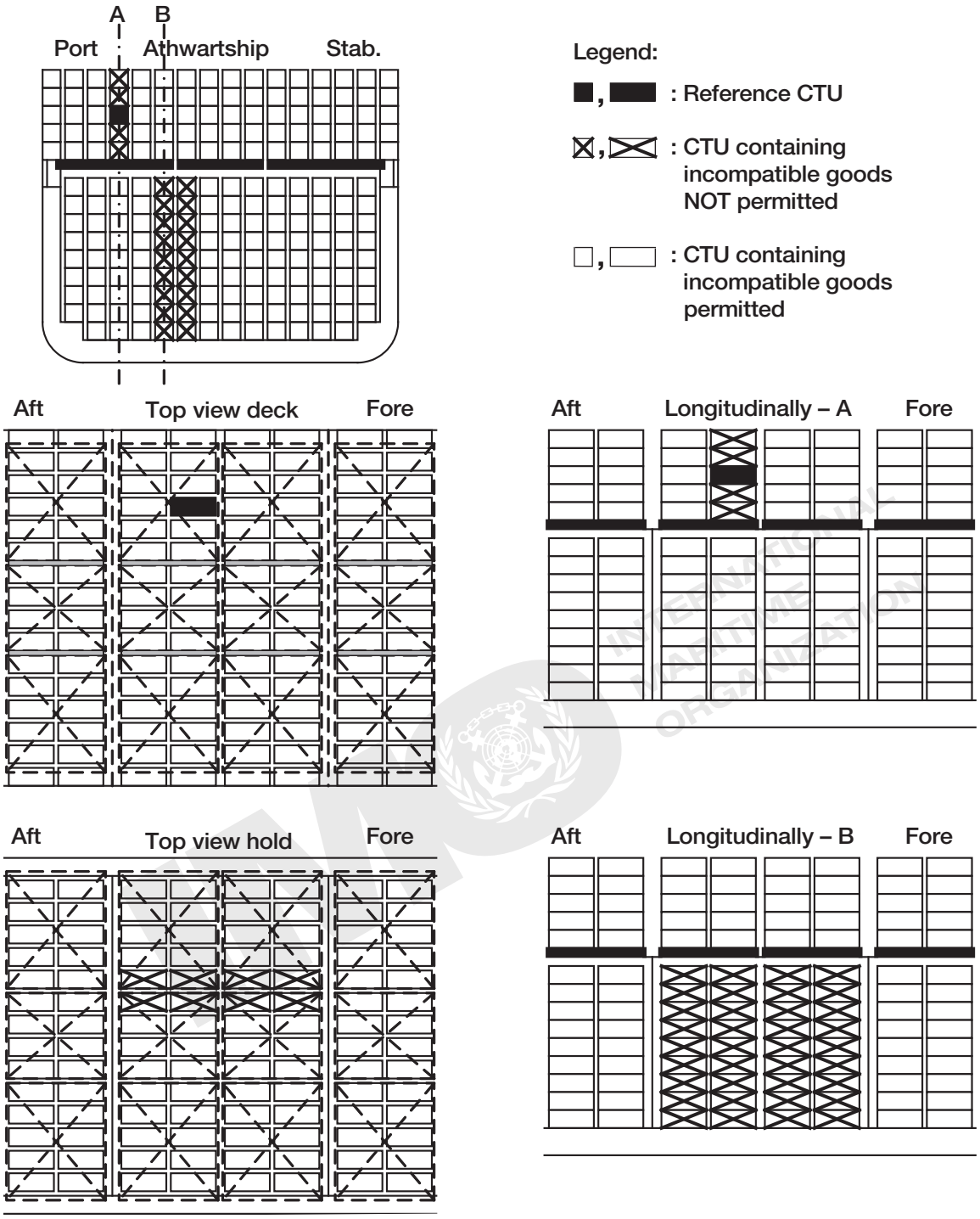


Figure 3.5.1-1 – *Example of segregation within sensitive vertical lines (reference CTU is above left hatchway cover)*

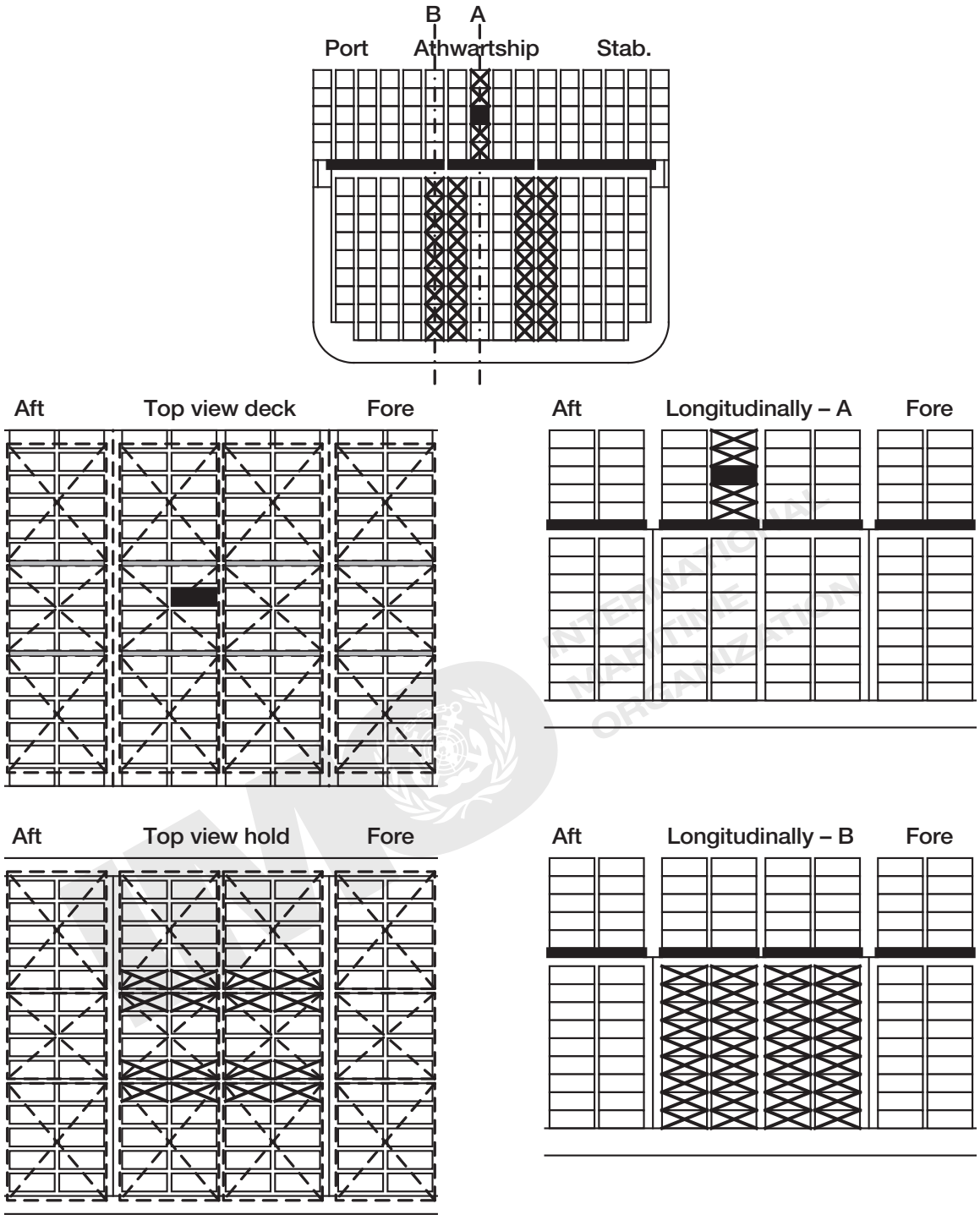


Figure 3.5.1-2 – *Example of segregation within sensitive vertical lines (reference CTU is above centre hatchway covers)*

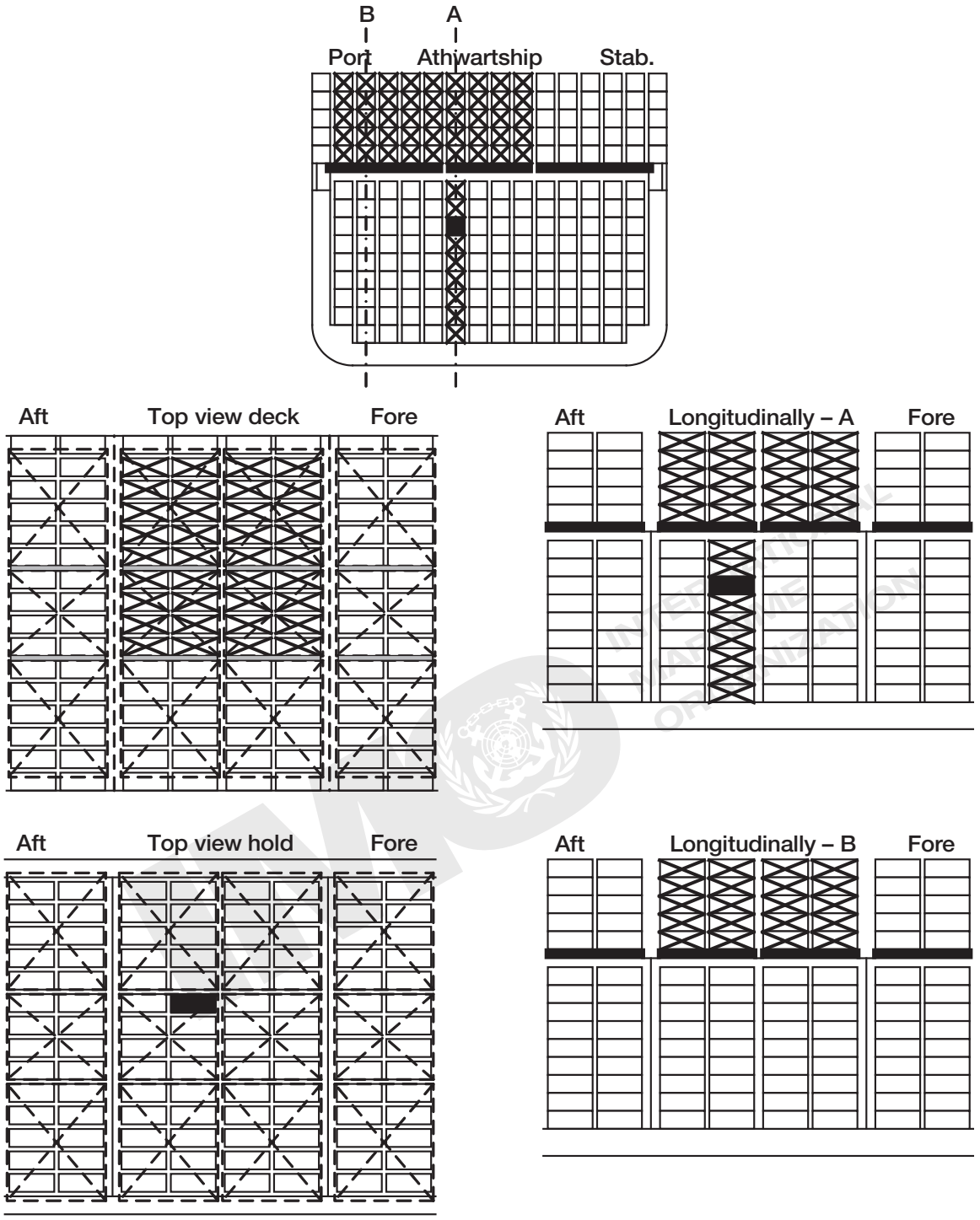


Figure 3.5.1-3 – *Example of segregation within sensitive vertical lines (reference CTU is in sensitive vertical line under deck)*

MSC/Circ.1147
15 December 2004

Questionnaire on inspections of containers/vehicles carrying packaged dangerous goods

1 The Sub-Committee on Dangerous Goods, Solid Cargoes and Containers (DSC), at its ninth session (27 September to 1 October 2004), in recalling the provisions of MSC/Circ.859, whereby Member Governments are invited to submit reports to the Organization on the results of inspection on the compliance with the International Maritime Dangerous Goods (IMDG) Code of cargo transport units carrying dangerous goods, supported proposals that, in order to obtain an accurate reflection of the degree of such inspections taking place, it would be appropriate to carry out a survey to ascertain the full extent of such inspections.

2 The Maritime Safety Committee, at its seventy-ninth session (1 to 10 December 2004), concurred with the approach taken by the Sub-Committee and instructed the Secretariat to collate the information received, in response to the questionnaire, and to report the results to DSC 10.

3 Member Governments are requested to provide the information requested in the questionnaire set out in the annex and to forward completed questionnaires to the Secretariat by 1 June 2005.

Annex
IMO Survey – inspections of containers/vehicles carrying packaged dangerous goods

1 What specific arrangements do you have in place to accord with MSC/Circ.859 to carry out inspections of freight containers/vehicles carrying packaged dangerous goods in relation to compliance with the IMDG Code?

2 How frequently are the above arrangements carried out?

3 If no arrangements are in place, do you propose to institute inspections and when will they be instituted?

4 When did you last send in a report of the findings of inspections to the IMO?

5 What did your last report of inspections indicate as a level of compliance?

6 What initiatives to raise awareness of the requirements of the IMDG Code do you have in place?

7 What enforcement actions have been taken in the past 12 months as a result of your inspections?

8 The IMDG Code is mandatory. What activities in relation to the shipment of packaged dangerous goods are envisaged by your organization because of its mandatory nature?

Please complete the above questionnaire as fully as possible and return this form by 1 June 2005.

Coordinates of responding Member Government to include complete address, telephone and facsimile numbers and, if possible, an email address.

MSC.1/Circ.1188
22 May 2006

Guidelines on training and certification for port facility security officers

1 The Maritime Safety Committee (the Committee), at its eightieth session (11 to 20 May 2005), when approving MSC/Circ.1154 on Guidelines on training and certification for company security officers, instructed the Sub-Committee on Standards of Training and Watchkeeping (STW Sub-Committee) to develop similar guidelines on training and certification requirements for port facility security officers.

2 The STW Sub-Committee, at its thirty-seventh session (23 to 27 January 2006), developed, and the Committee, at its eighty-first session (10 to 19 May 2006), approved, the Guidelines on training and certification requirements for port facility security officers (the Guidelines), as set out in the annex.

3 SOLAS Contracting Governments are invited to bring the Guidelines to the attention of all parties concerned with matters addressed therein.

4 SOLAS Contracting Governments, international organizations and non-governmental organizations with consultative status which encounter difficulties with the implementation of the Guidelines should bring, at the earliest opportunity, the matter to the attention of the Committee for consideration of actions to be taken.

Annex
Guidelines on training and certification for port facility security officers

1 Every person designated as a port facility security officer (PFSO) should be able to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of the annex to this circular.

2 The level of knowledge of the subjects listed in column 2 of the annex should be sufficient to enable the person to act as the designated PFSO.

3 In addition, a PFSO should, within the provisions of the national legislation, actively facilitate shore leave for ship's personnel or personnel changes, as well as access of visitors to the ship including representatives of seafarers' welfare and labour organizations.*

4 Persons who have satisfactorily completed an approved course based on IMO Model Course 3.21 on Port facility security officer, or who have attended a course based on the attached knowledge, understanding and proficiency (KUP), should be considered to have met the training requirements for service as a PFSO.

5 Practical experience relating to knowledge, understanding and proficiency gained after 1 January 2004 may be taken into account in demonstrating competence.

6 As many of the training objectives in IMO Model Courses 3.19, 3.20 and 3.21 are common to SSO†, CSO‡ and PFSO, and many of the KUPs in the competence tables are similarly common, SOLAS Contracting Governments should therefore take them into account when setting criteria for the re-training and assessment of those SSOs and CSOs moving toward PFSO qualifications.

7 Those completing PFSO training which meets the criteria set by the SOLAS Contracting Government within whose territory they will work should be provided with documentary evidence to this effect.

* For further details see 2002 SOLAS Conference resolution 11 on Human element-related aspects and shore leave for seafarers, MSC/Circ.1112 on Shore leave and access to ships under the ISPS Code and the FAL Convention.

† Ship security officer.

‡ Company security officer.

**Knowledge, understanding and proficiencies (KUPs)
relevant to the port facility security officer**

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Develop, maintain and supervise the implementation of a port facility security plan	Knowledge of international maritime security policy and responsibilities of Governments, Companies and designated persons Knowledge of the purpose for and the elements that make up a port facility security plan, related procedures and maintenance of records Knowledge of procedures to be employed in developing, maintaining and supervising the implementation, and the submission for approval, of a port facility security plan Knowledge of the procedures for the initial and subsequent verification of the port facility's compliance Knowledge of security levels and the consequential security measures and procedures aboard ship and in the port facility environment Knowledge of the requirements and procedures for conducting internal audits, on-scene inspections, control and monitoring of security activities specified in a port facility security plan Knowledge of the requirements and procedures for acting upon any deficiencies and non-conformities identified during internal audits, periodic reviews, and security inspections Knowledge of the methods and procedures used to modify the port facility security plan Knowledge of security-related contingency plans and the procedures for responding to security threats or breaches of security, including provisions for maintaining critical operations of the ship/port interface Knowledge of procedures for facilitating shore leave for ship's personnel or personnel changes, as well as access of visitors to the ship including representatives of seafarers' welfare and labour organizations Knowledge of the procedures, instructions and guidance for responding to ship security alerts Working knowledge of maritime security terms and definitions (SOLAS chapter XI-2 and ISPS Code)	Assessment of evidence obtained from approved training or examination	Procedures and actions are in accordance with the principles established by SOLAS chapter XI-2 and the ISPS Code Legislative requirements relating to security are correctly identified Procedures achieve a state of readiness to respond to changes in security levels Communications within the port facility security officer's (PFSO's) area of responsibility are clear and understood

Knowledge, understanding and proficiencies (KUPs) relevant to the port facility security officer *(continued)*

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
Assess security risk, threat, and vulnerability	Knowledge of risk assessment and assessment tools Knowledge of security assessment documentation, including the Declaration of Security Knowledge of techniques used to circumvent security measures Knowledge enabling recognition, on a non-discriminatory basis, of persons posing potential security risks Knowledge enabling recognition of weapons, dangerous substances, and devices and awareness of the damage they can cause Knowledge of crowd management and control techniques, where appropriate Knowledge in handling sensitive security-related information and security-related communications Knowledge of methods for implementing and coordinating searches Knowledge of the methods for physical searches and non-intrusive inspections	Assessment of evidence obtained from approved training or examination	Procedures and actions are in accordance with the principles established by SOLAS chapter XI-2 and the ISPS Code Procedures achieve a state of readiness to respond to changes in security levels Communications within the PFSO's area of responsibility are clear and understood
Undertake regular inspections of the port facility to ensure that appropriate security measures are implemented and maintained	Knowledge of the requirements for designating and monitoring restricted areas Knowledge of controlling access to the port facility and to restricted areas in the port facility Knowledge of methods for effective monitoring of the port facility and areas surrounding the port facility Knowledge of methods for controlling the embarkation and disembarkation of persons and their effects aboard ships, including the confirmation of identity when requested by the Ship Security Officer Knowledge of security aspects relating to the handling of cargo and ship's stores and coordinating these aspects with relevant Ship Security Officers and Company Security Officers	Assessment of evidence obtained from approved training or examination	Procedures and actions are in accordance with the principles established by SOLAS chapter XI-2 and the ISPS Code Procedures achieve a state of readiness to respond to changes in security levels Communications within the PFSO's area of responsibility are clear and understood
Ensure that security equipment and systems, if any, are properly operated, tested and calibrated	Knowledge of the various types of security equipment and systems and their limitations Knowledge of the methods for testing, calibrating and maintaining security systems and equipment	Assessment of evidence obtained from approved training or examination	Procedures and actions are in accordance with the principles established by SOLAS chapter XI-2 and the ISPS Code
Encourage security awareness and vigilance	Knowledge of training, drill and exercise requirements under relevant conventions and codes Knowledge of the methods for enhancing security awareness and vigilance Knowledge of the methods for assessing the effectiveness of drills and exercises Knowledge of instruction techniques for security training and education	Assessment of evidence obtained from approved training or examination	Procedures and actions are in accordance with the principles established by SOLAS chapter XI-2 and the ISPS Code Communications within the PFSO's area of responsibility are clear and understood

MSC.1/Circ.1266
18 December 2008

Carriage of dangerous goods

Document of compliance with the special requirements for ships carrying dangerous goods under the provisions of regulation II-2/19 of the 1974 SOLAS Convention, as amended, and of paragraph 7.17 of the 2000 HSC Code, as amended

1 The Maritime Safety Committee, at its sixty-third session (16 to 25 May 1994), approved a standard format for the document of compliance required by regulation II-2/54.3 of the 1974 SOLAS Convention, as amended. The Committee further agreed that the period of validity of the document of compliance should not exceed 5 years and should not be extended beyond the expiry date of the valid Cargo Ship Safety Construction Certificate issued to the ship concerned under the provisions of SOLAS regulation I/12.

2 The Committee, at its seventy-fifth session (15 to 24 May 2002), in view of the amendments to SOLAS chapter II-2 adopted by resolution MSC.99(73), approved a revised standard format for the document of compliance required by regulation II-2/19.4 of the 1974 SOLAS Convention, as amended, applicable as from 1 July 2002. This format is reproduced in MSC/Circ.1027.

3 The Committee, at its seventy-ninth session (1 to 10 December 2004), recognizing the need to take into account the amendments to table 19.3 of SOLAS regulation II-2/19 which had been adopted by resolution MSC.134(76), decided that it was necessary to highlight the prohibition on stowage of class 5.2 dangerous goods under deck or in enclosed ro-ro spaces in documents of compliance required by regulation II-2/19 of the 1974 SOLAS Convention, as amended, for any ship built on or after 1 July 2004 when issuing or renewing the said documents.

4 The Committee, recognizing also that this prohibition on stowage under the IMDG Code also applies to all ships built before 1 July 2004 and subject to regulation II-2/19 (or II-2/54) of the 1974 SOLAS Convention, as amended, also decided that the prohibition on stowage should be taken into account when renewing documents of compliance for:

.1 any passenger ship built on or after 1 September 1984 and before 1 July 2004;

.2 any cargo ship of 500 gross tonnage or above built on or after 1 September 1984 and before 1 July 2004; and

.3 any cargo ship of less than 500 gross tonnage built on or after 1 February 1992 and before 1 July 2004.

5 Furthermore, the Committee, at the same session, agreed that the standard document of compliance format set out in MSC/Circ.1027 should be used when renewing documents of ships subject to SOLAS regulation II-2/54 applicable before 1 July 2002, and that in such cases the references to regulations II-2/19 and II-2/19.4 appearing in the standard format should be replaced by references to regulations II-2/54 and II-2/54.3, respectively.

6 The Committee, at its eighty-first session (10 to 19 May 2006), agreed the inclusion of a standard format for a document of compliance with special requirements for high-speed craft carrying dangerous goods as required by paragraph 7.17.4 of the 2000 HSC Code, although the draft amendments to the Code were not adopted.

7 The Committee, at its eighty-fourth session (7 to 16 May 2008), in view of the envisaged adoption of the amendments to table 19.3 in SOLAS chapter II-2 and table 7.17-3 in the 2000 HSC Code, subsequently adopted by the Committee at its eighty-fifth session (26 November to 5 December 2008) by means of resolutions MSC.269(85) and MSC.271(85), respectively, approved revised standard formats for the document of compliance required by regulation II-2/19.4 of the 1974 SOLAS Convention, as amended, and by paragraph 7.17.4 of the 2000 HSC Code, as amended.

8 The Committee, at its eighty-fourth session, confirmed that the period of validity of the document of compliance should not exceed:

.1 five years for cargo ships and should not be extended beyond the expiry date of the valid Cargo Ship Safety Construction Certificate issued to cargo ships concerned under the provisions of SOLAS regulation I/12; and

.2 one year for passenger ships and should not be extended beyond the expiry date of the valid Passenger Ship Safety Certificate issued to passenger ships concerned under the provisions of SOLAS regulation I/12.

9 The Committee, at its eighty-fourth session, further agreed that:

.1 it is still necessary to highlight the prohibition on stowage of class 5.2 dangerous goods under deck or in closed ro-ro spaces when issuing or renewing documents of compliance according to the revised standard formats; and

.2 the revised standard formats should be used when renewing documents of compliance for existing ships subject to SOLAS regulation II-2/1.2.3 and that, in such cases, the reference to regulation II-2/19 appearing in the revised standard format should be replaced by "II-2/19.3 as applicable according to II-2/1.2.3".

10 The revised standard formats of the document of compliance recommended for use and acceptance by Member Governments and Contracting Governments to the 1974 SOLAS Convention and the 2000 HSC Code are set out in annex 1 and annex 2, respectively.

11 Member Governments are invited to draw this circular to the attention of authorities responsible for issuing and renewing documents of compliance, bodies acting on behalf of these governments, and shipowners, ship operators and masters, with a view to harmonizing the practices of the various Administrations.

12 Member Governments are also invited to draw this circular to the attention of authorities tasked by the port State with carrying out inspections of ships, and to recommend them to take the above into account when discharging their responsibilities.

13 This circular supersedes MSC/Circ.1027 and MSC/Circ.1148.

Annex 1
Standard format of the document of compliance

SPECIAL REQUIREMENTS FOR SHIPS CARRYING DANGEROUS GOODS

Issued in pursuance of the requirement of regulation II-2/19.4
of the International Convention for the Safety of Life at Sea, 1974,
as amended, under the authority of
the Government of . . . . . .

Name of ship: . . . . . .

Distinctive number or letters: . . . . . .

Port of registry: . . . . . .

Ship type: . . . . . .

IMO Number (if applicable): . . . . . .

THIS IS TO CERTIFY:

.1 that the construction and equipment of the above-mentioned ship have been found to comply with the provisions of regulation II-2/19 of the *International Convention for the Safety of Life at Sea, 1974*, as amended; and

.2 that the ship is suitable for the carriage of those classes of dangerous goods as specified in the appendix hereto, subject to any provisions in the *International Maritime Dangerous Goods* (IMDG) Code and the *Code of Safe Practice for Solid Bulk Cargoes* (BC Code)* for individual substances, materials or articles also being complied with.

This document is valid until . . . . . .

Issued at . . . . . .

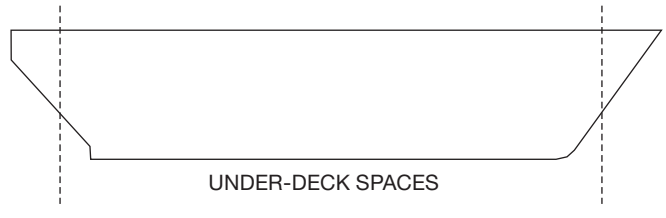
(Signature of authorized official issuing the certificate)

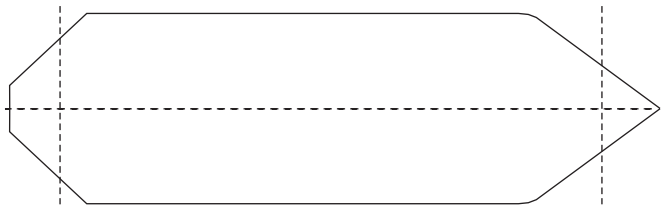
Note: There are no special requirements in the above-mentioned regulation II-2/19 for the carriage of dangerous goods of classes 6.2 and 7, and for the carriage of dangerous goods in limited quantities, as required in chapter 3.4 of the IMDG Code, and excepted quantities, as required in chapter 3.5 of the IMDG Code.

* Also refer to the IMSBC Code, as amended.

Appendix

Spaces to be indicated in the plans with numbers corresponding with the table below





Class \ Hold	1	2	3	.	.	.	.	.	.
1.1 to 1.6									
1.4S									
2.1									
2.2									
2.3 flammable									
2.3 non-flammable									
3 FP $<$ 23°C									
3 FP $\geq$ 23°C to $\leq$ 60°C									
4.1									
4.2									
4.3 liquids									
4.3 solid									
5.1									
5.2									
6.1 liquids FP $<$ 23°C									
6.1 liquids FP $\geq$ 23°C to $\leq$ 60°C									
6.1 liquids									
6.1 solid									
8 liquids FP $<$ 23°C									
8 liquids FP $\geq$ 23°C to $\leq$ 60°C									
8 liquids									
8 solid									
9									

P Indicates PACKAGED GOODS PERMITTED

A Indicates PACKAGED AND BULK GOODS ALLOWED

X Indicates NOT ALLOWED

Remarks related to the information in the table above as applicable:

. . . . . .

Note: Cargoes in bulk may be listed individually by name and class.

Annex 2
Standard format of the document of compliance

SPECIAL REQUIREMENTS FOR SHIPS CARRYING DANGEROUS GOODS

Issued in pursuance of the requirement of part D, chapter 7 of the
International Code of Safety for High-Speed Craft, 2000,
as amended, under the authority of
the Government of . . . . . .

Name of craft: . . . . . .

Design type and hull No.: . . . . . .

Distinctive number or letters: . . . . . .

IMO Number (if applicable):* . . . . . .

Port of registry: . . . . . .

Category: Category A craft/Category B craft/cargo craft† . . . . . .

Type of craft: hovercraft, surface effect ship, hydrofoil, single-hull vessel, multi-hull vessel, other (please state. . . . .)†

CERTIFICATE

1 The construction and equipment of the above-mentioned craft have been found to comply with the provisions of part D, chapter 7 of the *International Code of Safety for High-Speed Craft, 2000*, as amended.

2 The craft is suitable to carry the classes of dangerous goods indicated in the attached appendix, subject to concurrent application of the *International Maritime Dangerous Goods Code* (IMDG Code) and the *Code of Safe Practice for Solid Bulk Cargoes (BC) Code*‡ in respect of the various materials or items.

This document is valid until

Issued at . . . . . .
(Signature of authorized official issuing the certificate)

Note: Part D of chapter 7 stipulates no special provisions for the carriage of dangerous goods of classes 6.2 and 7, nor for the carriage of dangerous goods in limited quantities as defined in chapter 3.4 of the IMDG Code.

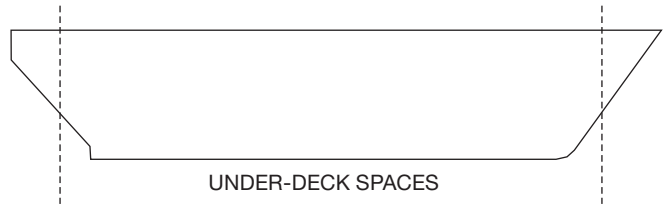
* Refer to IMO Ship Identification Number Scheme (resolution A.1117(30)).

† Delete where applicable.

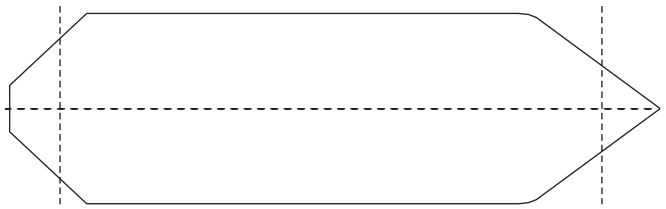
‡ Also refer to the IMSBC Code, as amended.

Appendix

Indicate spaces on plans using the corresponding numbers from the table below



UNDER-DECK SPACES



ON-DECK SPACES

Class \ Hold	1	2	3	.	.	.	.	.	.
1.1 to 1.6									
1.4S									
2.1									
2.2									
2.3 flammable									
2.3 non-flammable									
3 FP $<$ 23°C									
3 FP $\geq$ 23°C to $\leq$ 60°C									
4.1									
4.2									
4.3 liquids									
4.3 solid									
5.1									
5.2									
6.1 liquids FP $<$ 23°C									
6.1 liquids FP $\geq$ 23°C to $\leq$ 60°C									
6.1 liquids									
6.1 solid									
8 liquids FP $<$ 23°C									
8 liquids FP $\geq$ 23°C to $\leq$ 60°C									
8 liquids									
8 solid									
9									

P Indicates PACKAGED GOODS PERMITTED

A Indicates PACKAGED AND BULK GOODS ALLOWED

X Indicates NOT ALLOWED

Comments on the information in the table above as applicable:

. . . . . .

Note: Bulk cargoes may be listed individually, by designation and class.

MSC.1/Circ.1341
27 May 2010

Guidelines on security-related training and familiarization for port facility personnel

1 The Maritime Safety Committee, at its eighty-seventh session (12 to 21 May 2010), having considered the need to enhance maritime security and encourage consistent and harmonized implementation of SOLAS chapter XI-2 and the ISPS Code and the related provisions of the ILO/IMO Code of practice on security in ports and the IMDG Code, approved Guidelines on security-related training and familiarization training for port facility personnel, set out in the annex.

2 The Committee, when developing the Guidelines, took into consideration MSC.1/Circ.1188 on Guidelines on training and certification for port facility security officers.

3 The Committee agreed that the sole purpose of the Guidelines was to assist SOLAS Contracting Governments and Designated Authorities in the implementation of the relevant provisions of:

.1 ISPS Code, sections A/18.1 and A/18.2, and paragraphs B/18.2 and B/18.3;

.2 ILO/IMO Code of practice on security in ports, chapter 10; and

.3 IMDG Code, section 1.4.1.

4 SOLAS Contracting Governments are invited to bring the annexed Guidelines to the attention of all parties concerned with the matter addressed therein.

5 The Committee invited SOLAS Contracting Governments, international organizations and non-governmental organizations with consultative status which encounter difficulties with the implementation of the Guidelines to bring, at the earliest opportunity, the matter to the attention of the Committee for consideration of the issues involved and decision on the action to be taken.

Annex
Guidelines on security-related training and familiarization for port facility personnel

1 Application

1.1 The present Guidelines apply to personnel, other than port facility security officers and persons appointed to act on behalf of the port facility security officer, employed in a port facility which is required to comply with the provisions of SOLAS chapter XI-2 and the ISPS Code, and who should have received training in accordance with section A/18.1 of the ISPS Code, Guidelines on training and certification for port facility security officers (MSC.1/Circ.1188) and paragraph 1.4.1.4 of the IMDG Code.

1.2 The term "port facility personnel" means any persons employed or engaged in a port facility having specific security-related duties and all other port facility personnel working in the port facility identified in the approved port facility security plan as requiring training or instruction and familiarization training.

2 General principles

2.1 Port facility personnel are not security experts and it is not the aim of the provisions of the Guidelines to convert them into security specialists.

2.2 Port facility personnel should receive adequate security-related training or instruction and familiarization training so as to acquire the required knowledge and understanding to perform their assigned duties or perform their jobs and to contribute collectively to the enhancement of maritime security.

2.3 Categories of port facility personnel designated as being with and without security duties should be detailed in the approved port facility security plan.

2.4 Port facility personnel should receive adequate security-related training or instruction at least one time in their career.

2.5 The security-related familiarization training should be conducted by the port facility security officer or by an equally qualified person.

3 Terminology

3.1 ISPS Code, section A/16.3.6, states that the port facility security plan shall address the "duties of port facility personnel … on security aspects". ISPS Code, section A/18.2 and paragraph B/18.2, make reference to "port facility personnel having specific security duties" and ISPS Code, paragraph B/18.3, makes reference, in relation to ISPS Code, paragraph B/18.2, to "all other port facility personnel".

3.2 ILO/IMO Code of practice on security in ports, paragraph 10.1, states that "appropriate training of personnel working in the port should maximize personal awareness and … additional or special training may be required for people in particular roles".

3.3 IMDG Code, paragraph 1.4.1.3, states that "port facility personnel engaged in the transport of dangerous goods should be aware of the security requirements for such goods, in addition to those specified in the ISPS Code, and commensurate with their responsibilities". Moreover, IMDG Code, paragraph 1.4.1.4, states, inter alia, that "the training of port facility personnel … having specific duties, engaged in the transport of dangerous goods, should also include elements of security awareness related to those goods".

3.4 As a result these Guidelines use the following expressions:

.1 port facility personnel "with designated security duties" to denote those having specific security duties and responsibilities in accordance with the approved port facility security plan; and

.2 port facility personnel "without designated security duties" to denote all other port facility personnel.

4 Port facility personnel without designated security duties

4.1 Basic training or instruction in security awareness

4.1.1 Port facility personnel without designated security duties should be able to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of table 1.

4.1.2 The level of knowledge of the subjects listed in column 2 of table 1 should be sufficient to enable the person to contribute collectively to the enhancement of maritime security.

4.1.3 Persons who have satisfactorily completed approved security awareness training based on the knowledge, understanding and proficiency (KUP) set out in table 1, should be considered to have met the requirements. Those completing such training should be provided with documentary evidence to this effect to the satisfaction of the relevant SOLAS Contracting Government or Designated Authority.

4.2 Security-related familiarization training

4.2.1 Before being assigned to their duties, port facility personnel without designated security duties should receive security-related familiarization training sufficient to enable them to:

.1 report a security incident;

.2 know the procedures to follow when they recognize a security threat also in relation to dangerous goods in the meaning of the IMDG Code, as applicable; and

.3 take part in security-related emergency and contingency procedures.

4.3 Standing vis-à-vis the requirements of the ISPS Code and the IMDG Code

4.3.1 Port facility personnel without designated security duties complying with the requirements of paragraphs 4.1 and 4.2 should be considered as having met the requirements of ISPS Code, paragraph B/18.3 and IMDG Code, paragraph 1.4.1.5.

5 Port facility personnel with designated security duties

5.1 Training or instruction in designated security duties

5.1.1 Port facility personnel with designated security duties should be able to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of table 2.

5.1.2 The level of knowledge of the subjects listed in column 2 of table 2 should be sufficient to enable the person to perform their designated security duties.

5.1.3 Persons who have satisfactorily completed an approved training based on the knowledge, understanding and proficiency (KUP) set out in table 2 should be considered to have met the requirements. Those completing such training should be provided with documentary evidence to this effect to the satisfaction of the relevant SOLAS Contracting Government or Designated Authority.

5.2 Security-related familiarization training

5.2.1 Port facility personnel with designated security duties should, before being assigned such duties, receive security-related familiarization training in their assigned duties and responsibilities taking into account the relevant provisions of the port facility security plan.

5.3 Standing vis-à-vis the requirements of the ISPS Code and the IMDG Code

5.3.1 Port facility personnel with designated security duties who comply with the requirements of paragraphs 5.1 and 5.2 should be considered as having met the requirements of ISPS Code, section A/18.2 and paragraph B/18.2 as well as IMDG Code, paragraph 1.4.1.4.

6 Alternative methods for demonstrating competency

6.1 SOLAS Contracting Governments or Designated Authorities, as applicable, may allow port facility personnel to demonstrate competence to undertake the tasks, duties and responsibilities listed in column 1 of tables 1 or 2, as the case may be, by:

.1 evidence of service as port facility personnel without or with designated duties, as the case may be, for a period of at least six months in total during the preceding three years; or

.2 having performed during the preceding three years security functions considered to be equivalent, as the case may be, to the service required in paragraph 6.1.1; or

.3 passing an approved test; or

.4 successfully completing approved training.

Table 1 – *Knowledge, understanding and proficiencies (KUPs) relevant to security awareness of port facility personnel without designated security duties*

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
1 Contribute to the enhancement of maritime security through heightened awareness	Basic working knowledge of maritime security terms and definitions Basic knowledge of international maritime security policy and responsibilities of Government/Designated Authority, port facility security officer and designated persons Basic knowledge of maritime security levels and their impact on security measures and procedures in the port facility and aboard ships Basic knowledge of security reporting procedures Basic knowledge of security-related contingency plans Basic knowledge of security-related provisions for dangerous goods	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Requirements relating to enhanced maritime security are correctly identified
2 Recognition of security threats	Basic knowledge enabling recognition of potential security threats Basic knowledge of techniques used to circumvent security measures Basic knowledge enabling recognition of weapons, dangerous substances, dangerous goods, and devices and awareness of the damage they can cause Basic knowledge of procedures for security-related communications	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Maritime security threats are correctly identified

Table 1 – *Knowledge, understanding and proficiencies (KUPs) relevant to security awareness of port facility personnel without designated security duties (continued)*

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
3 Understanding the need for and methods of maintaining security awareness and vigilance	Basic knowledge of training, drill and exercise requirements under relevant conventions and codes	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Requirements relating to enhanced maritime security are correctly identified

Table 2 – *Knowledge, understanding and proficiencies (KUPs) relevant to port facility personnel with designated security duties other than port facility security officers*

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
1 Maintaining the conditions set out in a port facility security plan	Working knowledge of maritime security terms and definitions Knowledge of international maritime security policy and responsibilities of Governments/Designated Authorities, RSOs, port facilities security officer and designated persons Knowledge of maritime security levels and their impact on security measures and procedures in the port facility and aboard ships Knowledge of security reporting procedures Knowledge of procedures for drills and exercises Knowledge of procedures for conducting inspections and surveys and for the control and monitoring of security activities specified in a port facility security plan Knowledge of security-related contingency plans and the procedures for responding to security incidents, including provisions for maintaining critical operations of port facility and ship/port interface Knowledge of procedures for handling security-related information and security-related communications Knowledge of security documentation including the Declaration of Security	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Procedures and actions are in accordance with the principles established by the SOLAS Convention and the ISPS Code Legislative requirements relating to security are correctly identified Communications within the area of responsibility are clear and understood

Table 2 – *Knowledge, understanding and proficiencies (KUPs) relevant to port facility personnel with designated security duties other than port facility security officers (continued)*

Column 1	Column 2	Column 3	Column 4
Competence	**Knowledge, understanding and proficiency**	**Methods for demonstrating competence**	**Criteria for evaluating competence**
2 Recognition of security threats	Knowledge of techniques used to circumvent security measures Knowledge enabling recognition of weapons, dangerous substances, dangerous goods, and devices and awareness of damage they can cause Knowledge of security-related provisions for dangerous goods Knowledge of crowd management and control techniques, where appropriate General knowledge of methods for recognition, on a non-discriminatory basis, of characteristics and behavioural patterns of persons who are likely to threaten security	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Procedures and actions are in accordance with the principles established by the SOLAS Convention, ISPS Code and the relevant provisions of the IMDG Code
3 Inspection, control and monitoring activities	Knowledge of controlling access to the port facility and its restricted areas Knowledge of the techniques for monitoring restricted areas Knowledge of methods for effective monitoring ship/port interface and areas surrounding the port facility Knowledge of inspection methods relating to the cargo and stores Knowledge of the methods for physical searches and non-intrusive inspections	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Procedures and actions are in accordance with the principles established by the SOLAS Convention, ISPS Code and the relevant provisions of the IMDG Code
4 Proper usage of security equipment and systems, if any	General knowledge of various types of security equipment and systems, including their limitations Knowledge of the need for testing, calibrating and maintaining security systems and equipment	Assessment of evidence obtained from approved instruction or during attendance at an approved course	Equipment and systems operations are carried out in accordance with established equipment operating instructions and taking into account the limitations of the equipment and systems Procedures and actions are in accordance with the principles established by the SOLAS Convention and the ISPS Code

MSC.1/Circ.1353/Rev.2
7 December 2020

Revised guidelines for the preparation of the Cargo Securing Manual

1 In accordance with regulations VI/5 and VII/5 of the 1974 SOLAS Convention, cargo units and cargo transport units shall be loaded, stowed and secured throughout a voyage in accordance with the Cargo Securing Manual approved by the Administration, which shall be drawn up to a standard at least equivalent to the guidelines developed by the Organization.

2 The Maritime Safety Committee, at its eighty-seventh session (12 to 21 May 2010), considered a proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its fourteenth session (21 to 25 September 2009), and approved the *Revised guidelines for the preparation of the Cargo Securing Manual* (MSC.1/Circ.1353/Rev.1).

3 These Revised guidelines are based on the provisions contained in the annex to MSC/Circ.745 but have been expanded to include safe access for lashing of containers, taking into account the provisions of the *Code of Safe Practice for Cargo Stowage and Securing* (CSS Code). They are of a general nature and intended to provide guidance on the preparation of Cargo Securing Manuals required on all types of ships engaged in the carriage of cargoes other than solid and liquid bulk cargoes.

4 The Maritime Safety Committee, at its one hundred and second session (4 to 11 November 2020), agreed to amend the Revised guidelines, in conjunction with the approval of amendments to the CSS Code (MSC.1/Circ.1623) and approved *Revised guidelines for the preparation of the Cargo Securing Manual*, as set out in the annex.

5 Member Governments are invited to bring these guidelines to the attention of all parties concerned, with the aim of having Cargo Securing Manuals carried on board ships prepared appropriately and in a consistent manner, and to:

.1 apply the revised guidelines in their entirety for containerships* the keels of which were laid or which were at a similar stage of construction on or after 1 January 2015; and

.2 apply chapters 1 to 4 of the revised guidelines to existing containerships* the keels of which were laid or which were at a similar stage of construction before 1 January 2015.

6 This circular supersedes MSC.1/Circ.1353/Rev.1.

Annex
Revised guidelines for the preparation of the Cargo Securing Manual

Preamble

1 In accordance with the *International Convention for the Safety of Life at Sea, 1974* (SOLAS) chapters VI, VII and the *Code of Safe Practice for Cargo Stowage and Securing* (CSS Code), cargo units, including containers, shall be stowed and secured throughout the voyage in accordance with a Cargo Securing Manual approved by the Administration.

2 The Cargo Securing Manual is required on all types of ships engaged in the carriage of all cargoes other than solid and liquid bulk cargoes.

3 The purpose of these guidelines is to ensure that Cargo Securing Manuals cover all relevant aspects of cargo stowage and securing and to provide a uniform approach to the preparation of Cargo Securing Manuals, their layout and content. Administrations may continue accepting Cargo Securing Manuals drafted in accordance with *Containers and cargoes (BC) – Cargo Securing Manual* (MSC/Circ.385) provided that they satisfy the requirements of these guidelines.

4 If necessary, those manuals should be revised explicitly when the ship is intended to carry containers in a standardized system.

* As approved by the Maritime Safety Committee at its ninety-fourth session (17 to 21 November 2014), reference to *containerships* means dedicated containerships and those parts of other ships for which arrangements are specifically designed and fitted for the purpose of carrying containers on deck.

5 It is important that securing devices meet acceptable functional and strength criteria applicable to the ship and its cargo. It is also important that the officers on board are aware of the magnitude and direction of the forces involved and the correct application and limitations of the cargo securing devices. The crew and other persons employed for the securing of cargoes should be instructed in the correct application and use of the cargo securing devices on board the ship.

Chapter 1 – General

1.1 Definitions

1.1.1 *Cargo securing devices* are all fixed and portable devices used to secure and support cargo units.

1.1.2 *Maximum securing load* (MSL) is a term used to define the allowable load capacity for a device used to secure cargo to a ship. *Safe working load* (SWL) may be substituted for MSL for securing purposes, provided this is equal to or exceeds the strength defined by MSL.

1.1.3 *Standardized cargo* means cargo for which the ship is provided with an approved securing system based upon cargo units of specific types.

1.1.4 *Semi-standardized cargo* means cargo for which the ship is provided with a securing system capable of accommodating a limited variety of cargo units, such as vehicles and trailers.

1.1.5 *Non-standardized cargo* means cargo which requires individual stowage and securing arrangements.

1.2 Preparation of the manual

The Cargo Securing Manual should be developed, taking into account the recommendations given in these guidelines, and should be written in the working language or languages of the ship. If the language or languages used is not English, French or Spanish, a translation into one of these languages should be included.

1.3 General information

This chapter should contain the following general statements:

.1 "The guidance given herein should by no means rule out the principles of good seamanship, neither can it replace experience in stowage and securing practice.";

.2 "The information and requirements set forth in this manual are consistent with the requirements of the vessel's trim and stability booklet, International Load Line Certificate (1966), the hull strength loading manual (if provided) and with the requirements of the *International Maritime Dangerous Goods Code* (IMDG Code) (if applicable).";

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

.4 "It is imperative to the safety of the ship and the protection of the cargo and personnel that the securing of the cargo is carried out properly and that only appropriate securing points or fittings should be used for cargo securing.";

.5 "The cargo securing devices mentioned in this manual should be applied so as to be suitable and adapted to the quantity, type of packaging and physical properties of the cargo to be carried. When new or alternative types of cargo securing devices are introduced, the Cargo Securing Manual should be revised accordingly. Alternative cargo securing devices introduced should not have less strength than the devices being replaced.";

.6 "There should be a sufficient quantity of reserve cargo securing devices on board the ship.";

.7 "Information on the strength and instructions for the use and maintenance of each specific type of cargo securing device, where applicable, is provided in this manual. The cargo securing devices should be maintained in a satisfactory condition. Items worn or damaged to such an extent that their quality is impaired should be replaced."; and

.8 The Cargo Safe Access Plan (CSAP) is intended to provide detailed information for persons engaged in work connected with cargo stowage and securing. Safe access should be provided and maintained in accordance with this plan.

Chapter 2 – Securing devices and arrangements

2.1 Specification for fixed cargo securing devices

This section should indicate and, where necessary, illustrate the number, locations, type and MSL of the fixed devices used to secure cargo and should as a minimum contain the following information:

.1 a list and/or plan of the fixed cargo securing devices, which should be supplemented with appropriate documentation for each type of device as far as practicable. The appropriate documentation should include information as applicable regarding:

.1 name of manufacturer;

.2 type designation of item with simple sketch for ease of identification;

.3 material(s);

.4 identification marking;

.5 strength test result or ultimate tensile strength test result;

.6 result of non-destructive testing; and

.7 maximum securing load (MSL);

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

.3 fixed securing devices on decks and their types (e.g. elephant feet fittings, container fittings, apertures), where provided, including their MSL;

.4 fixed securing devices on deckheads, where provided, listing their types and MSL; and

.5 for existing ships with non-standardized fixed securing devices, the information on MSL and location of securing points is deemed sufficient.

2.2 Specification for portable cargo securing devices

This section should describe the number of and the functional and design characteristics of the portable cargo securing devices carried on board the ship, and should be supplemented by suitable drawings or sketches if deemed necessary. It should contain the following information as applicable:

.1 a list for the portable securing devices, which should be supplemented with appropriate documentation for each type of device as far as practicable; the appropriate documentation should include information as applicable regarding:

.1 name of manufacturer;

.2 type designation of item with simple sketch for ease of identification;

.3 material(s), including minimum safe operational temperature;

.4 identification marking;

.5 strength test result or ultimate tensile strength test result;

.6 result of non-destructive testing; and

.7 maximum securing load (MSL);

.2 container stacking fittings, container deck securing fittings, fittings for interlocking of containers, bridge-fittings, etc. their MSL and use;

.3 chains, wire lashings, rods, etc. their MSL and use;

.4 tensioners (e.g. turnbuckles, chain tensioners), their MSL and use;

.5 securing gear for cars, if appropriate, and other vehicles, their MSL and use;

.6 trestles and jacks, etc. for vehicles (trailers), where provided, including their MSL and use; and

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

2.3 Inspection and maintenance schemes

This section should describe inspection and maintenance schemes of the cargo securing devices on board the ship.

2.3.1 Regular inspections and maintenance should be carried out under the responsibility of the master. Cargo securing devices inspections as a minimum should include:

.1 routine visual examinations of components being utilized; and

.2 periodic examinations/re-testing as required by the Administration; when required, the cargo securing devices concerned should be subjected to inspections by the Administration.

2.3.2 This section should document actions to inspect and maintain the ship's cargo securing devices. Entries should be made in a record book, which should be kept with the Cargo Securing Manual. This record book should contain the following information:

.1 procedures for accepting, maintaining and repairing or rejecting cargo securing devices; and

.2 record of inspections.

2.3.3 This section should contain information for the master regarding inspections and adjustment of securing arrangements during the voyage.

2.3.4 Computerized maintenance procedures may be referred to in this section.

Chapter 3 – Stowage and securing of non-standardized and semi-standardized cargo

3.1 Handling and safety instructions

This section should contain:

.1 instructions on the proper handling of the securing devices; and

.2 safety instructions related to handling of securing devices and to securing and unsecuring of units by ship or shore personnel.

3.2 Evaluation of forces acting on cargo units

This section should contain the following information:

.1 tables or diagrams giving a broad outline of the accelerations which can be expected in various positions on board the ship in adverse sea conditions and with a range of applicable metacentric height (GM) values;

.2 examples of the forces acting on typical cargo units when subjected to the accelerations referred to in 3.2.1 and angles of roll and metacentric height (GM) values above which the forces acting on the cargo units exceed the permissible limit for the specified securing arrangements, as far as practicable;

.3 examples of how to calculate number and strength of portable securing devices required to counteract the forces referred to in 3.2.2 as well as safety factors to be used for different types of portable cargo securing devices; calculations may be carried out according to annex 13 of the CSS Code or methods accepted by the Administration;

.4 it is recommended that the designer of a Cargo Securing Manual converts the calculation method used into a form suiting the particular ship, its securing devices and the cargo carried; this form may consist of applicable diagrams, tables or calculated examples; and

.5 other operational arrangements such as electronic data processing (EDP) or use of a loading computer may be accepted as alternatives to the requirements of the above paragraphs 3.2.1 to 3.2.4, providing that this system contains the same information.

3.3 Application of portable securing devices on various cargo units, vehicles and stowage blocks

3.3.1 This section should draw the master's attention to the correct application of portable securing devices, taking into account the following factors, as reflected in annex 13 of the CSS Code:

.1 duration of the voyage;

.2 geographical area of the voyage with particular regard to the minimum safe operational temperature of the portable securing devices;

.3 sea conditions which may be expected;

.4 dimensions, design and characteristics of the ship;

.5 expected static and dynamic forces during the voyage;

.6 type and packaging of cargo units including vehicles;

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

.8 mass and dimensions of the cargo units and vehicles.

3.3.2 This section should describe the application of portable cargo securing devices as to number of lashings and allowable lashing angles. Where necessary, the text should be supplemented by suitable drawings or sketches to facilitate the correct understanding and proper application of the securing devices 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 soft boards or other anti-skid material under the cargo to increase friction between the deck and the cargo.

3.3.3 This section should contain guidance as to the recommended location and method of stowing and securing of containers, trailers and other cargo carrying vehicles, palletized cargoes, unit loads and single cargo items (e.g. woodpulp, paper rolls), heavy weight cargoes, cars and other vehicles.

3.3.4 When weather-dependent lashing is applied, operational procedures should be developed in accordance with annex 13 of the CSS Code.

3.4 Supplementary requirements for ro-ro ships

3.4.1 The manual should contain sketches showing the layout of the fixed securing devices with identification of strength (MSL) as well as longitudinal and transverse distances between securing points. In preparing this section, further guidance should be utilized from IMO Assembly resolutions A.533(13) and A.581(14), as appropriate.

3.4.2 In designing securing arrangements for cargo units, including vehicles and containers, on ro-ro passenger ships and specifying minimum strength requirements for securing devices used, forces due to the motion of the ship, angle of heel after damage or flooding and other considerations relevant to the effectiveness of the cargo securing arrangement should be taken into account.

3.5 Bulk carriers

If bulk carriers carry cargo units falling within the scope of chapter VI/5 or chapter VII/5 of the SOLAS Convention, this cargo shall be stowed and secured in accordance with a Cargo Securing Manual, approved by the Administration.

Chapter 4 – Stowage and securing of containers and other standardized cargo

4.1 Handling and safety instructions

This section should contain:

.1 instructions on the proper handling of the securing devices; and

.2 safety instructions related to handling of securing devices and to securing and unsecuring of containers or other standardized cargo by ship or shore personnel.

4.2 Stowage and securing instructions

This section is applicable to any stowage and securing system (i.e. stowage within or without cellguides) for containers and other standardized cargo. On existing ships, the relevant documents regarding safe stowage and securing may be integrated into the material used for the preparation of this chapter.

4.2.1 *Stowage and securing plan*

This section should consist of a comprehensive and understandable plan or set of plans providing the necessary overview on:

.1 longitudinal and athwartship views of under deck and on deck stowage locations of containers as appropriate;

.2 alternative stowage patterns for containers of different dimensions;

.3 maximum stack masses;

.4 permissible vertical sequences of masses in stacks;

.5 maximum stack heights with respect to approved sight lines; and

.6 application of securing devices using suitable symbols with due regard to stowage position, stack mass, sequence of masses in stack and stack height; the symbols used should be consistent throughout the Cargo Securing Manual.

4.2.2 *Stowage and securing principle on deck and under deck*

This section should support the interpretation of the stowage and securing plan with regard to container stowage, highlighting:

.1 the use of the specified devices; and

.2 any guiding or limiting parameters such as dimension of containers, maximum stack masses, sequence of masses in stacks, stacks affected by wind load, height of stacks.

It should contain specific warnings of possible consequences from misuse of securing devices or misinterpretation of instructions given.

4.3 Other allowable stowage patterns

4.3.1 This section should provide the necessary information for the master to deal with cargo stowage situations deviating from the general instructions addressed under section 4.2, including appropriate warnings of possible consequences from misuse of securing devices or misinterpretation of instructions given.

4.3.2 Information should be provided with regard to, inter alia:

.1 alternative vertical sequences of masses in stacks;

.2 stacks affected by wind load in the absence of outer stacks;

.3 alternative stowage of containers with various dimensions; and

.4 permissible reduction of securing effort with regard to lower stack masses, lesser stack heights or other reasons.

4.4 Forces acting on cargo units

4.4.1 This section should present the distribution of accelerations on which the stowage and securing system is based, and specify the underlying condition of stability. Information on forces induced by wind and sea on deck cargo should be provided.

4.4.2 It should further contain information on the nominal increase of forces or accelerations with an increase of initial stability. Recommendations should be given for reducing the risk of cargo losses from deck stowage by restrictions to stack masses or stack heights, where high initial stability cannot be avoided.

Chapter 5 – Cargo Safe Access Plan (CSAP)

5.1 Ships which are specifically designed and fitted for the purpose of carrying containers should be provided with a Cargo Safe Access Plan (CSAP) in order to demonstrate that personnel will have safe access for container securing operations. This plan should detail arrangements necessary for conducting cargo stowage and securing in a safe manner.

It should include the following for all areas to be worked by personnel:

.1 handrails;

.2 platforms;

.3 walkways;

.4 ladders;

.5 access covers;

.6 location of equipment storage facilities;

.7 lighting fixtures;

.8 container alignment on hatch covers/pedestals;

.9 fittings for specialized containers, such as reefer plugs/receptacles;

.10 first aid stations and emergency access/egress;

.11 gangways; and

.12 any other arrangements necessary for the provision of safe access.

5.2 Guidelines for specific requirements are contained in annex 14 to the CSS Code.

MSC-MEPC.2/Circ.1
18 July 2006

Disposal of fumigant material

1 The Marine Environment Protection Committee, at its fifty-third session (18 to 22 July 2005), and the Maritime Safety Committee, at its eighty-first session (10 to 19 May 2006), considered a report, concerning the discharge of active packages of the cargo fumigant Magnesium Phosphide into New Zealand's marine waters.

2 The Committees' attention was drawn to the fact that, while there appeared to be no prohibition on the discharge of such material pursuant to the existing marine pollution prevention conventions, the discharge of active packages, producing phosphine gas, represented a significant risk to the public who may encounter them at sea.

3 The attention of Member Governments is, therefore, drawn to the following observations.

4 The most recent version of the IMO Recommendations on the safe use of pesticides in ships, incorporated into the Supplement to the IMDG Code (hereafter referred to as IMO Recommendations) recommends, inter alia, that:

.1 fumigation of this nature should only be undertaken by a suitably qualified and trained person;

.2 a "fumigator-in-charge" should be designated by the fumigation company, government agency or appropriate authority. He should be able to provide documentation to the master confirming his competence and authorization;

.3 the master should be provided with written instructions by the fumigator-in-charge on the type of fumigant used, the hazards involved, the threshold limit values (TLV) and the precautions to be taken, and in view of the highly toxic nature of all commonly used fumigants these should be followed carefully;

.4 clear written instructions should be given to the master of the ship, to the receiver of the cargo and to the authorities at the discharging port as to how any powdery residues are to be disposed of. Furthermore, with regard to fumigation to be continued in transit, the ship should carry instructions on the disposal of residual material; and

.5 annex 4 of the IMO Recommendations also provides a Model Checklist for in-transit fumigation with phosphine, which should be completed and signed by both the fumigator-in-charge and the master.

5 It is, therefore, recommended that Member Governments issue regulations to oblige ships that carry solid cargoes requiring fumigation to ensure that all waste and residues are disposed of in an appropriate manner, either by incineration or by disposal on shore, as recommended by the manufacturer.

6 Member Governments are invited to bring the above information to the attention of shipowners, ship operators, companies, shipmasters, fumigation companies and all other parties concerned, requesting that appropriate action be taken in accordance with the provisions of the relevant IMO instruments.

MSC.1/Circ.1440
1 June 2012

Illustrations of segregation of cargo transport units on board containerships and ro-ro ships

1 The Maritime Safety Committee, at its ninetieth session (16 to 25 May 2012), having considered the proposal by the Sub-Committee on Dangerous Goods, Solid Cargoes and Containers, at its sixteenth session, with regard to illustrations of segregation of cargo transport units on board containerships and ro-ro ships, which apply to the carriage of packaged dangerous goods in pursuance of the requirements of SOLAS chapter VII and the relevant provisions of the IMDG Code, approved the illustrations of segregation of cargo transport units on board containerships and ro-ro ships, as set out in the attached annex.

2 Member Governments are invited to bring the illustrations of segregation of cargo transport units on board containerships and ro-ro ships, as set out in the annex, to the attention of competent authorities, seafarers and others concerned, taking into account the voluntary application date of 1 January 2013 of amendment 36-12 of the IMDG Code pending its envisaged mandatory entry-into-force date of 1 January 2014.

Annex
Illustrations of segregation of cargo transport units on board containerships and ro-ro ships

1 Scope

1.1 The segregation requirements applicable to containerships with hatch covers, hatchless containerships and ro-ro ships are provided in 7.4.3 and 7.5.3 of the IMDG Code. To facilitate familiarization with these requirements and to support training of relevant personnel, the following illustrations have been developed. It should be noted that only the relevant tables in the IMDG Code are legally binding. In case of any discrepancy, they shall take precedence over the illustrations in this circular.

1.2 This circular contains illustrations of segregation of:

- containers on board containerships with hatch covers (see section 2 of this circular);
- containers on board hatchless containerships (see section 3 of this circular); and
- cargo transport units on board ro-ro ships.

2 Illustrations of segregation of containers on board containerships with hatch covers

2.1 The illustrations of this section apply to the segregation of containers which meet the definition of a container within the term of the International Convention for Safe Containers (CSC) 1972, as amended, and are transported on deck and in the cargo holds of containerships or on deck and in the cargo holds of other types of ships provided that these stowage positions are properly fitted to give a permanent stowage of containers during transport.[*]

2.2 To determine locations in which containers are not permitted to contain dangerous goods that are incompatible with those in a reference container, the following method applies: container spaces (such as one container space, two container spaces) are identified in accordance with the applicable segregation provisions in the direct fore-and-aft and athwartships directions from the reference container. Lines are projected between the outermost corners of the containers occupying these spaces as shown in the figure. Containers located partially or completely between these lines and the reference container shall not contain dangerous goods that are incompatible with those in the reference container.

2.3 The deck/hold layout used for the illustrations is:

- two 20 ft containers stowed in a 40 ft container space
- distance between two 40 ft container spaces is 2 ft (60 cm)

[*] For containerships with partly hatchless container cargo spaces, the illustrations of section 3 apply to such spaces.

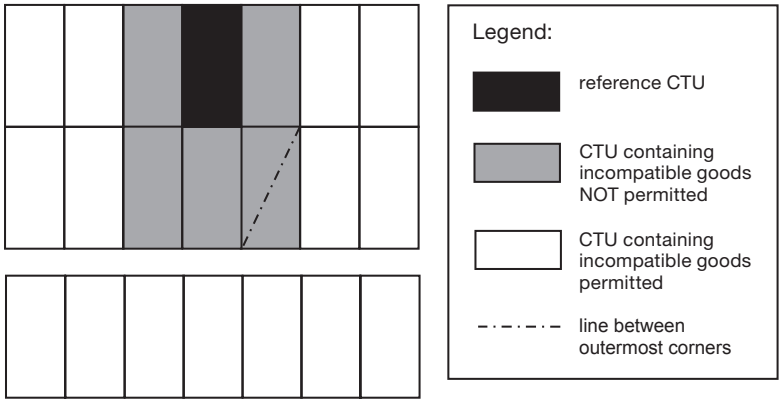
2.4 Explanation of the segregation terms

(1)	Reference container		
(2)	Container containing incompatible goods NOT permitted		
(3)	container containing incompatible goods permitted		
(4)	Distance athwarthships	(a) one container space	
		(b) two container spaces	
		(c) three container spaces	
(5)	Distance fore and aft	(a) one container space	
		(b) two container spaces	

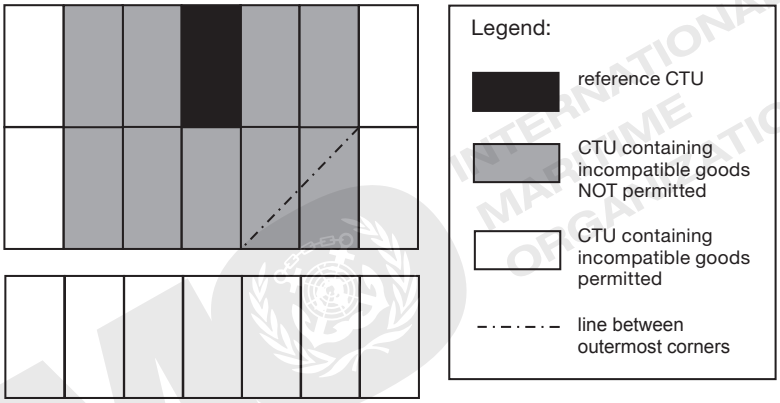
Note 1: All bulkheads and decks shall be resistant to fire and liquids.

Note 2: When an illustration has more than one reference container, only one should be used when interpreting the illustration. When an illustration contains several reference containers, they have to be considered as different examples.

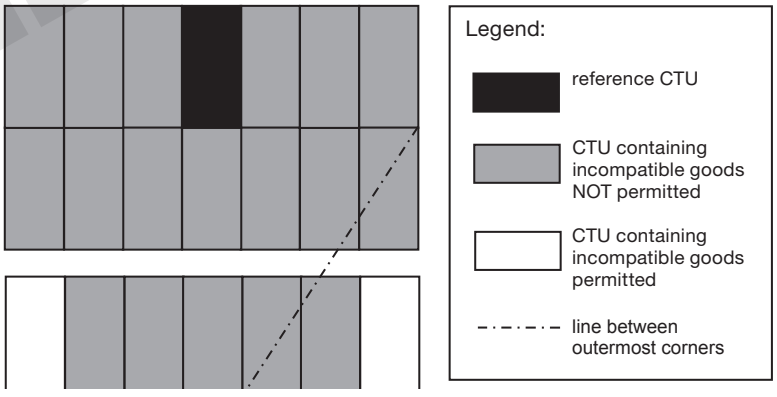
Situation fore and aft and athwartships: 1 container space



Situation fore and aft: 1 container space
and athwartships: 2 container spaces

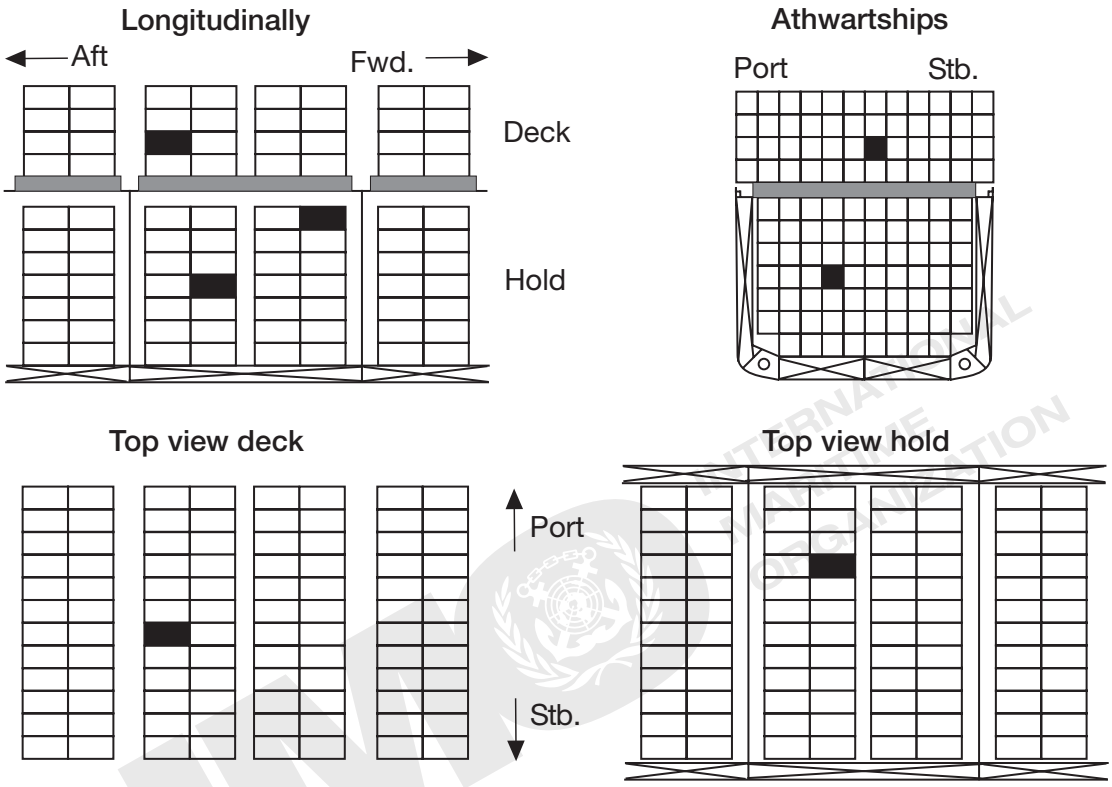


Situation fore and aft: 2 container spaces
and athwartships: 3 container spaces



Note: All bulkheads and decks shall be resistant to fire and liquids.

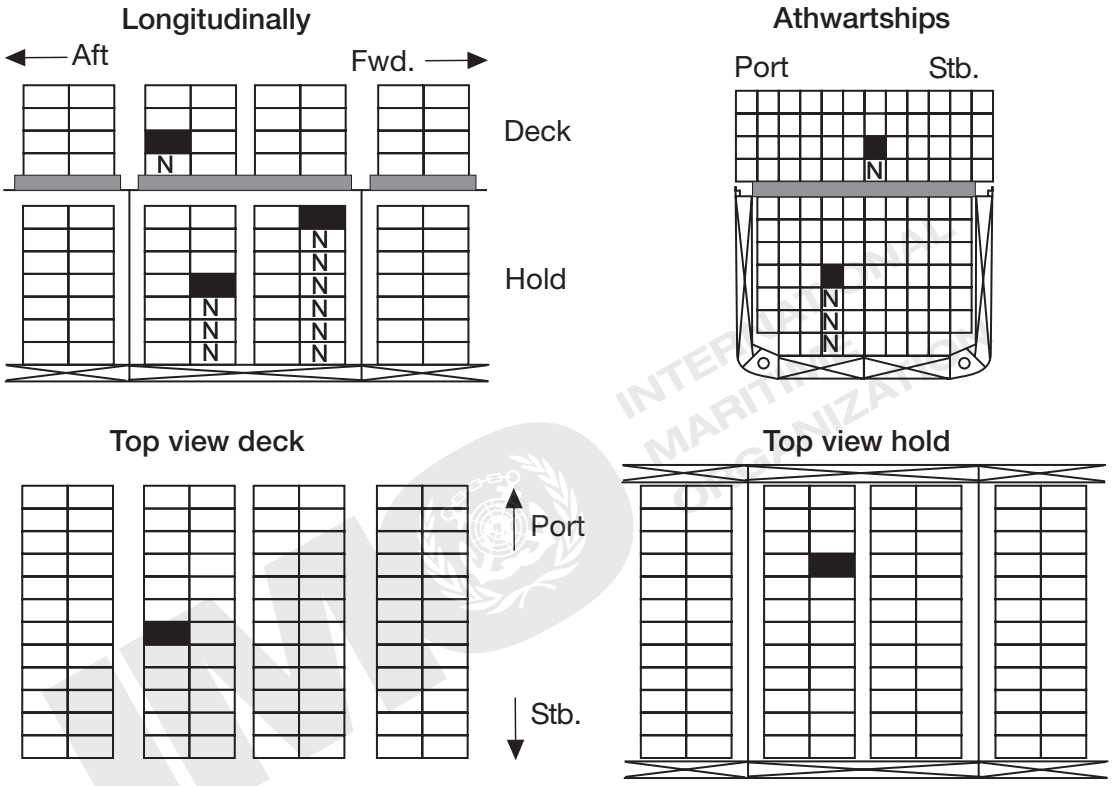
"AWAY FROM" .1			
CLOSED VERSUS CLOSED	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	No restriction	No restriction	One on top of the other permitted
ATHWARTSHIPS	No restriction	No restriction	



1 – Situation *closed* versus *closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

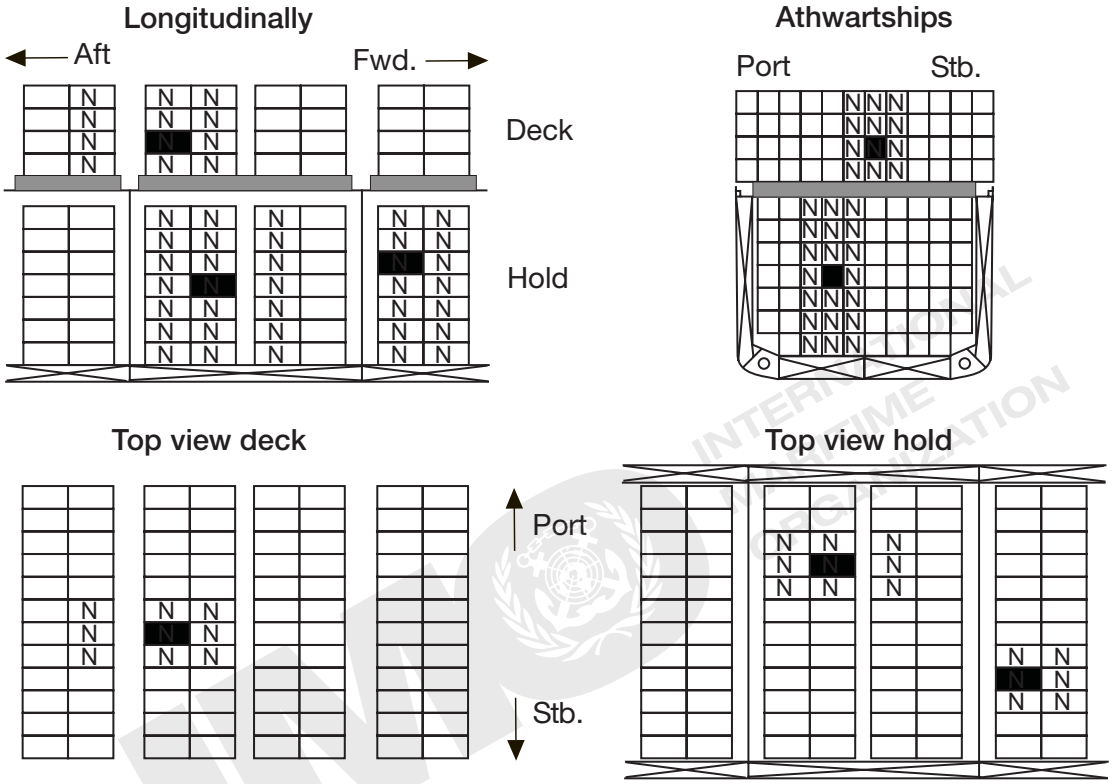
"AWAY FROM" .1			
CLOSED VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	No restriction	No restriction	Open on top of closed permitted
ATHWARTSHIPS	No restriction	No restriction	Otherwise NOT in the same vertical line unless segregated by a deck



1 – Situation *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

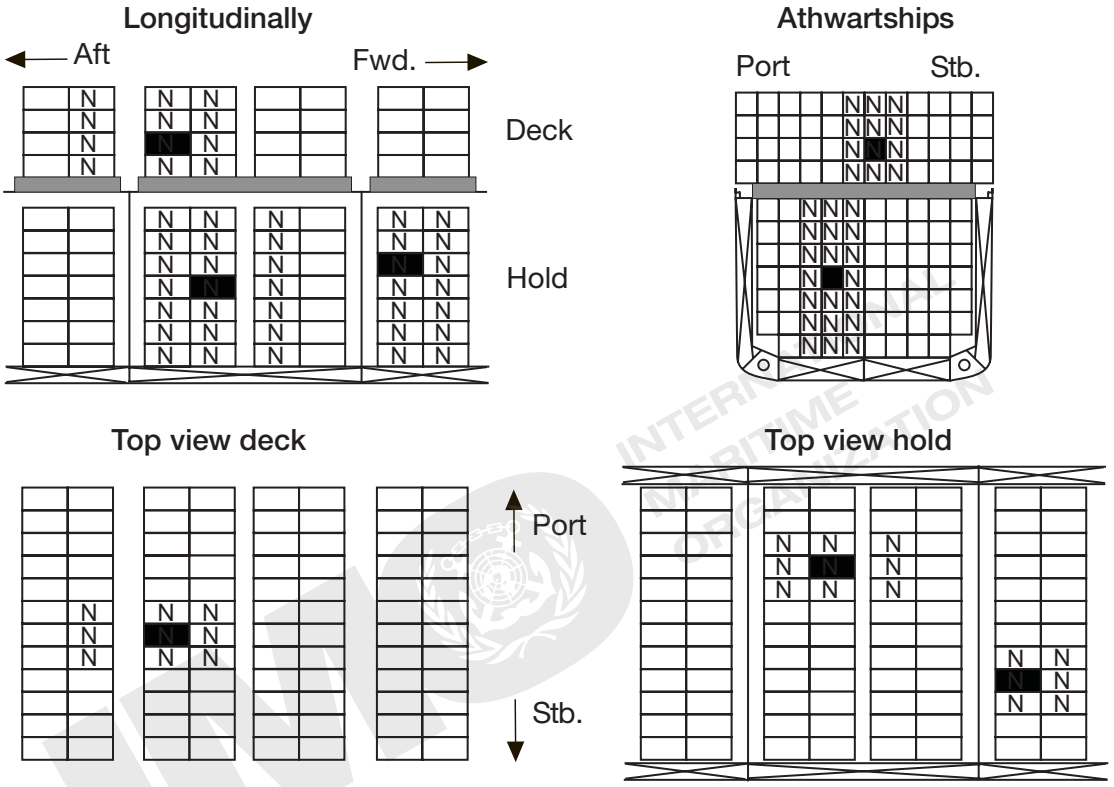
"AWAY FROM" .1			
OPEN VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One container space or one bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	One container space	One container space	



1 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

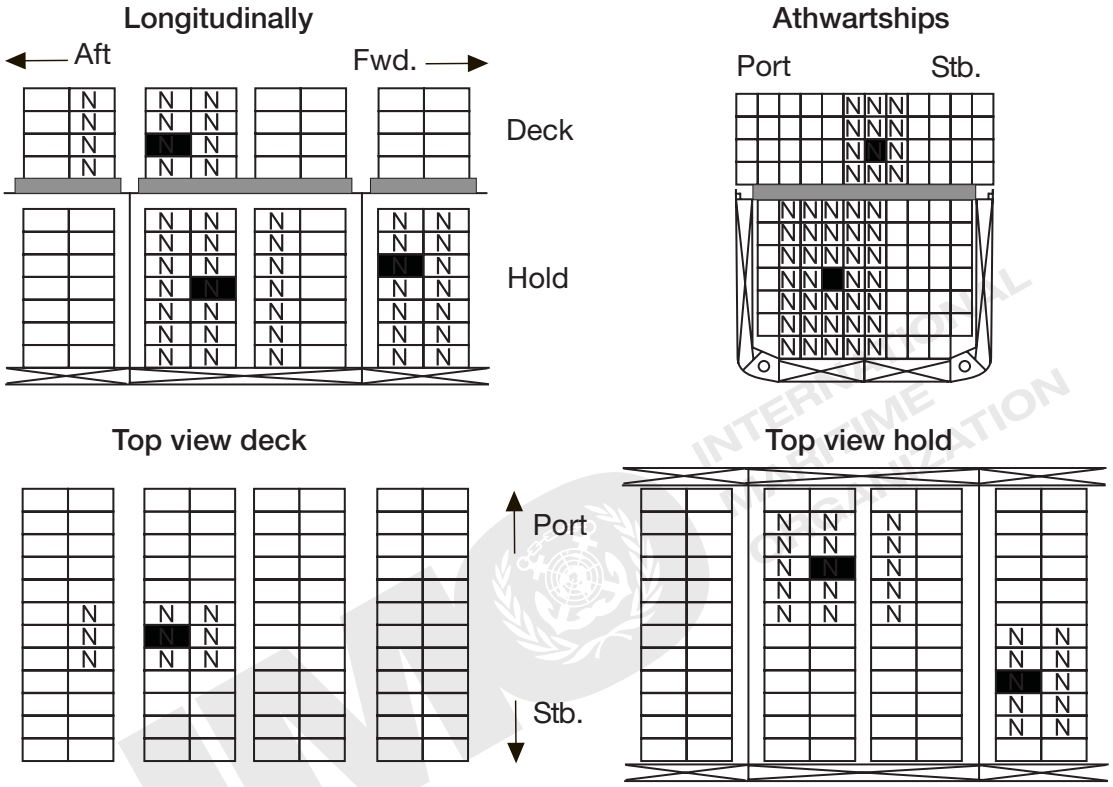
"SEPARATED FROM" .2			
CLOSED VERSUS CLOSED	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND FAFT	One container space	One container space or one bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	One container space	One container space	



2 – Situation *closed* versus *closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

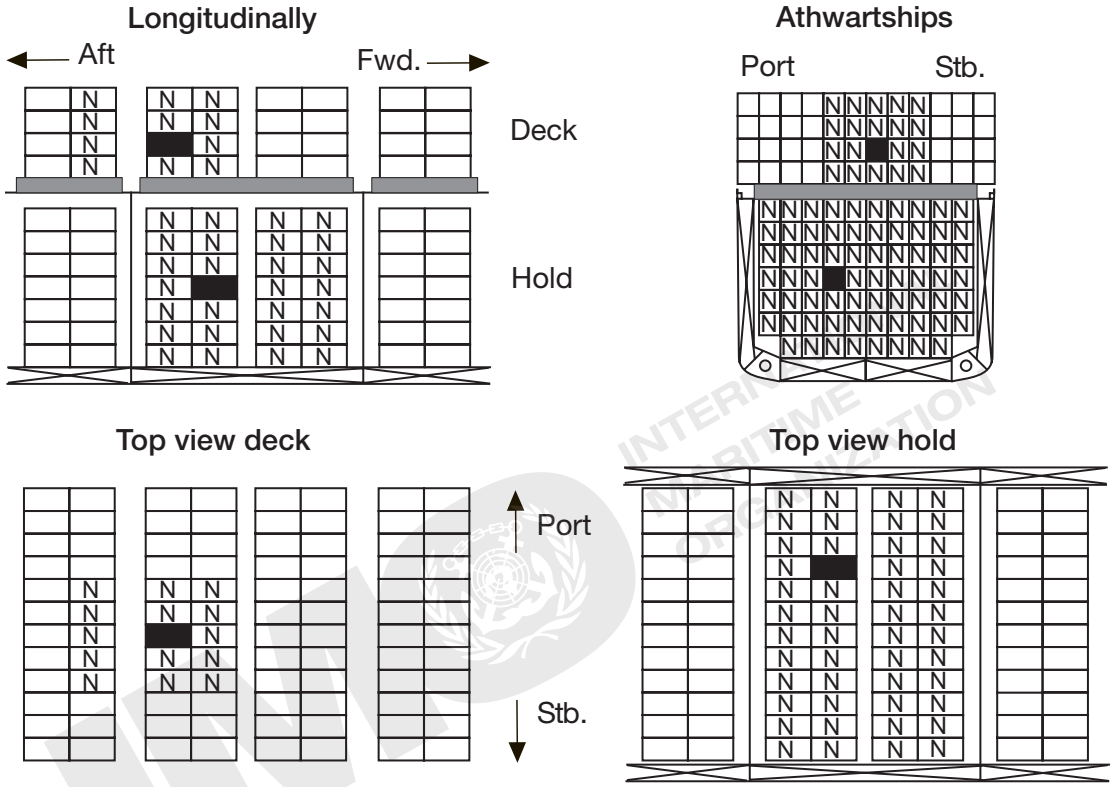
"SEPARATED FROM" .2			
CLOSED VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One container space or one bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	One container space	Two container spaces	



2 – Situation *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

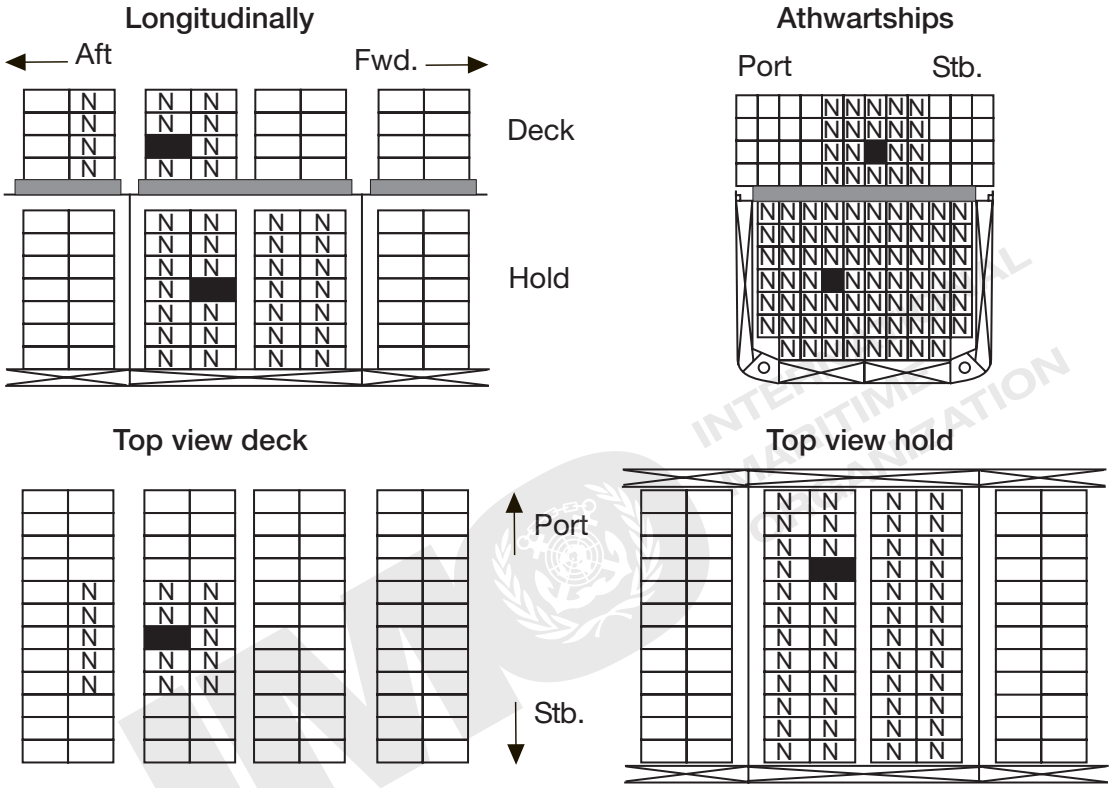
"SEPARATED FROM" .2			
OPEN VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	Two container spaces	One bulkhead	



2 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

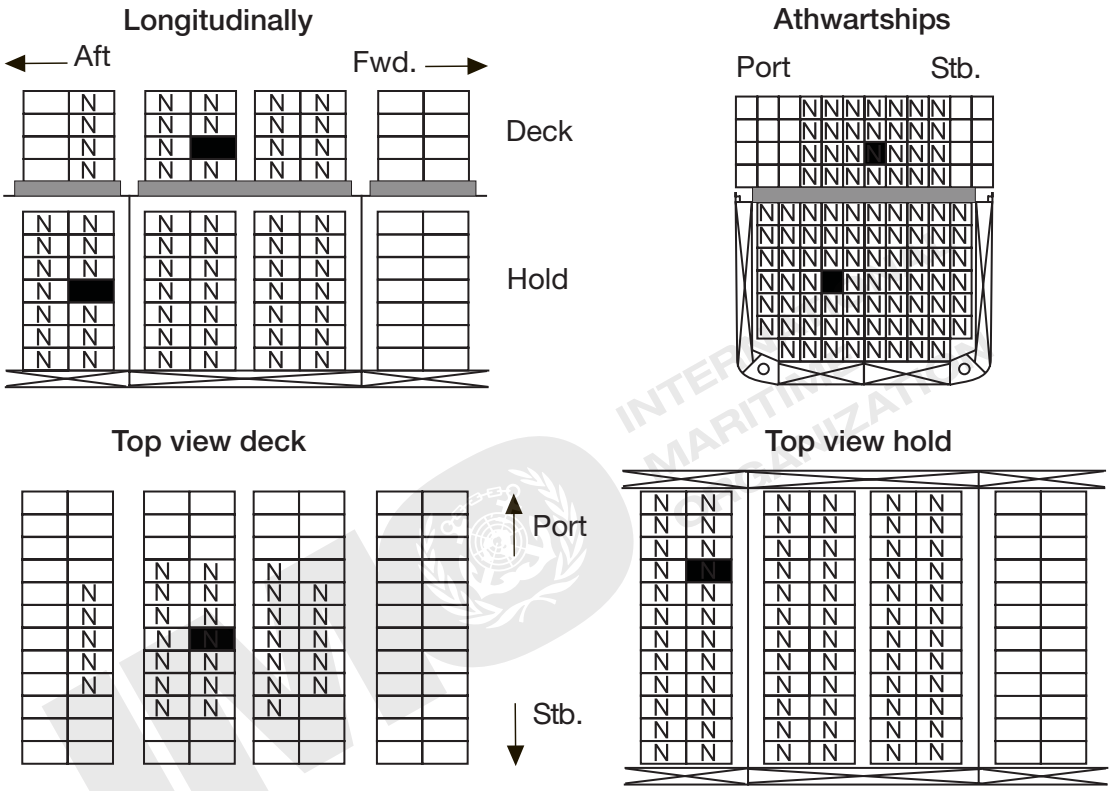
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3			
CLOSED VERSUS CLOSED OR CLOSED VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	One container space	One bulkhead	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	Two container spaces	One bulkhead	



3 – Situations *closed* versus *closed* and *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

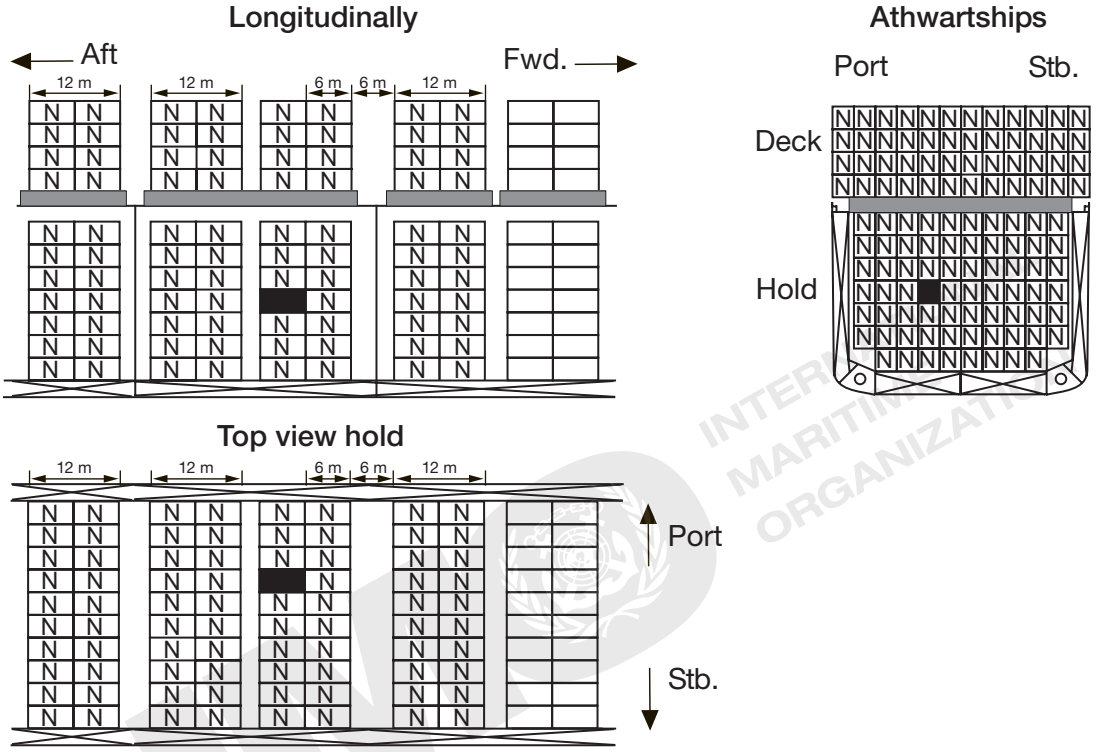
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3			
OPEN VERSUS OPEN	HORIZONTAL		VERTICAL
	ON DECK	UNDER DECK	
FORE AND AFT	Two container spaces	Two bulkheads	NOT in the same vertical line unless segregated by a deck
ATHWARTSHIPS	Three container spaces	Two bulkheads	



3 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead and minimum horizontal distance of 24 m*	Prohibited
ATHWARTSHIPS	Prohibited	

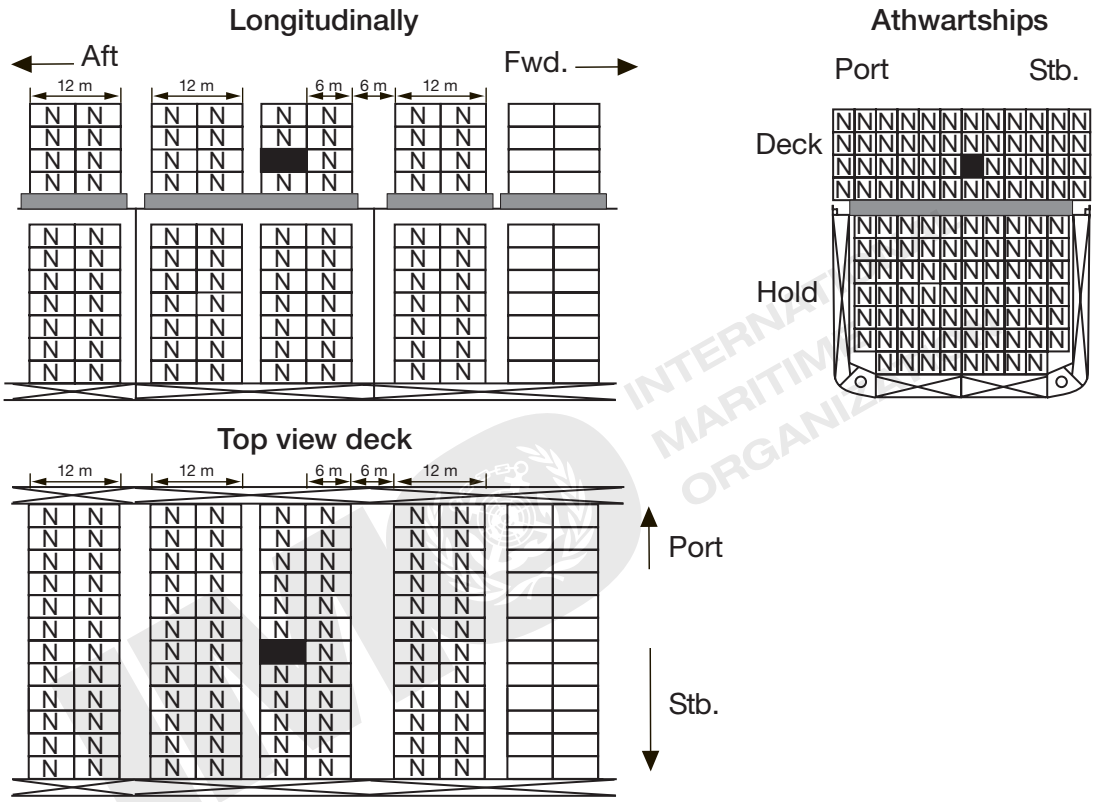


4 – Situation *closed* versus *closed* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

* Containers not less than 6 m from intervening bulkhead.

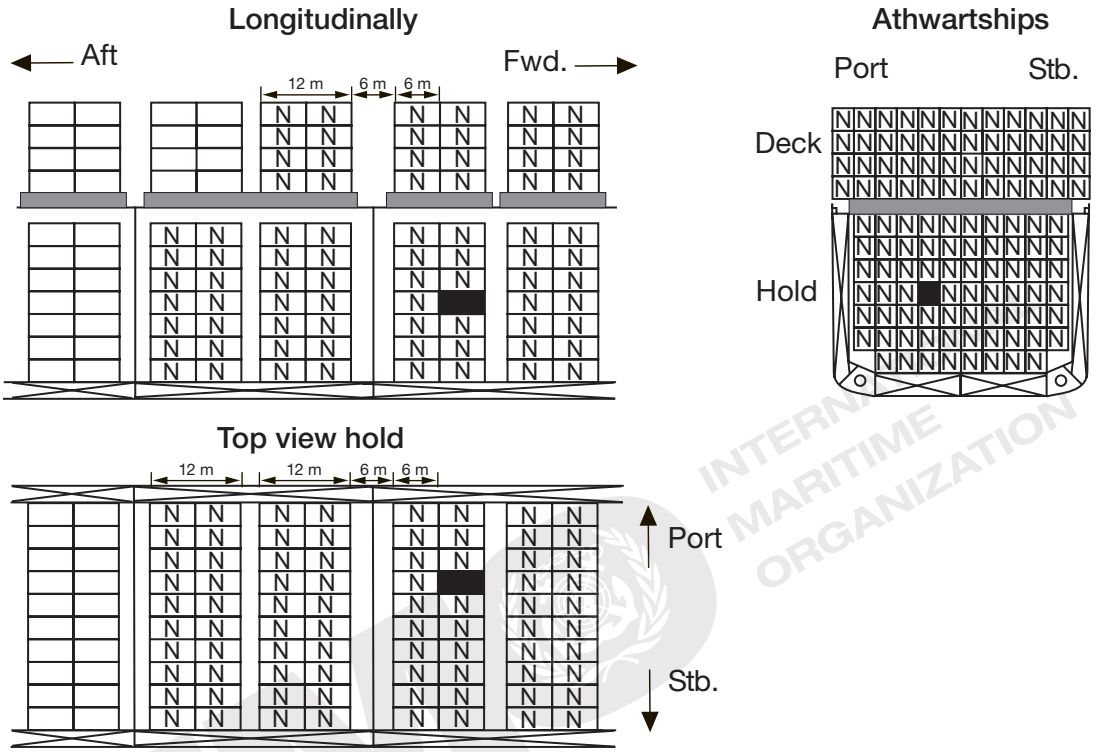
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN OR CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Minimum horizontal distance of 24 m	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situation *closed* versus *open*, *open* versus *open* and *closed* versus *closed* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	Two bulkheads	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situation *closed* versus *open* and *open* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

3 Illustrations of segregation of containers on board hatchless containerships

3.1 The illustrations of this section apply to the segregation of containers which are transported on board hatchless containerships provided that stowage positions are properly fitted to give permanent stowage of the containers during transport.*

3.2 To determine locations in which containers are not permitted to contain dangerous goods that are incompatible with those in a reference container, the following method applies: container spaces (such as one container space, two container spaces) are identified in accordance with the applicable segregation provisions in the direct fore-and-aft and athwartship directions from the reference container. Lines are projected between the outermost corners of the containers occupying these spaces as shown in the figure. Containers located partially or completely between these lines and the reference container shall not contain dangerous goods that are incompatible with those in the reference container.

3.3 The deck/hold layout used for the illustrations is:

- two 20' containers stowed in a 40' container space
- distance between two 40' container spaces is 2 feet (60 cm)

3.4 Explanation of the segregation terms

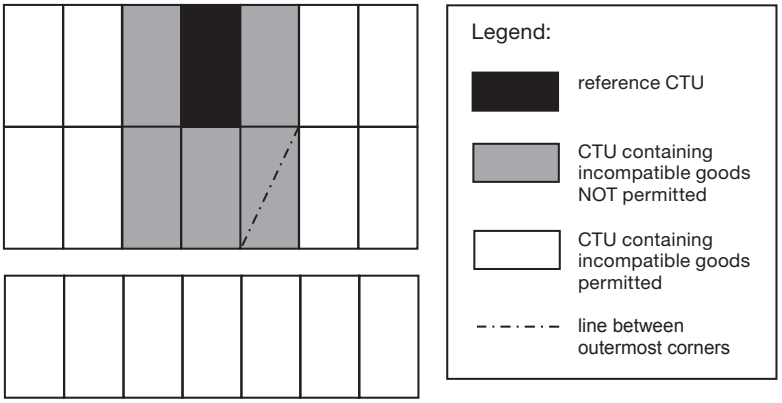
(1)	Reference container		
(2)	Container containing incompatible goods NOT permitted		
(3)	Container containing incompatible goods permitted		
(4)	Distance athwartships	(a) one container space	
		(b) two container spaces	
		(c) three container spaces	
(5)	Distance fore and aft	(a) one container space	
		(b) two container spaces	

Note 1: All bulkheads and decks shall be resistant to fire and liquids.

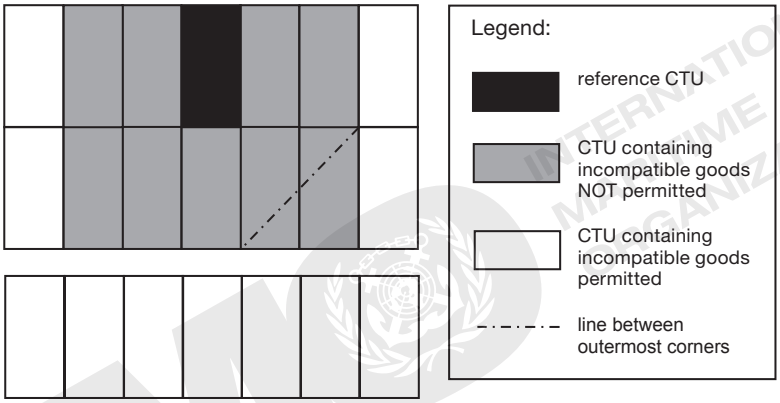
Note 2: When an illustration has more than one reference container only one should be used when interpreting the illustration. When an illustration contains several reference containers they have to be considered as different examples.

* For partly hatchless containerships with hatch-covered container cargo spaces, the illustrations of section 2 apply to such spaces.

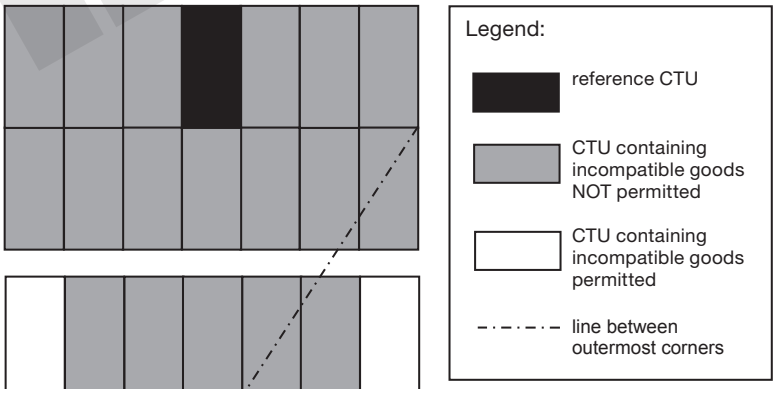
Situation fore and aft and athwartships: 1 container space



Situation fore and aft: 1 container space and athwartships: 2 container spaces

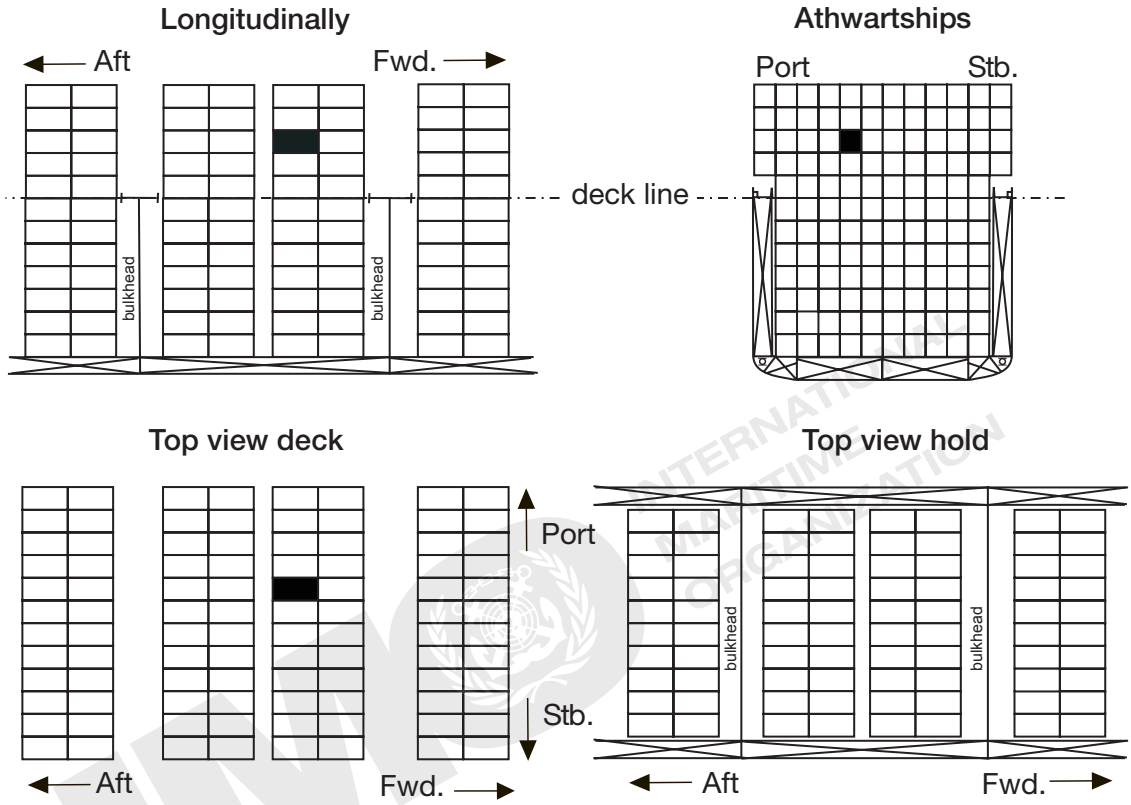


Situation fore and aft: 2 container spaces and athwartships: 3 container spaces



Note: All bulkheads and decks shall be resistant to fire and liquids.

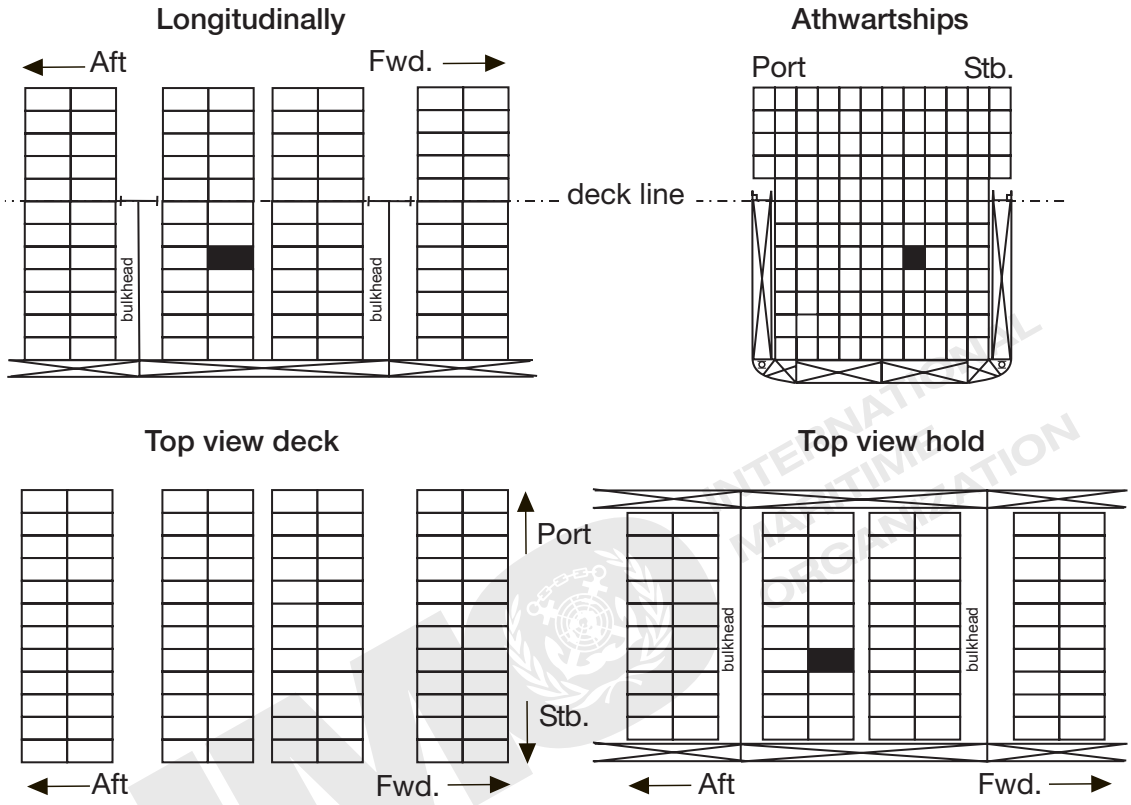
"AWAY FROM" .1		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	No restriction	One on top of the other permitted
ATHWARTSHIPS	No restriction	



1 – Situation *closed* versus *closed* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

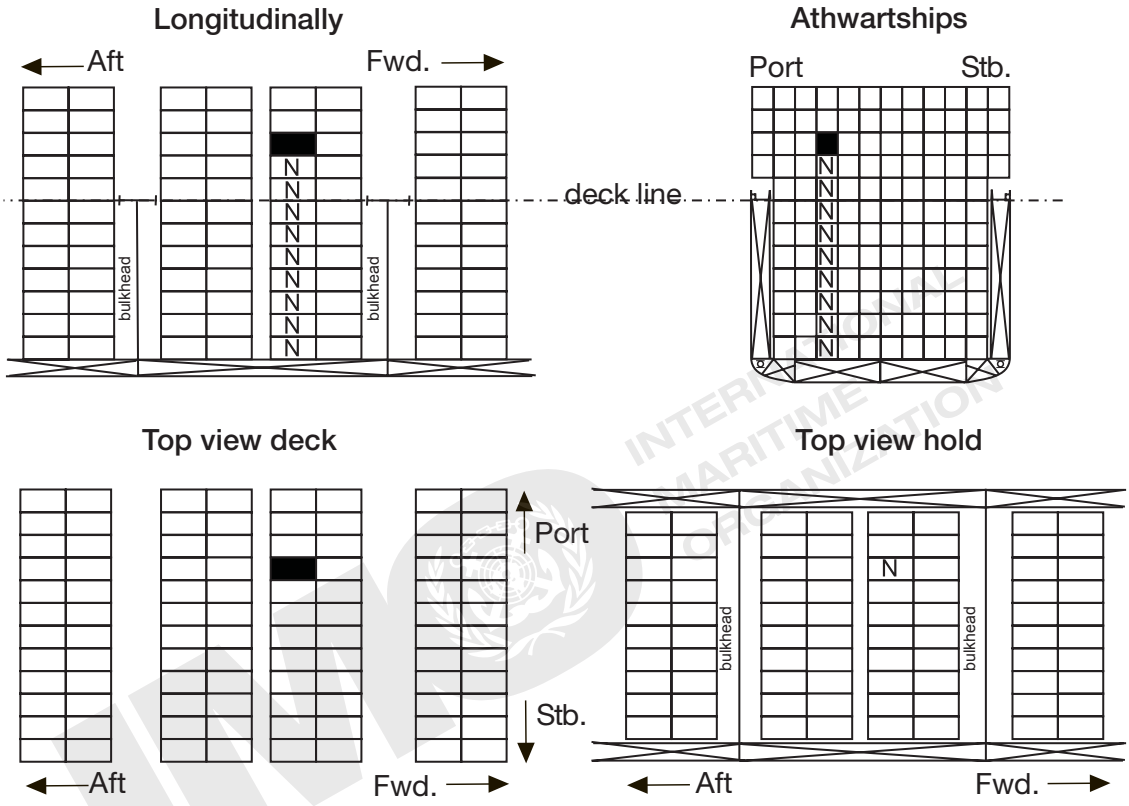
"AWAY FROM" .1		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	No restriction	One on top of the other permitted
ATHWARTSHIPS	No restriction	



1 – Situation *closed* versus *closed* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

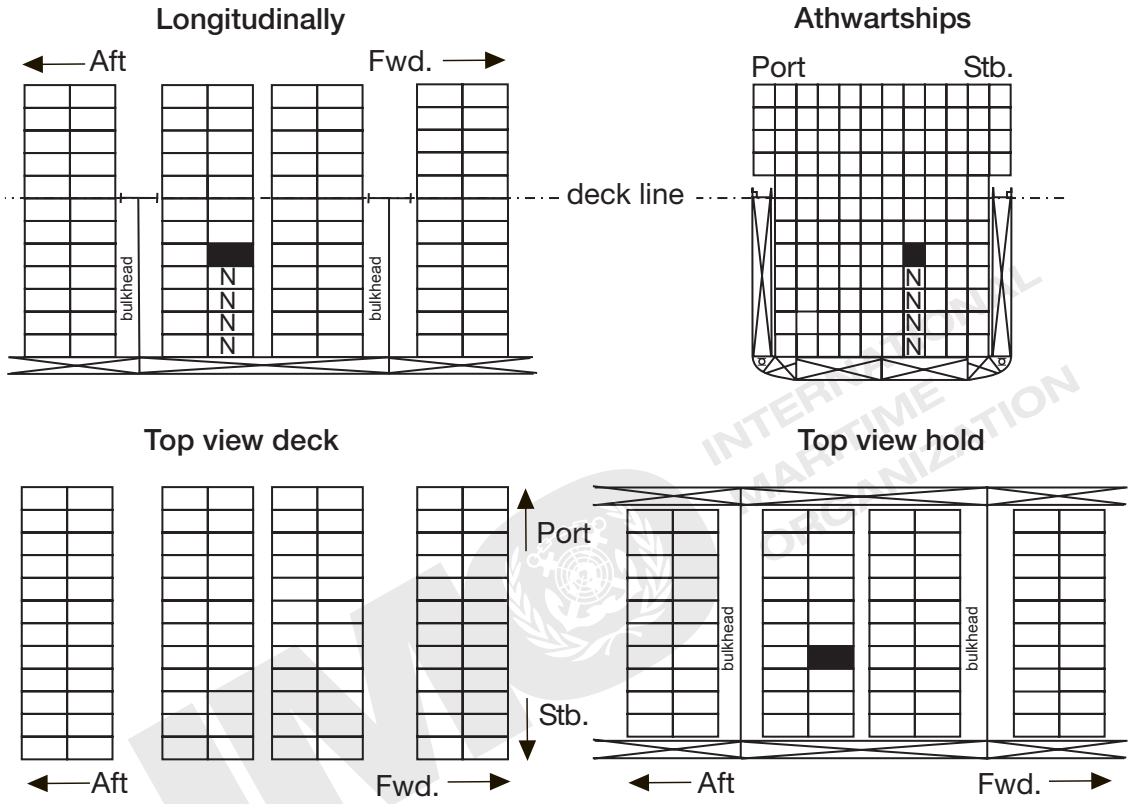
"AWAY FROM" .1		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	No restriction	Open on top of closed permitted Otherwise NOT in the same vertical line
ATHWARTSHIPS	No restriction	



1 – Situation *closed* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

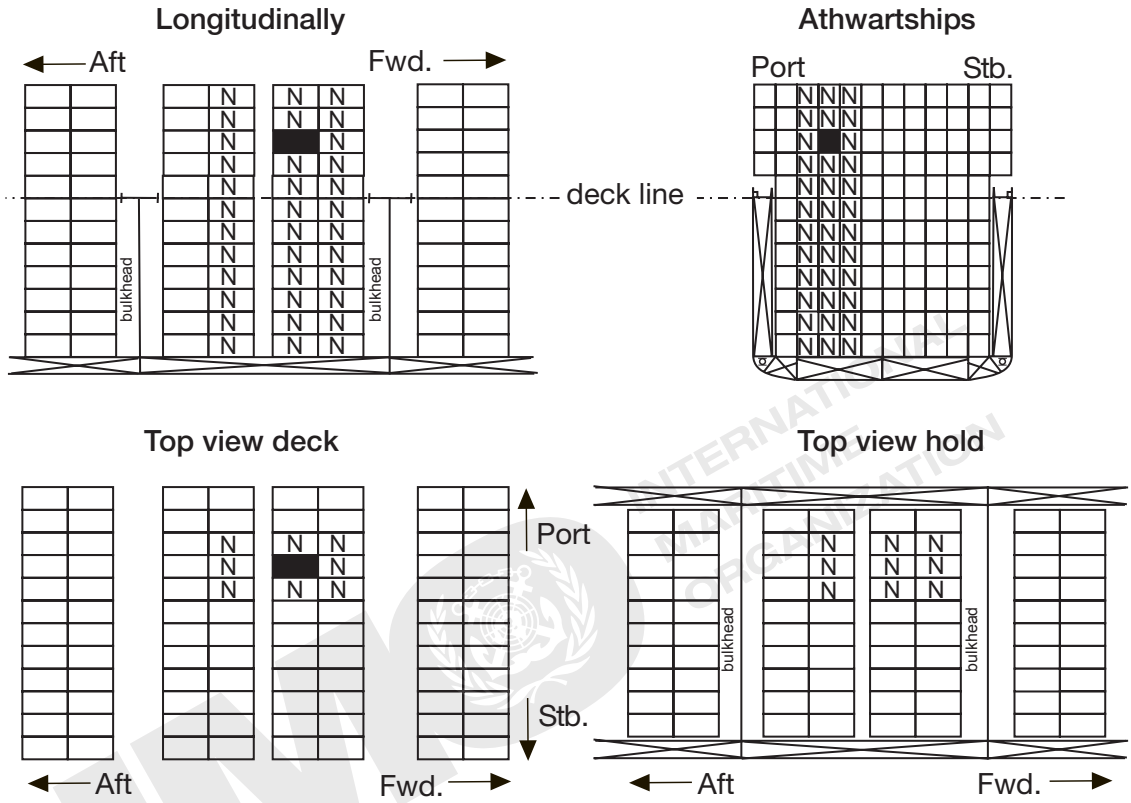
"AWAY FROM" .1		
CLOSED VERSUS OPEN	HORIZONTAL UNDER DECK	VERTICAL
FORE AND AFT	No restriction	Open on top of closed permitted Otherwise NOT in the same vertical line
ATHWARTSHIPS	No restriction	



1 – Situation *closed* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

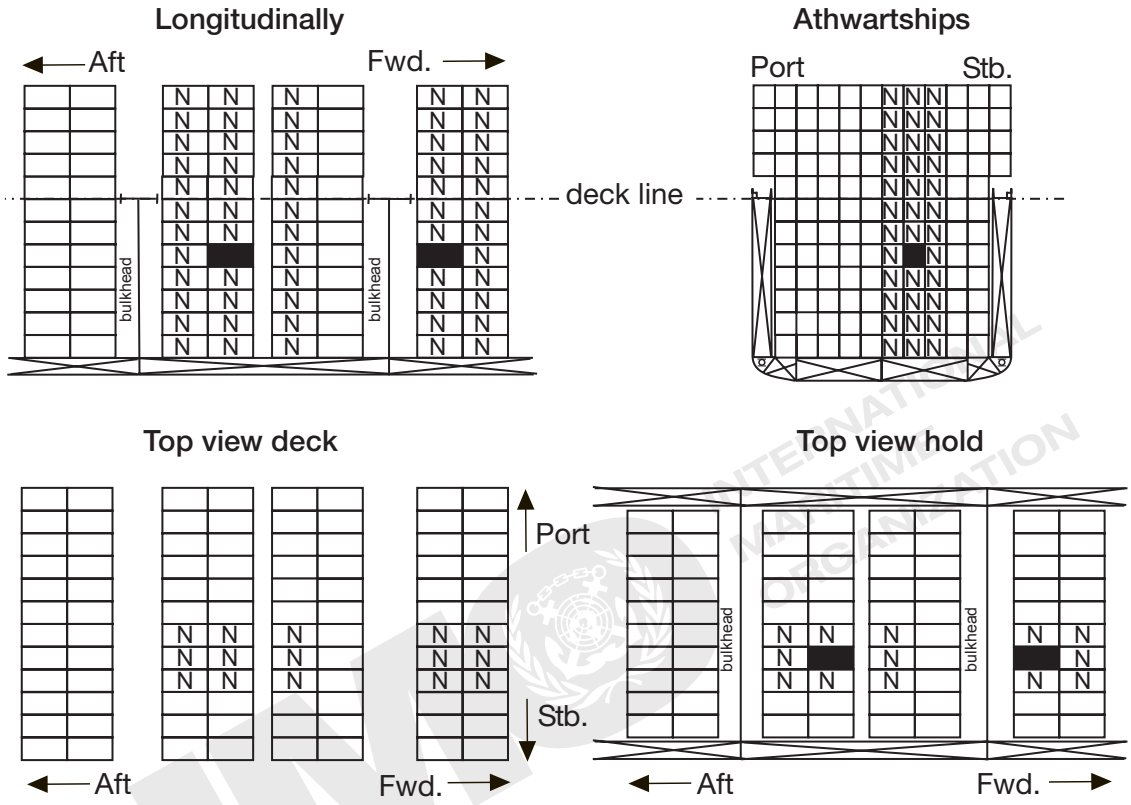
"AWAY FROM" .1		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space	NOT in the same vertical line
ATHWARTSHIPS	One container space	



1 – Situation *open* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

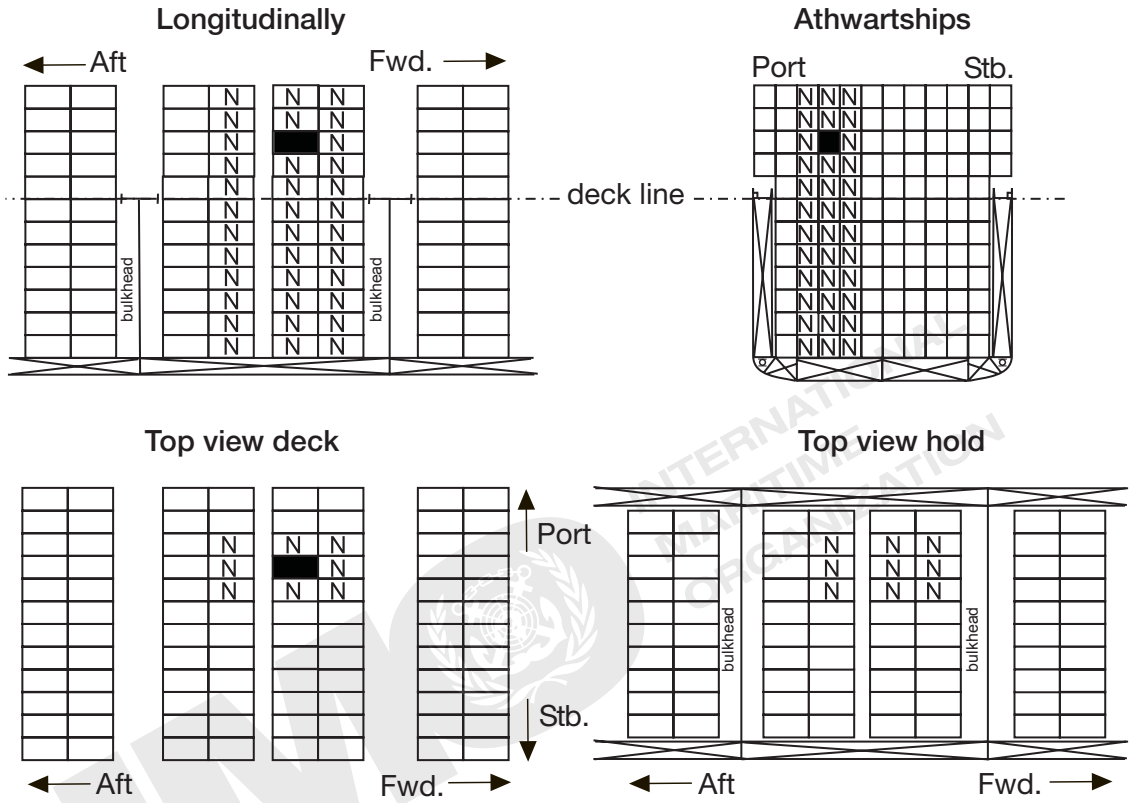
"AWAY FROM" .1		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One container space or one bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One container space	



1 – Situation *open* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

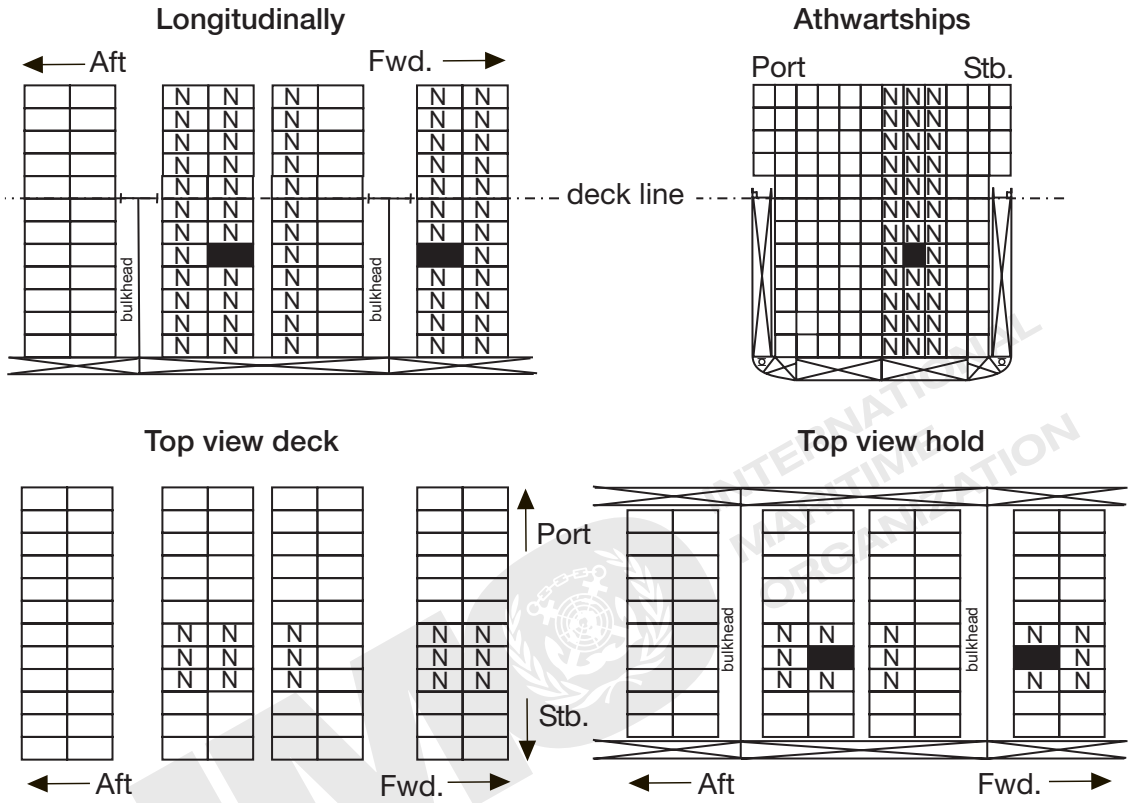
"SEPARATED FROM" .2		
CLOSED VERSUS CLOSED	HORIZONTAL ON DECK	VERTICAL
FORE AND AFT	One container space	NOT in the same vertical line
ATHWARTSHIPS	One container space	



2 – Situation *closed* versus *closed* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

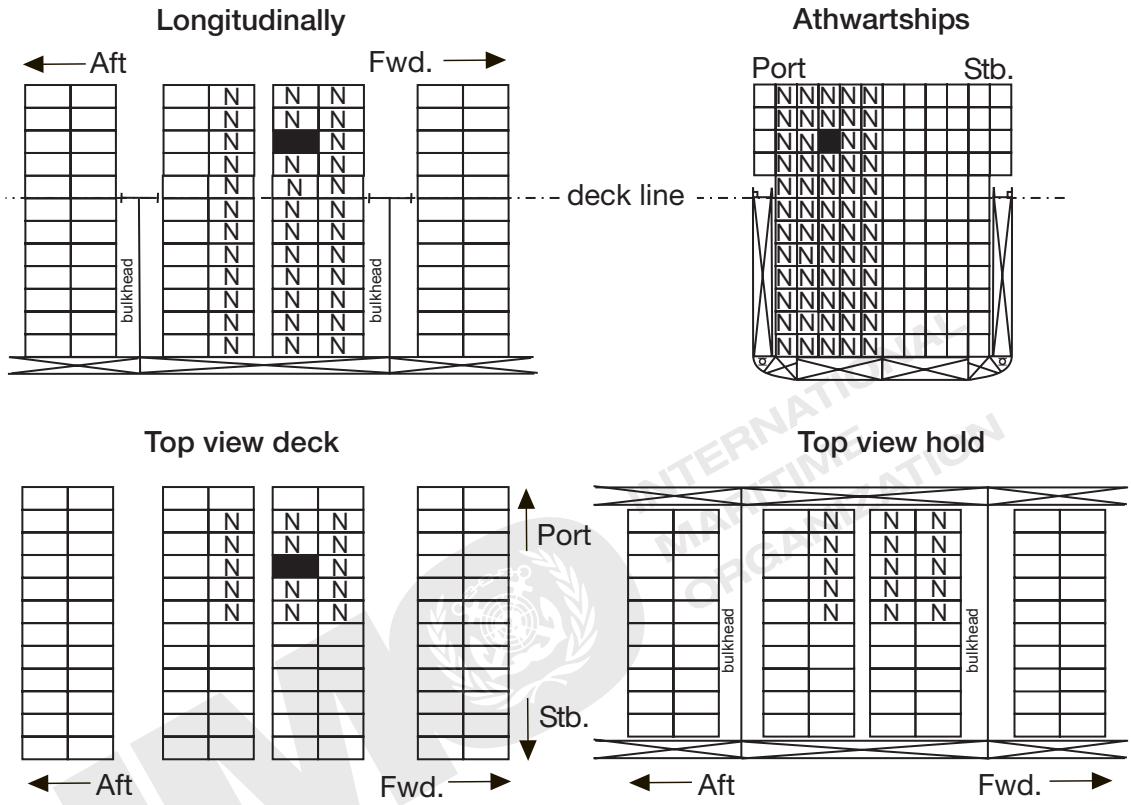
"SEPARATED FROM" .2		
CLOSED VERSUS CLOSED	HORIZONTAL UNDER DECK	VERTICAL
FORE AND AFT	One container space or one bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One container space	



2 – Situation *closed* versus *closed* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

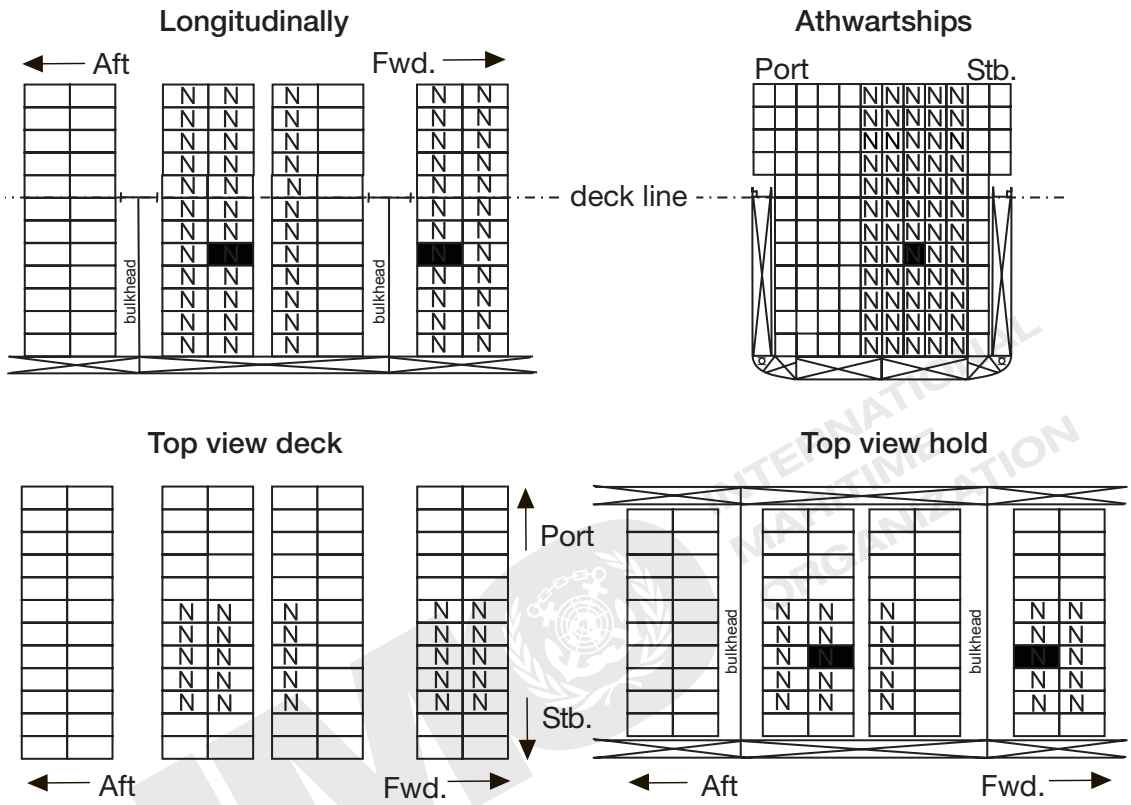
"SEPARATED FROM" .2		
CLOSED VERSUS OPEN	HORIZONTAL ON DECK	VERTICAL
FORE AND AFT	One container space	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces	



2 – Situation *closed* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

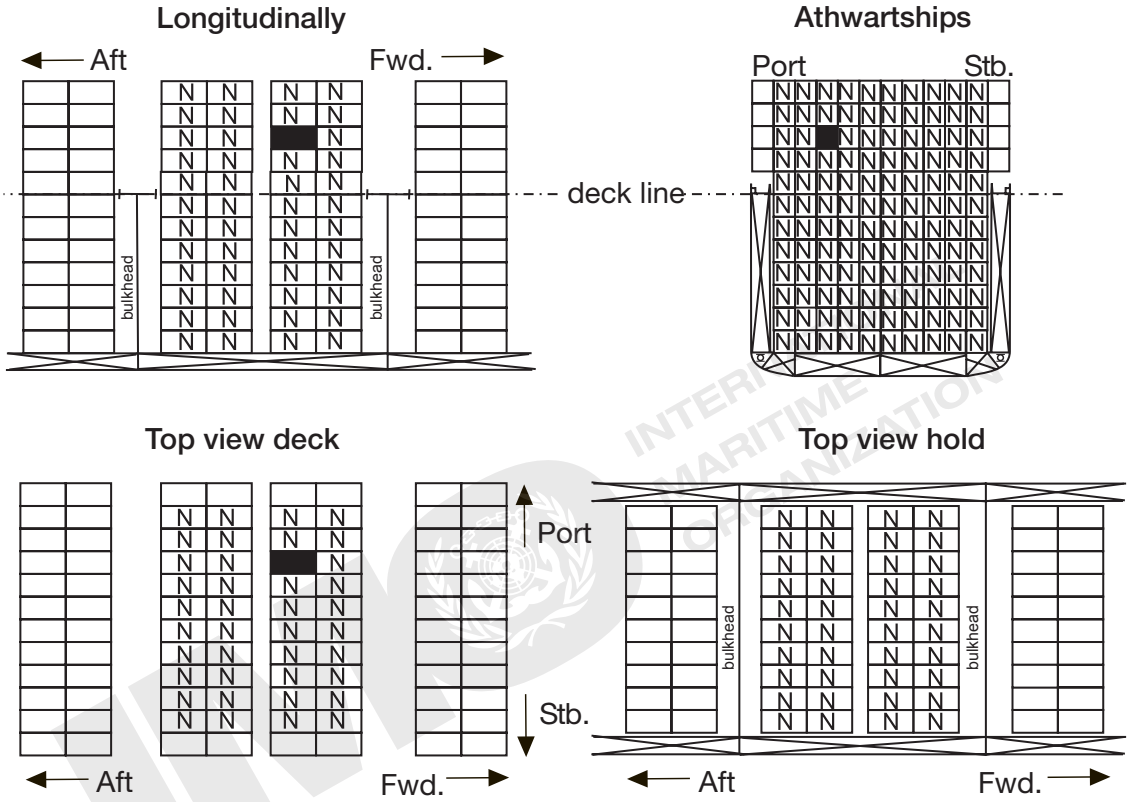
"SEPARATED FROM" .2		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One container space or one bulkhead	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces	



2 – Situation *closed* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

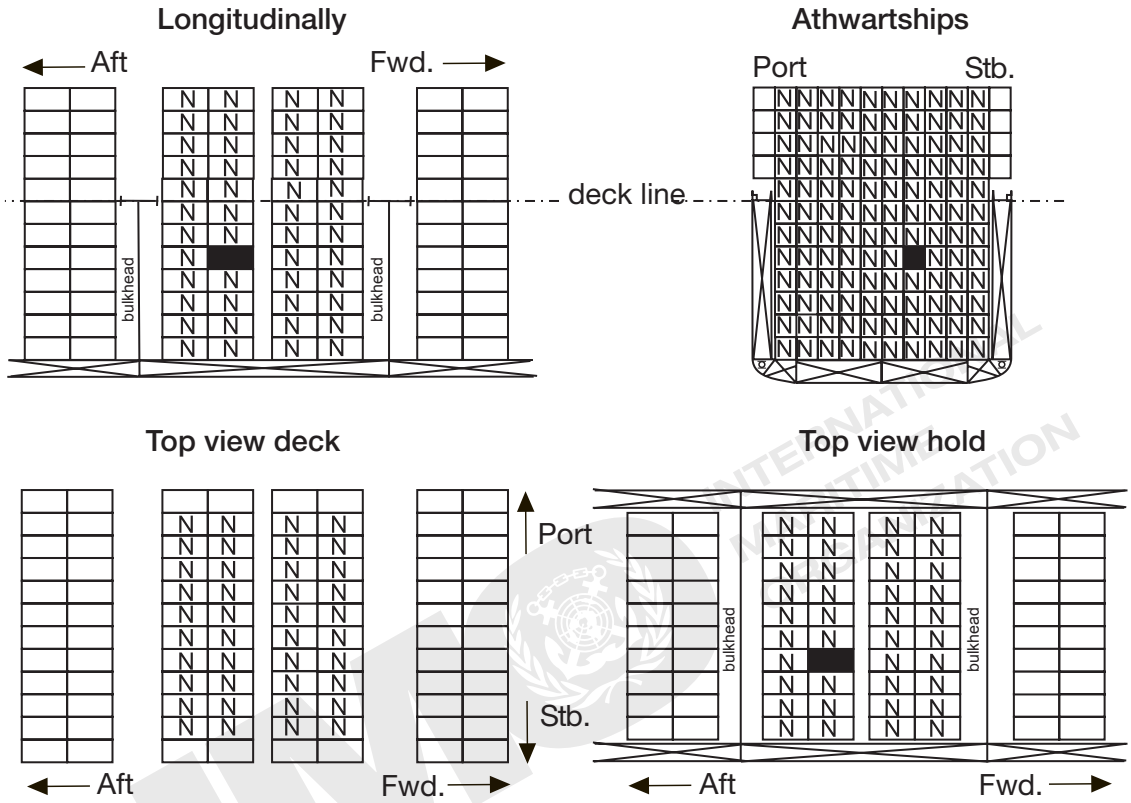
"SEPARATED FROM" .2		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces and not in or above same hold	



2 – Situation *open* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

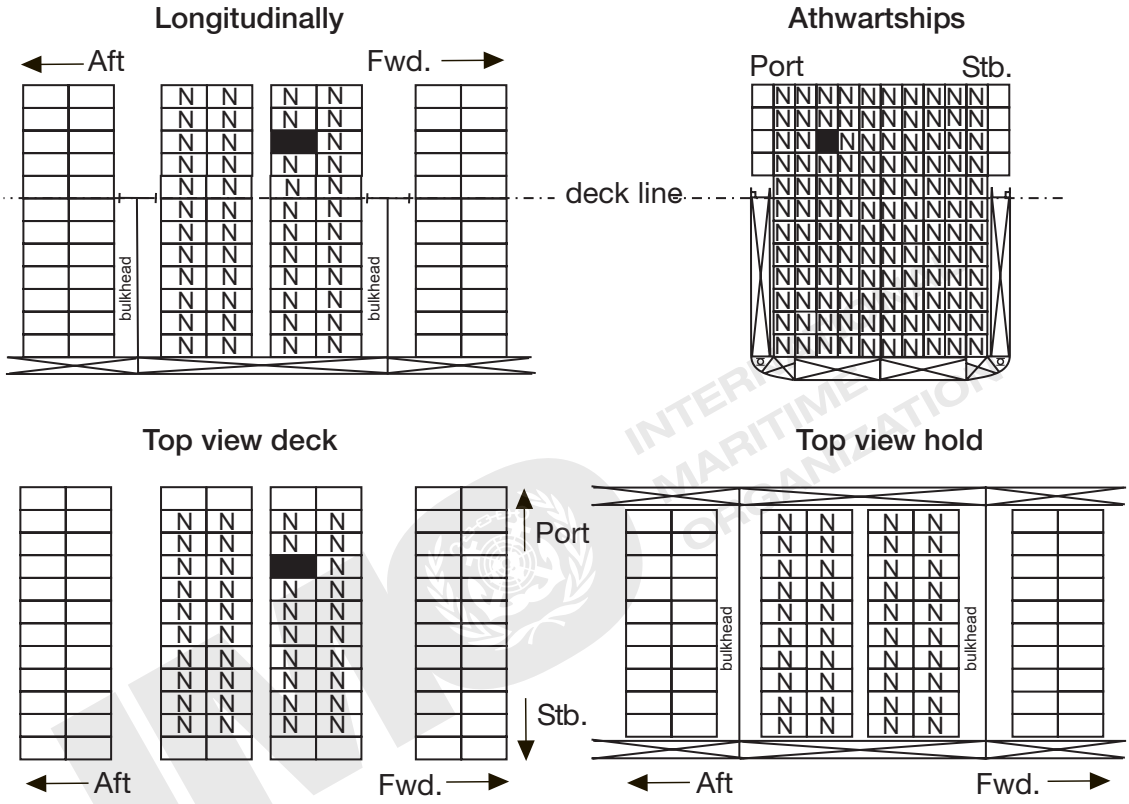
"SEPARATED FROM" .2		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One bulkhead	



2 – Situation *open* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

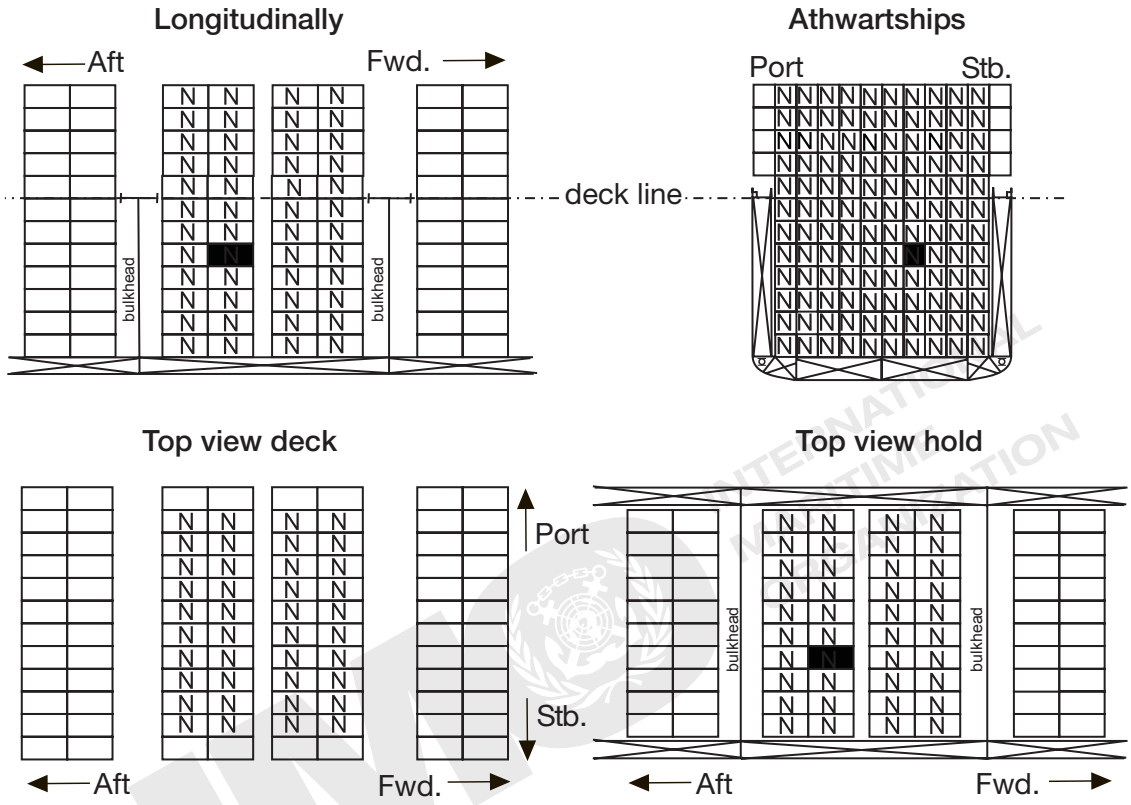
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	One container space and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces and not above same hold	



3 – Situation *closed* versus *closed* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

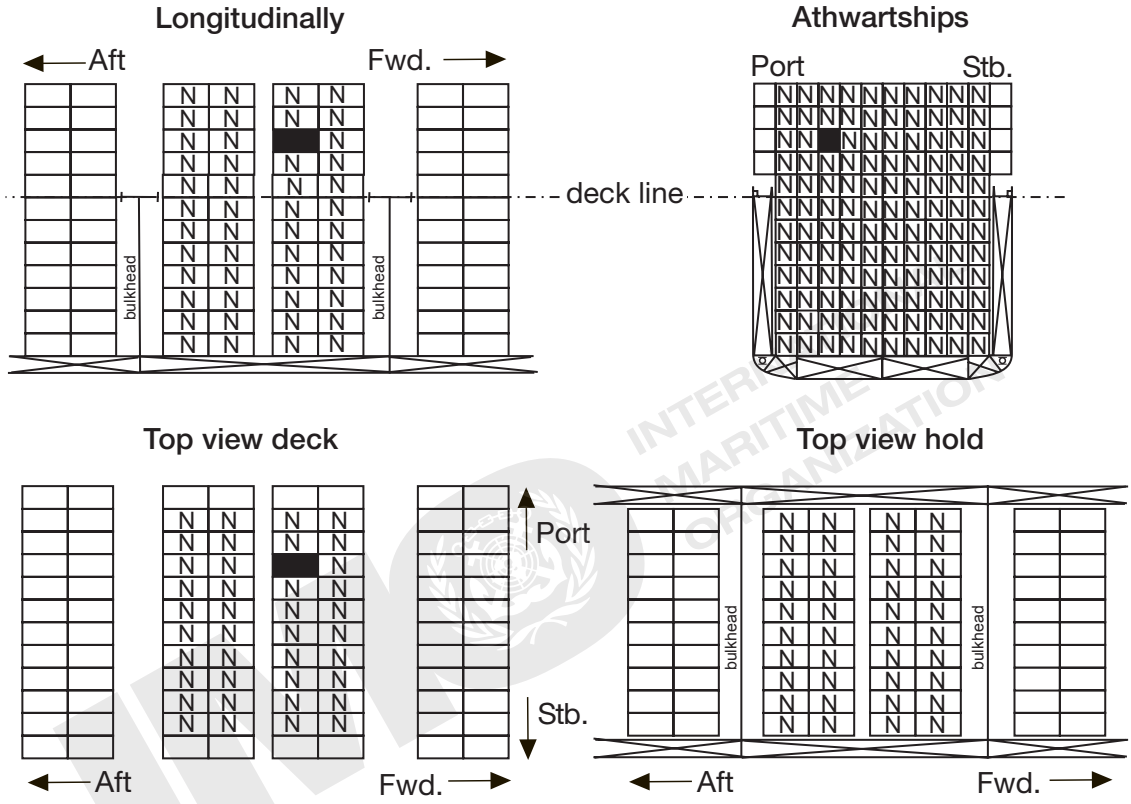
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS CLOSED	HORIZONTAL UNDER DECK	VERTICAL
FORE AND AFT	One bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One bulkhead	



3 – Situation *closed* versus *closed* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

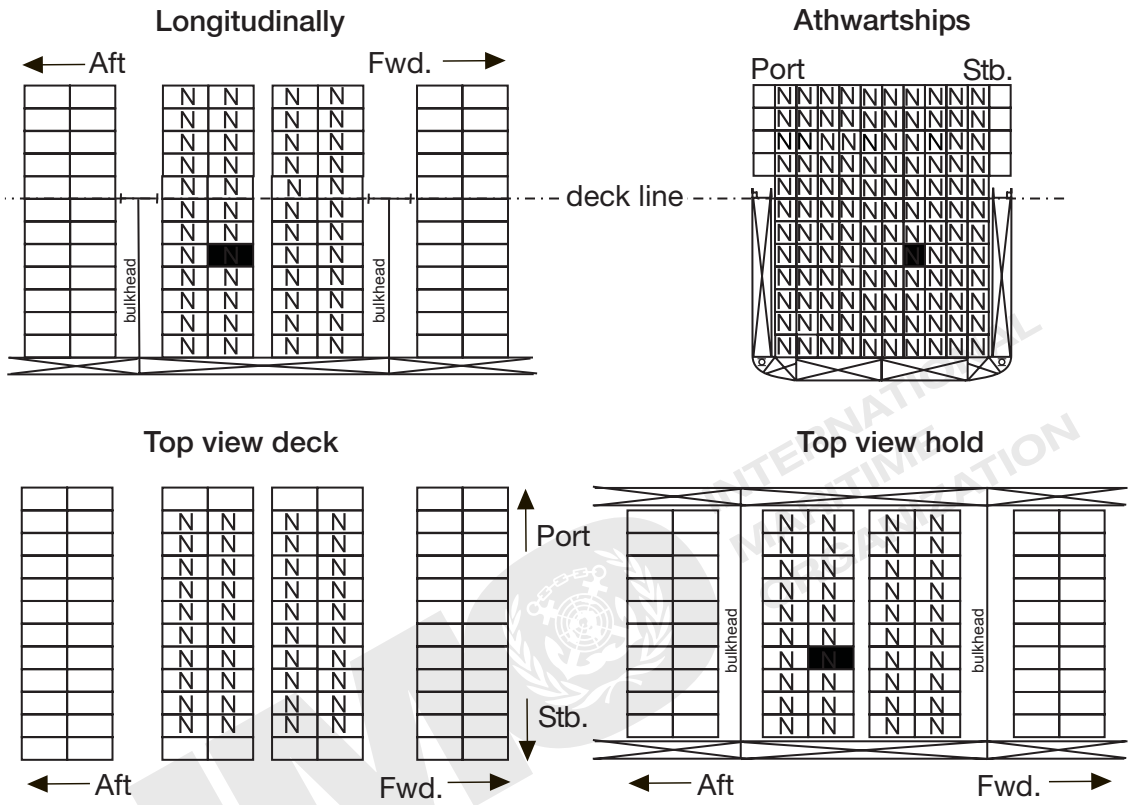
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS OPEN	HORIZONTAL ON DECK	VERTICAL
FORE AND AFT	One container space and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Two container spaces and not above same hold	



3 – Situation *closed* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

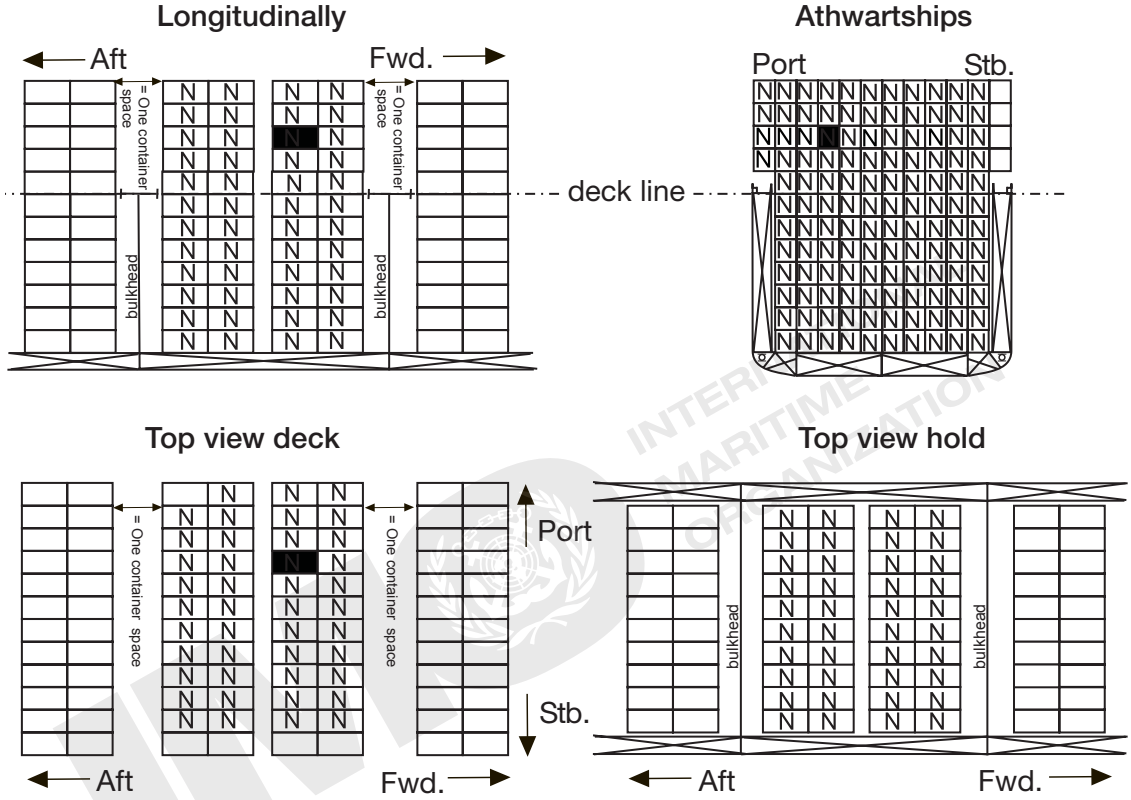
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead	NOT in the same vertical line
ATHWARTSHIPS	One bulkhead	



3 – Situation *closed* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

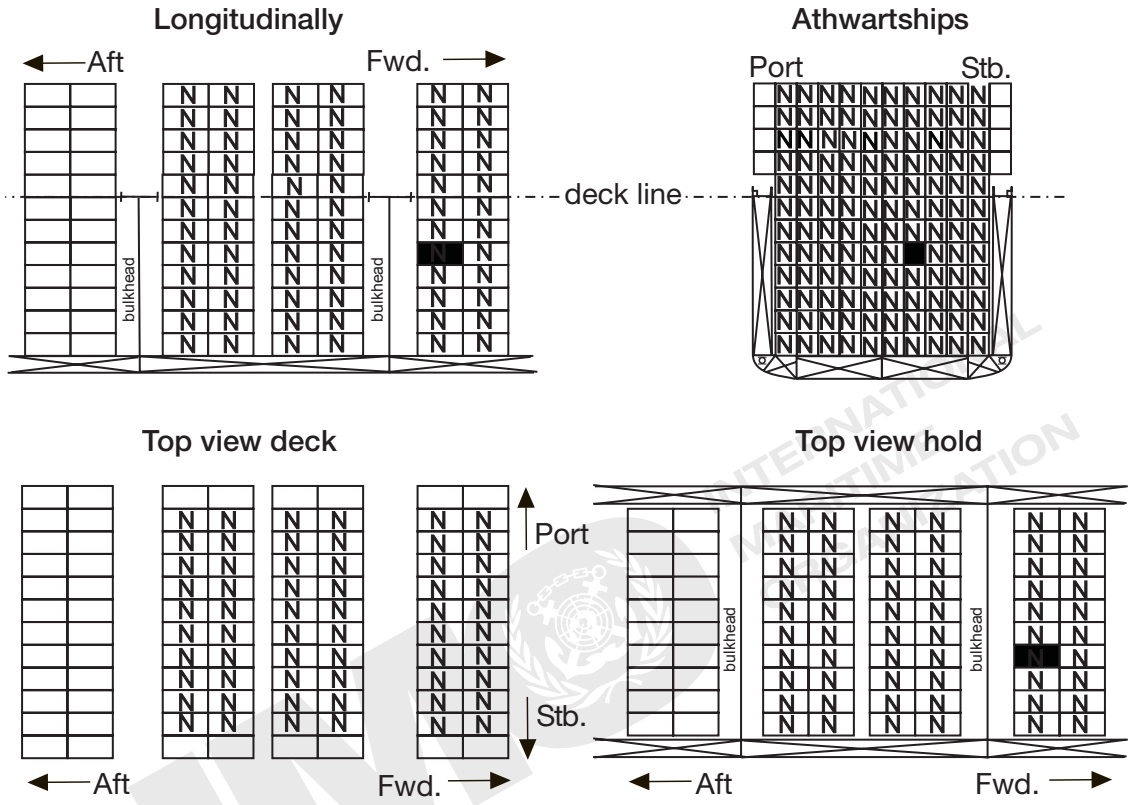
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Two container spaces and not in or above same hold	NOT in the same vertical line
ATHWARTSHIPS	Three container spaces and not above same hold	



3 – Situation *open* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

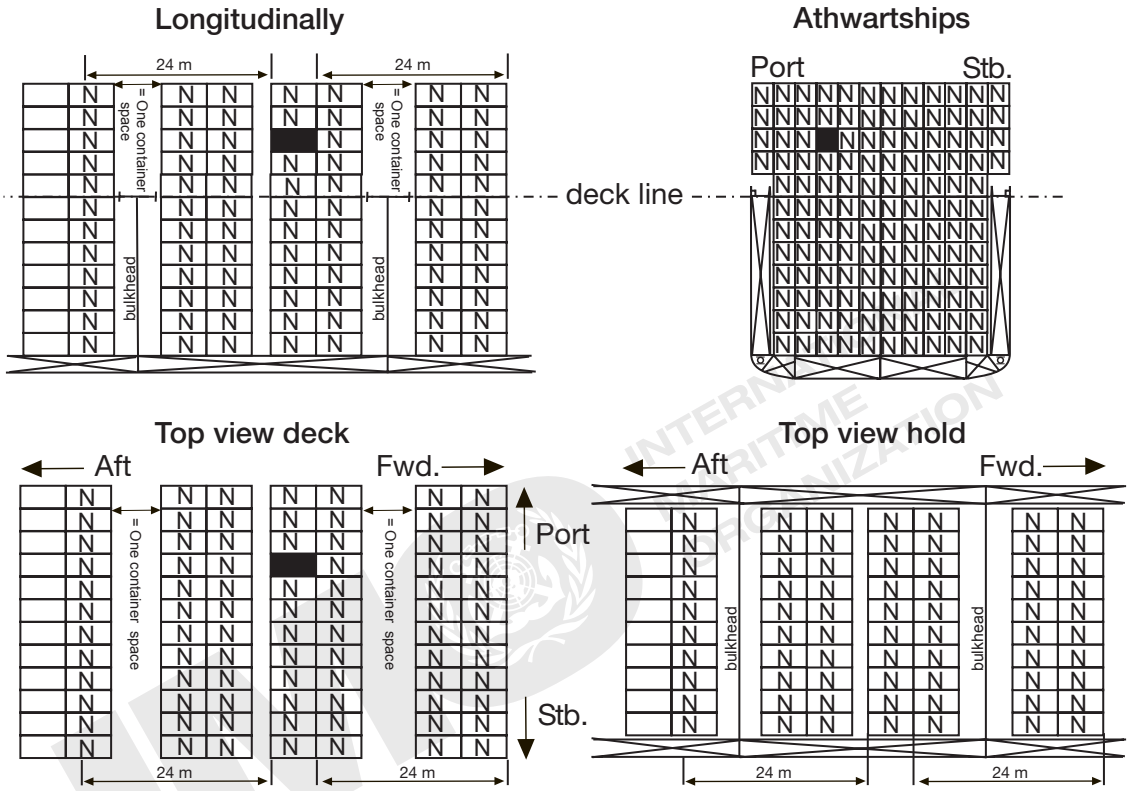
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	Two bulkheads	NOT in the same vertical line
ATHWARTSHIPS	Two bulkheads	



3 – Situation *open* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

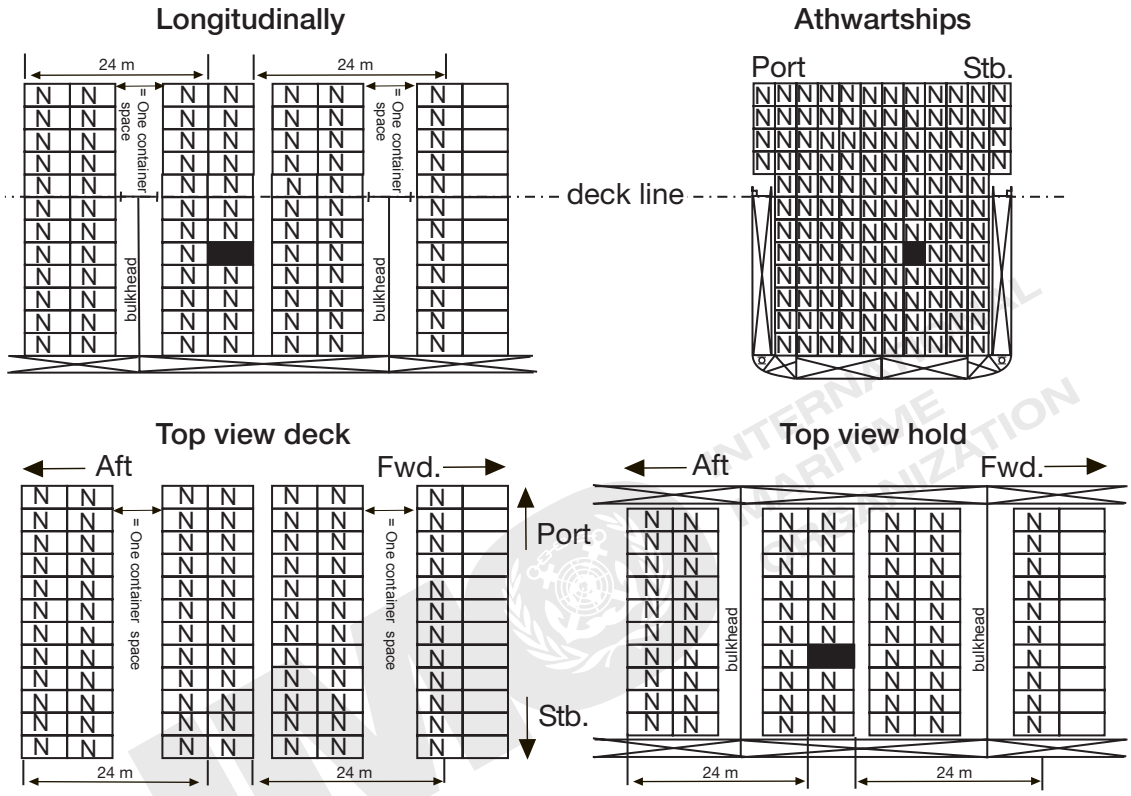
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Minimum horizontal distance of 24 m and not in or above same hold	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situation *closed* versus *closed* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	One bulkhead and minimum horizontal distance of 24 m*	Prohibited
ATHWARTSHIPS	Prohibited	

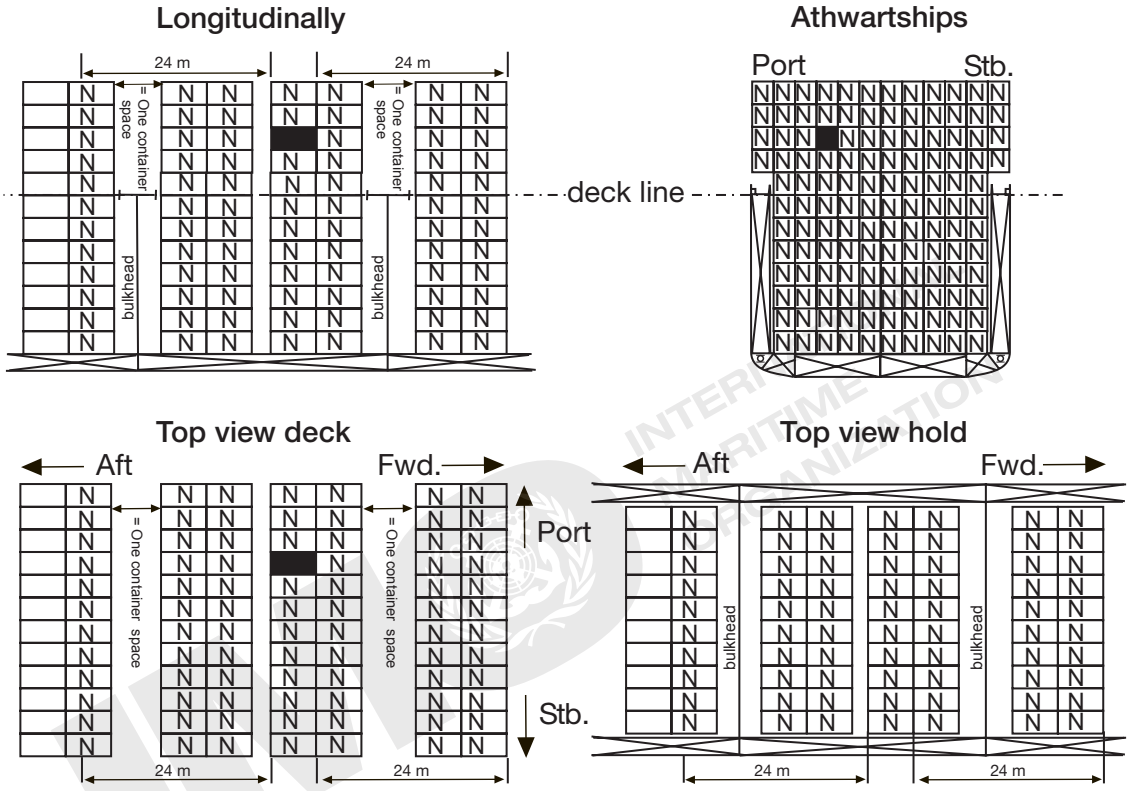


4 – Situation *closed* versus *closed* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

* Containers not less than 6 m from intervening bulkhead.

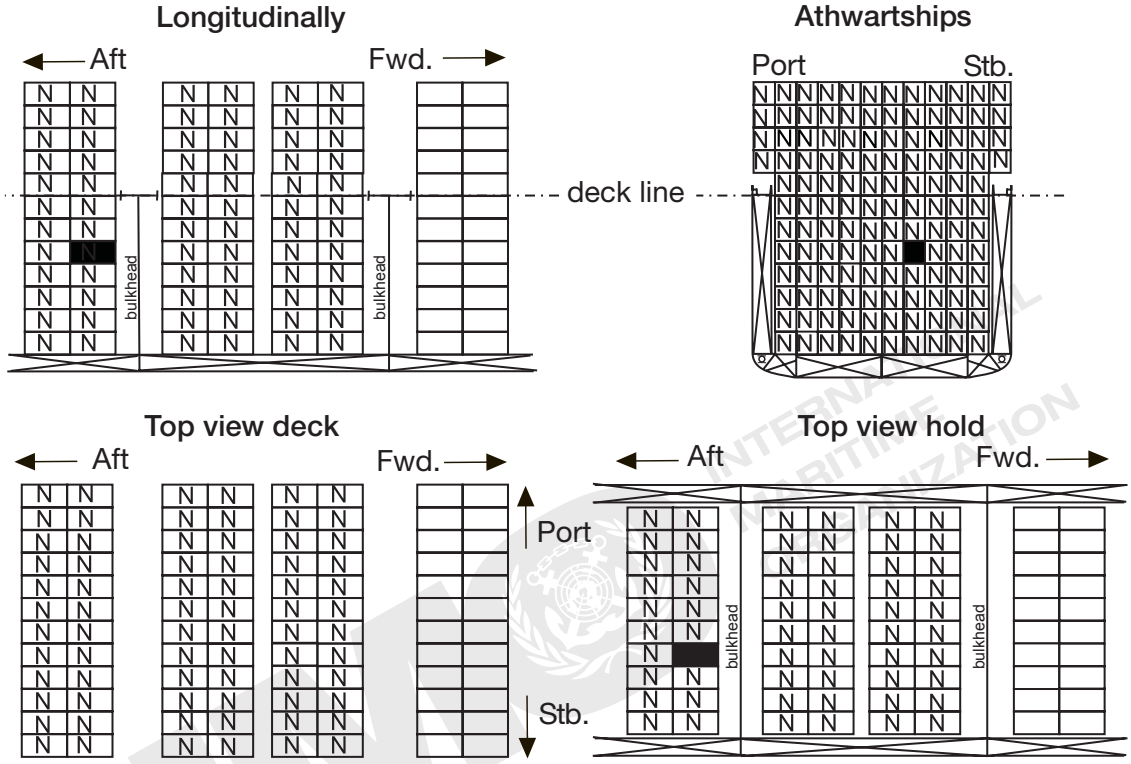
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	ON DECK	
FORE AND AFT	Minimum horizontal distance of 24 m and not above same hold	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situations *closed* versus *open* and *open* versus *open* – ON DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN OR OPEN VERSUS OPEN	HORIZONTAL	VERTICAL
	UNDER DECK	
FORE AND AFT	Two bulkheads	Prohibited
ATHWARTSHIPS	Prohibited	



4 – Situations *closed* versus *open* and *open* versus *open* – UNDER DECK

Note: All bulkheads and decks shall be resistant to fire and liquids.

4 Illustrations of segregation of cargo transport units on board ro-ro ships

4.1 The illustrations of this section apply to the segregation of cargo transport units which are transported on board roll-on/roll-off ships or in roll-on/roll off cargo spaces.*

4.2 To determine locations in which cargo transport units are not permitted to contain dangerous goods that are incompatible with those in a reference cargo transport unit, the following method applies: locations where incompatible dangerous goods are not permitted with respect to the referenced cargo transport unit are first determined in the direct fore and aft and athwartships directions. The relevant segregation distances to be considered in both directions are defined in metres as shown in the figure. Cargo transport units located partially or completely within these distances from the reference cargo transport unit shall not contain dangerous goods that are incompatible with those in the reference cargo transport unit.

4.3 The standard dimension of a cargo transport unit used for the illustrations is:

- length: 12 m
- width: 2.5 m

4.4 Explanation of the segregation terms

(1) Reference cargo transport unit . . . . . 

(2) CTU containing incompatible goods NOT permitted . . . . . 

(3) CTU containing incompatible goods permitted. . . . . 

(4) Distance athwartships:

(a) 3 m . . . . . 

(b) 6 m . . . . . 

(c) 12 m. . . . . 

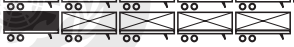
(d) 24 m. . . . . 

(5) Distance fore and aft:

(a) 3 m, 6 m and 12 m . . . . . 

(b) 24 m . . . . . 

(c) 36 m . . . . . 

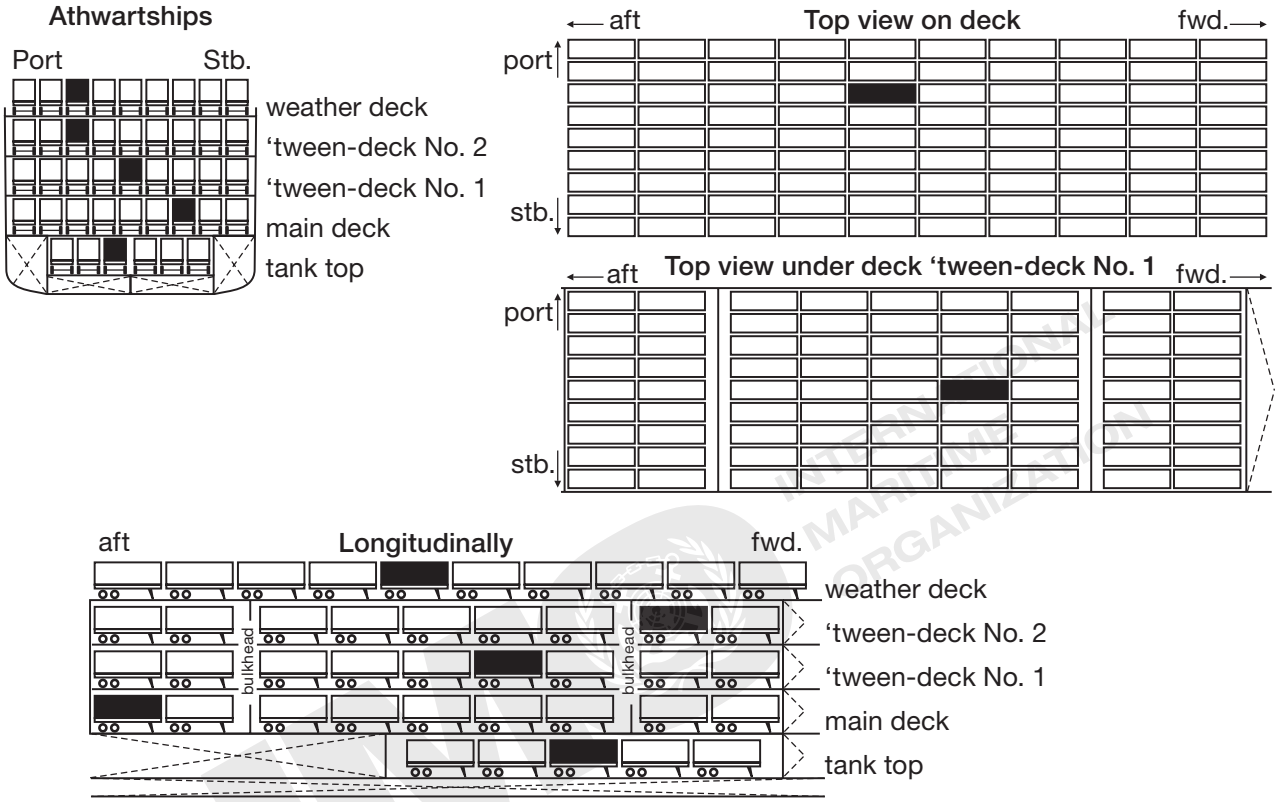
(d) 48 m . . . . . 

Note 1: All bulkheads and decks shall be resistant to fire and liquid.

Note 2: When an illustration has more than one reference cargo transport units, only one should be used when interpreting the illustration. When an illustration contains several reference cargo transport units, they have to be considered as different examples.

* For ro-ro ships which carry containers on decks or in holds, the illustrations of section 2 apply to such spaces.

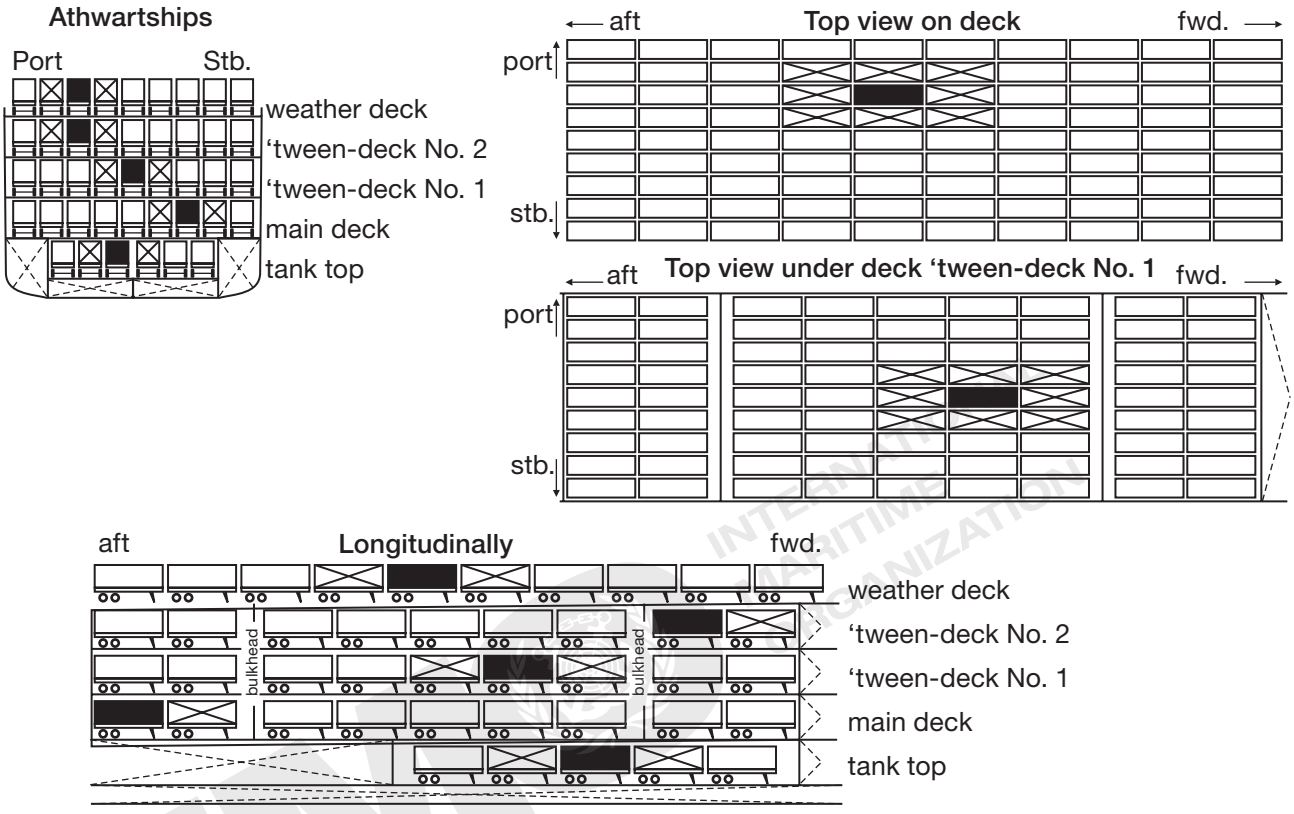
"AWAY FROM" .1		
CLOSED VERSUS CLOSED OR CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	No restriction	No restriction
ATHWARTSHIPS	No restriction	No restriction



1 – Situations *closed* versus *closed* and *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

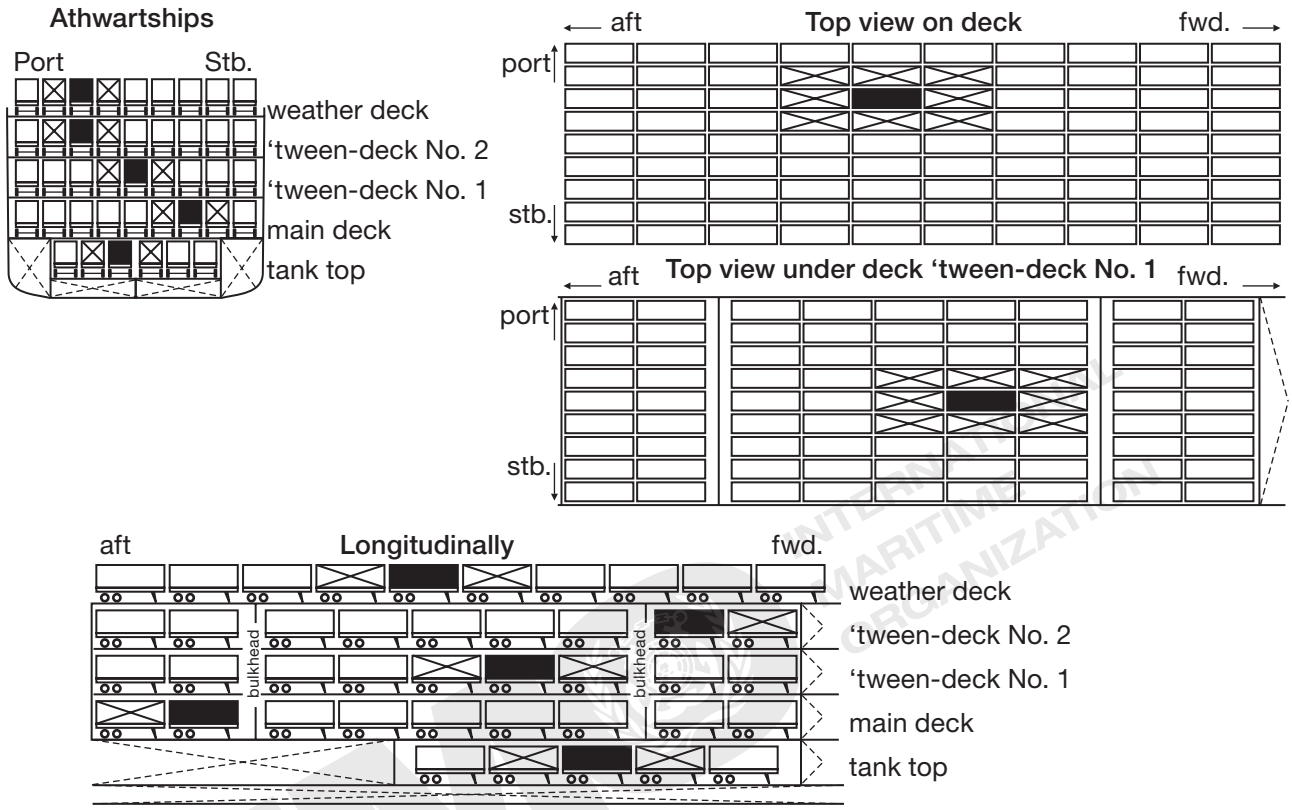
"AWAY FROM" .1		
OPEN VERSUS OPEN	**ON DECK**	**UNDER DECK**
FORE AND AFT	At least 3 m	At least 3 m
ATHWARTSHIPS	At least 3 m	At least 3 m



1 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

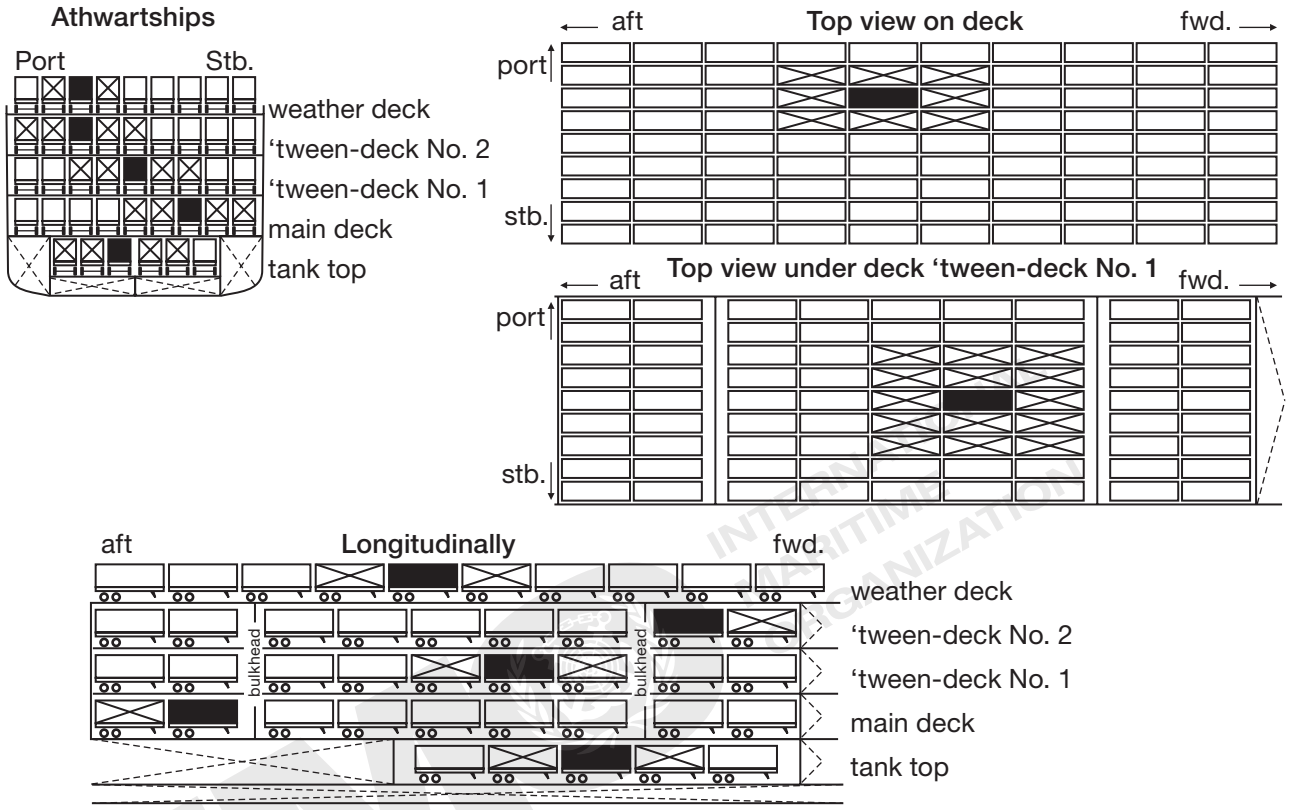
"SEPARATED FROM" .2		
CLOSED VERSUS CLOSED	ON DECK	UNDER DECK
FORE AND AFT	At least 6 m	At least 6 m or ONE bulkhead
ATHWARTSHIPS	At least 3 m	At least 3 m or ONE bulkhead



2 – Situation *closed* versus *closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

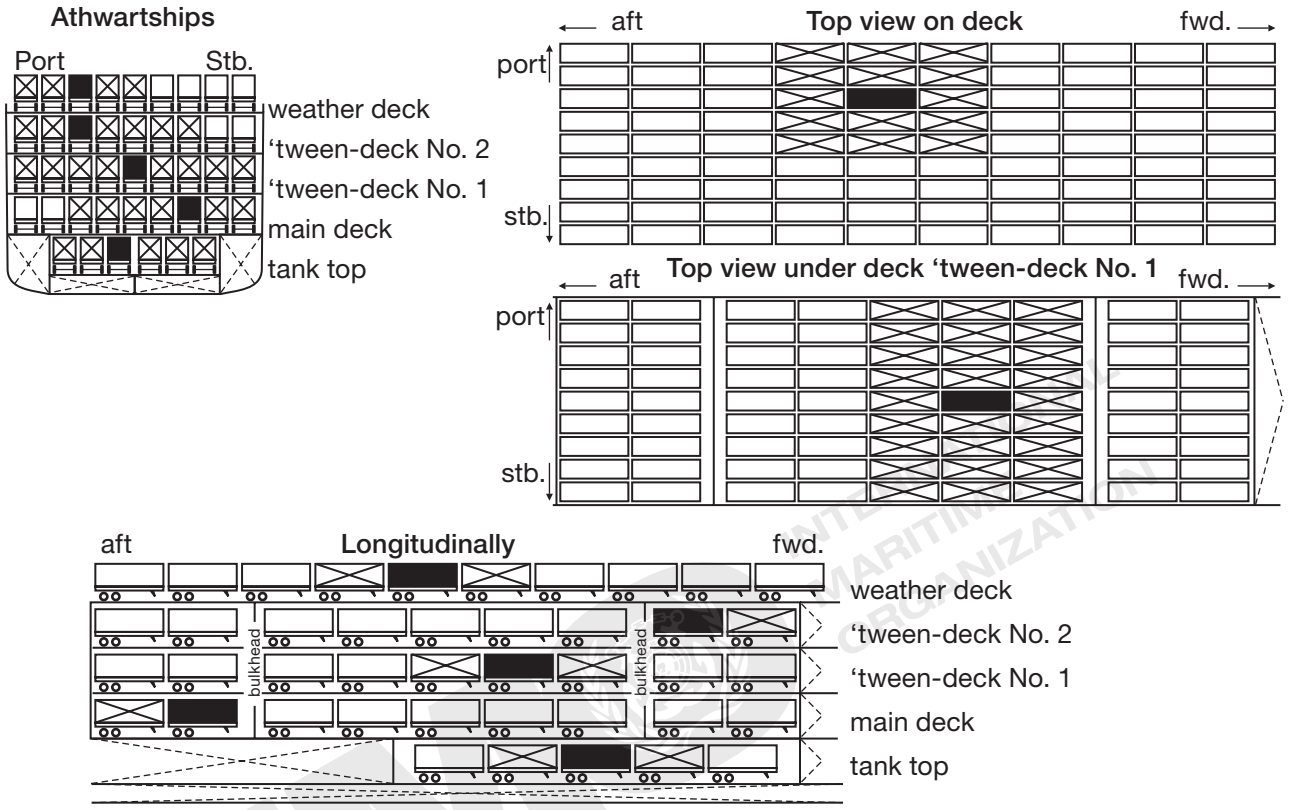
"SEPARATED FROM" .2		
CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 6 m	At least 6 m or ONE bulkhead
ATHWARTSHIPS	At least 3 m	At least 6 m or ONE bulkhead



2 – Situation *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

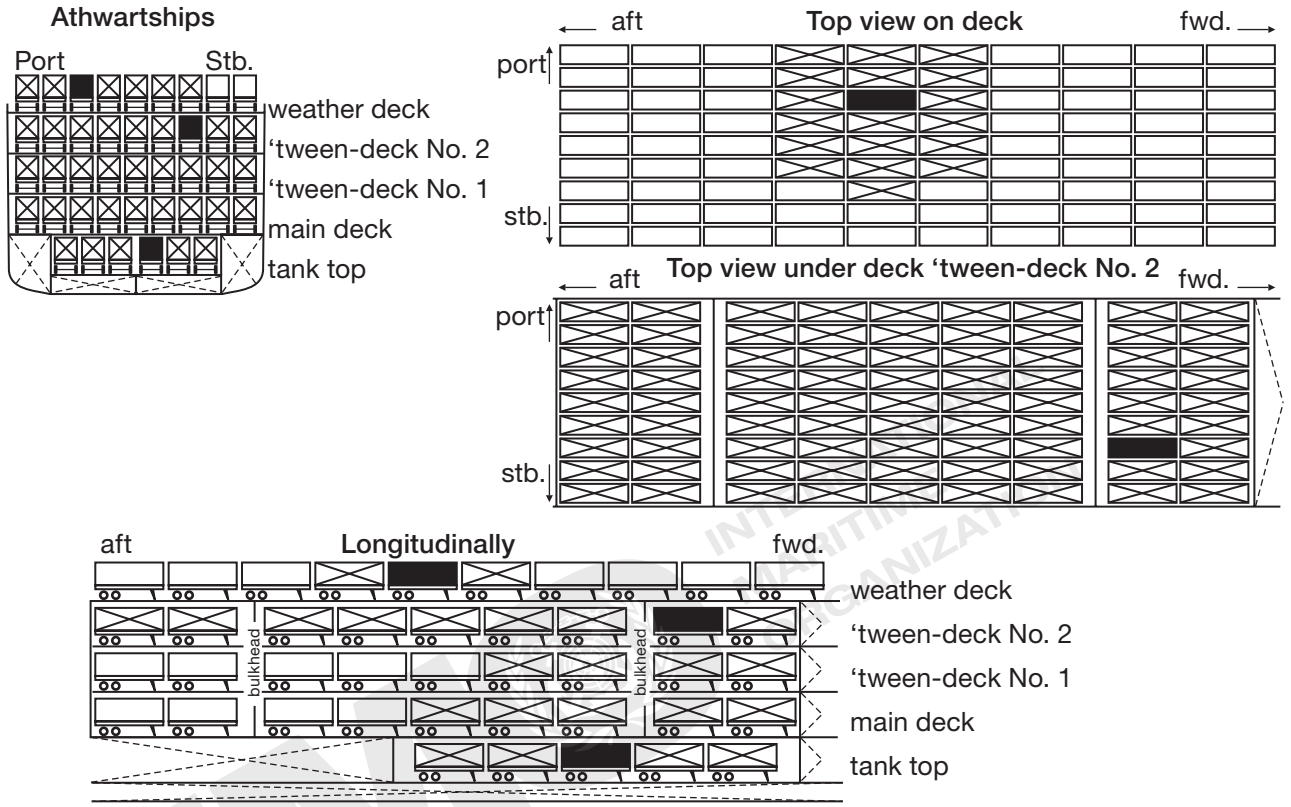
"SEPARATED FROM" .2		
OPEN VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 6 m	At least 12 m or ONE bulkhead
ATHWARTSHIPS	At least 6 m	At least 12 m or ONE bulkhead



2 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

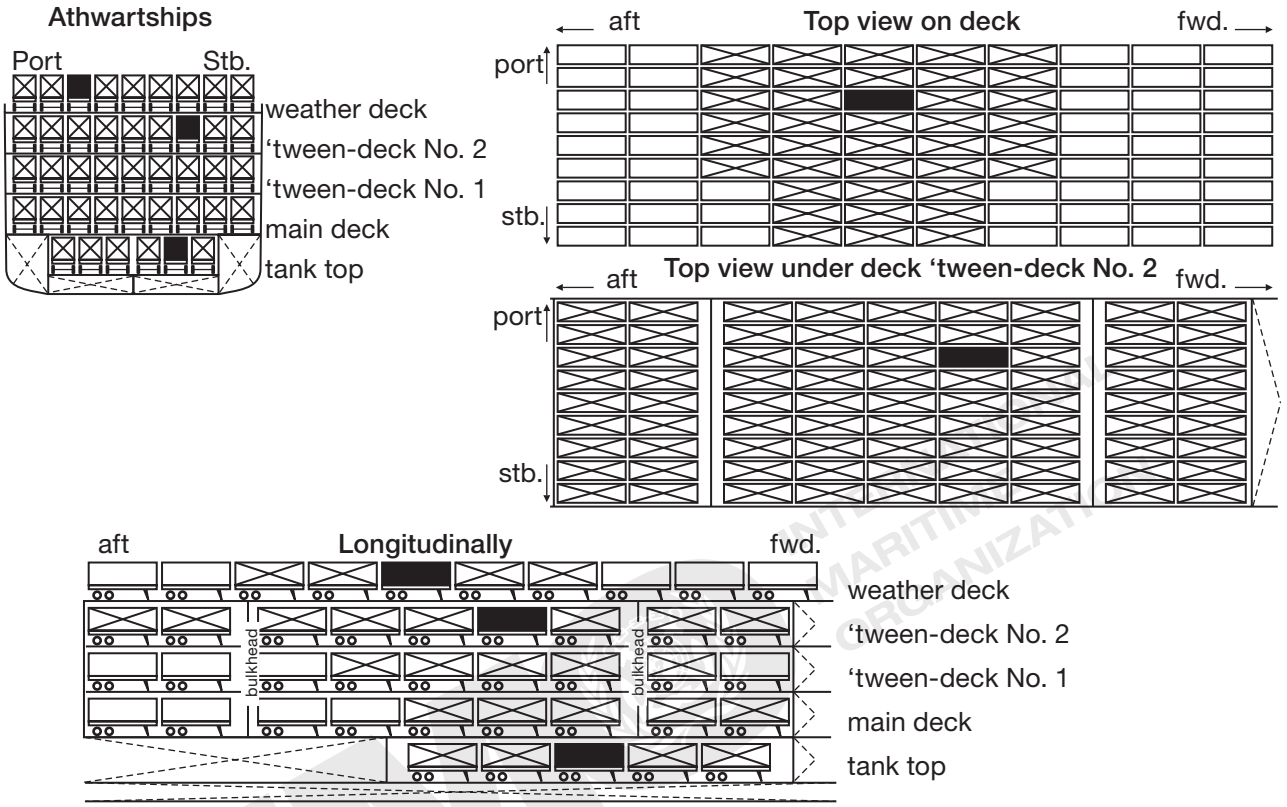
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS CLOSED	ON DECK	UNDER DECK
FORE AND AFT	At least 12 m	At least 24 m + deck
ATHWARTSHIPS	At least 12 m	At least 24 m + deck



3 – Situation *closed* versus *closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

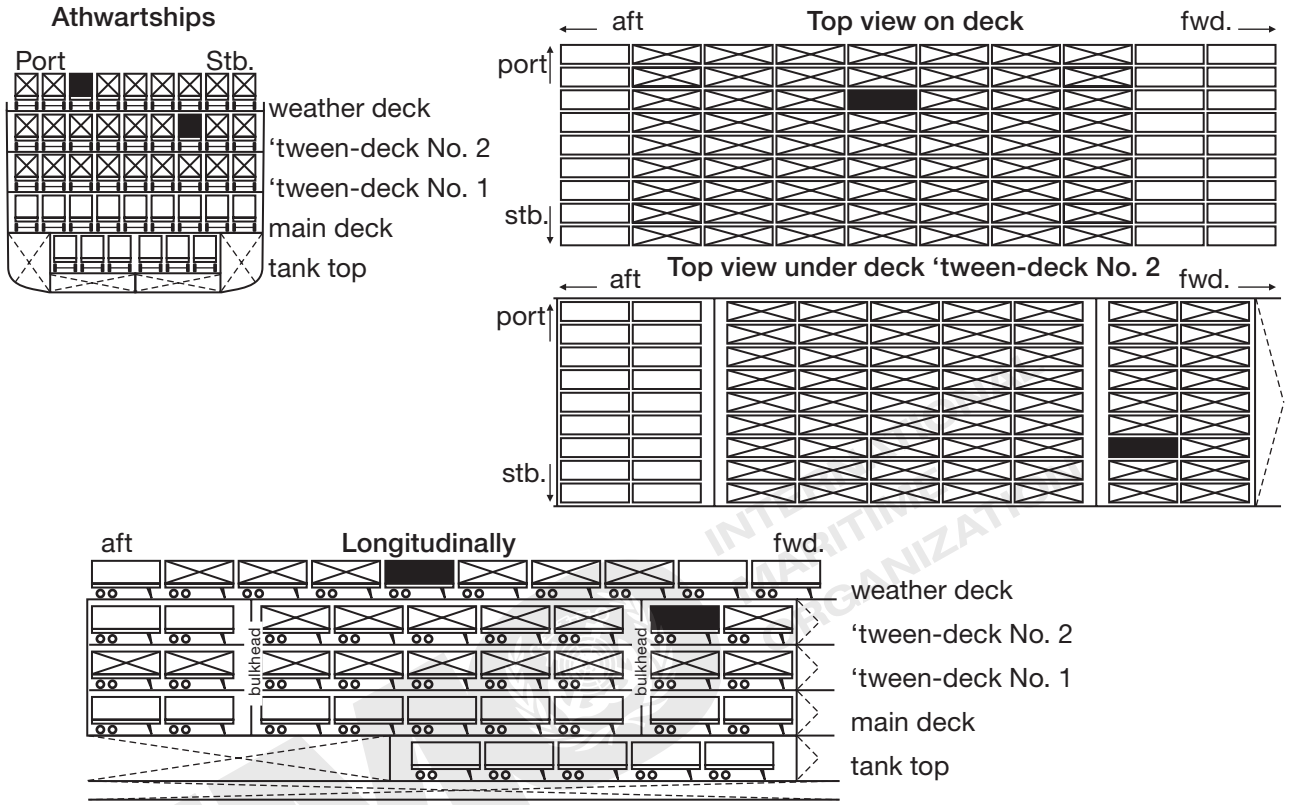
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 24 m	At least 24 m + deck
ATHWARTSHIPS	At least 24 m	At least 24 m + deck



3 – Situation *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

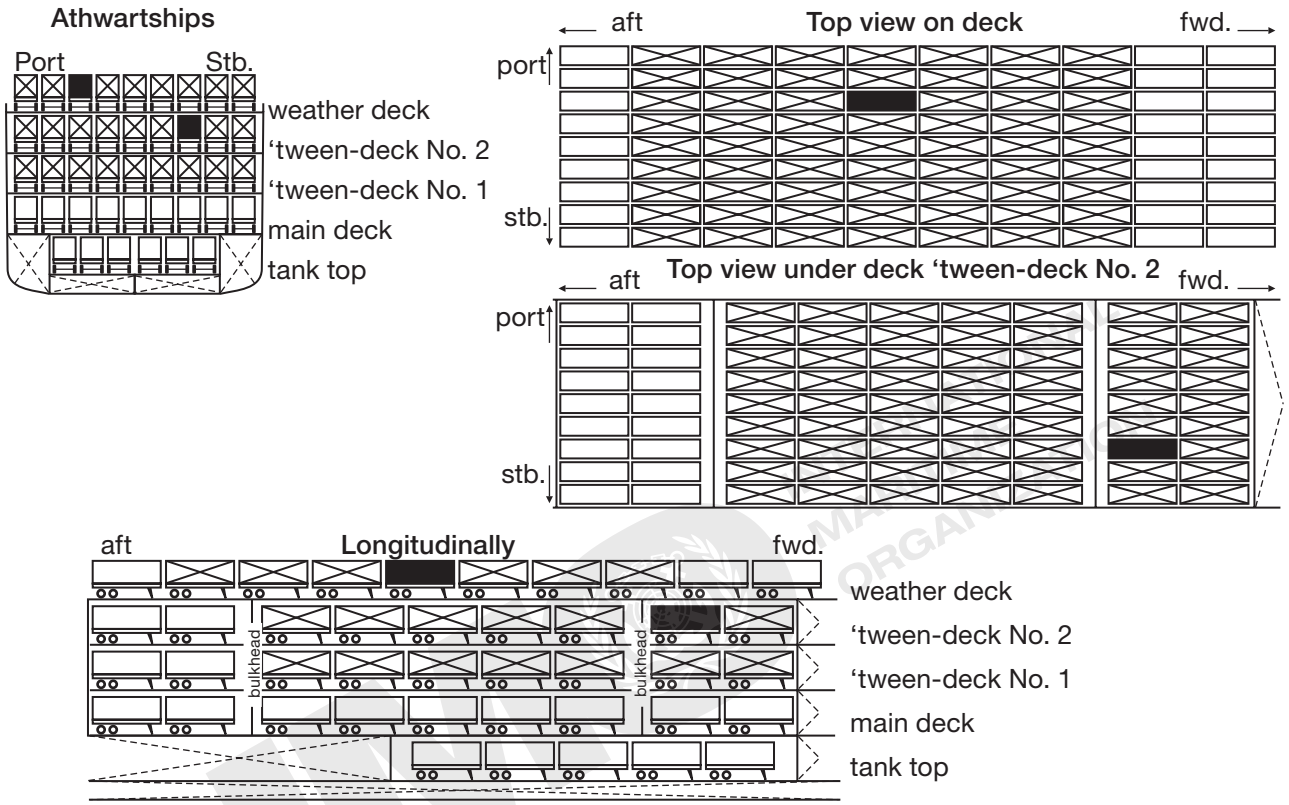
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" .3		
OPEN VERSUS OPEN	**ON DECK**	**UNDER DECK**
FORE AND AFT	At least 36 m	Two decks or TWO bulkheads
ATHWARTSHIPS	**Prohibited**	**Prohibited**



3 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

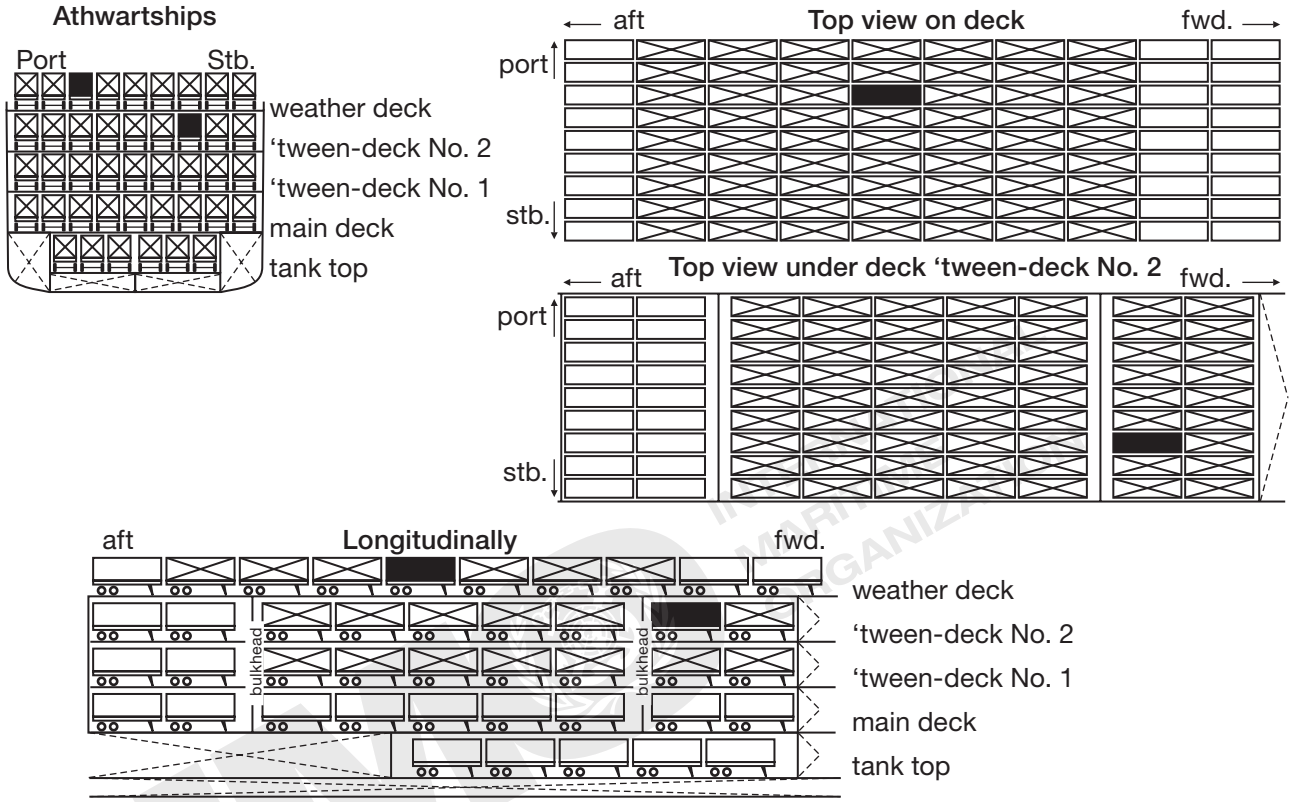
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS CLOSED	ON DECK	UNDER DECK
FORE AND AFT	At least 36 m	Two bulkheads or at least 36 m + two decks
ATHWARTSHIPS	Prohibited	Prohibited



4 – Situation *closed* versus *closed*

Note: All bulkheads and decks shall be resistant to fire and liquids.

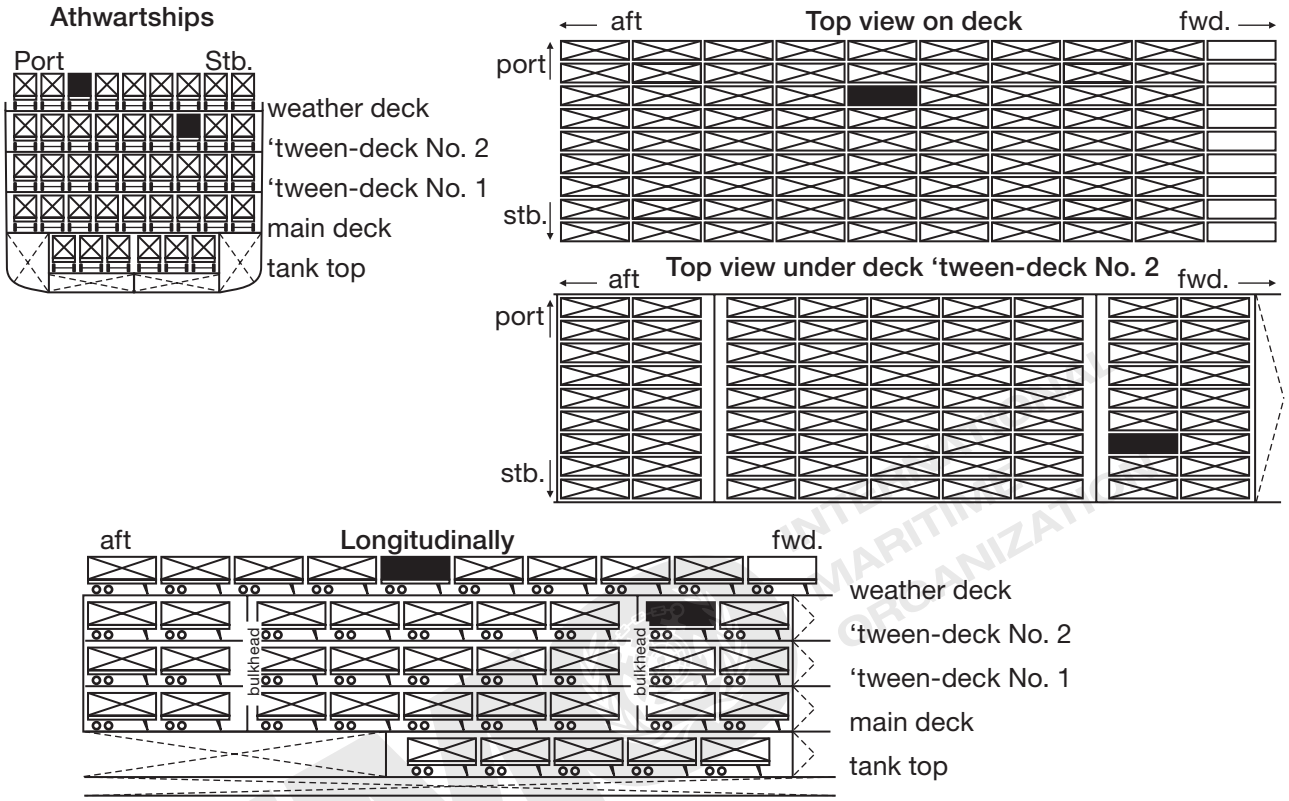
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
CLOSED VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 36 m	At least 48 m including TWO bulkheads
ATHWARTSHIPS	Prohibited	Prohibited



4 – Situation *closed* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" .4		
OPEN VERSUS OPEN	ON DECK	UNDER DECK
FORE AND AFT	At least 48 m	Prohibited
ATHWARTSHIPS	Prohibited	Prohibited



4 – Situation *open* versus *open*

Note: All bulkheads and decks shall be resistant to fire and liquids.

MSC.1/Circ.1442*

1 June 2012

Inspection programmes for cargo transport units carrying dangerous goods

1 The Maritime Safety Committee, at its ninetieth session (16 to 25 May 2012), noted that Member Government reports, submitted in accordance with the format set out in annex 2 to this circular, on inspections of cargo transport units (CTUs), as they are defined in chapter 1.2 of the IMDG Code, carrying dangerous goods for international transport by sea, could benefit by having guidance on how to conduct the inspections being reported. Inspection procedures and protocols may vary, depending on the specific type of CTU, on how it is presented for inspection (e.g. whether mounted on chassis or grounded), and on the need for additional precautions dependent upon the specific nature of the dangerous goods (e.g. radioactive, explosive, inhalation hazard).

2 The inspection guidance found in annex 1, while not in all cases definitive, is intended to provide Member Governments with adequate inspection guidelines and procedures to prompt substantial compliance with IMO standards and is applicable to all types of CTUs. Related circulars may be developed or updated to address peculiarities of specific types of CTUs and to provide greater detail on certain inspection items such as structural integrity (refer to resolution MSC.310(88)).

3 Noting that in those countries where regular inspection programmes have been implemented, a considerable improvement has been experienced in the general compliance with those standards, the Committee decided to offer inspection guidance to Member Governments to facilitate improvement to and implementation of inspection programmes. To avoid the diverting of dangerous goods to ports where inspections are not carried out, a regional approach should be taken.

4 To help identify areas of improvement to pertinent IMO standards, Member Governments are requested to continue providing reports on inspections of cargo transport units. Assuming inspection procedures among Member Governments are comparable to the guidelines contained in annex 1, these reports provide an ability to justify and effect safety improvements without the need for an actual safety incident. To aid the Organization in evaluating the reports, Governments are invited to submit their reports in a structured manner, using the format given in annex 2, with at least the following information:

.1 number of CTUs examined;

.2 number of CTUs found with deficiencies; and

.3 number of deficiencies relating to each inspection item as noted.

5 This circular supersedes MSC.1/Circ.1202.

Annex 1
Guidelines for the implementation of the inspection of cargo transport units

1 General

1.1 The objective of these Guidelines is to assist in the implementation of a uniform and safe inspection programme for the inspection of cargo transport units (CTUs) carrying goods for international transport by sea, and to provide guidance relating to such inspections in accordance with applicable IMO documents, such as the IMDG Code, CSC and related recommendations.

1.2 Any inspection should be carried out in accordance with applicable IMO standards, such as the IMDG Code and the CSC. The following items should, at a minimum, be covered by the inspection programme and be checked for compliance with applicable standards; these items are succinctly captured in a flow chart found in the appendix to these Guidelines and in the chronological sequence of an actual inspection:

.1 documentation;

* As amended by MSC.1/Circ.1521 (see page 393 for the complete circular).

.2 International Convention for Safe Containers (CSC) Safety Approval Plate and plating in accordance the IMDG Code for portable tanks;

.3 placarding and marking of CTUs;

.4 marking and labelling of packages;

.5 packaging (inappropriate or damaged);

.6 portable tank or road tank vehicles not covered by CSC (inappropriate or damaged);

.7 stowage/securing inside the freight containers, vehicles and other CTUs;

.8 segregation of cargo;

.9 Approved Continuous Examination Program (ACEP) or Periodic Examination Scheme (PES) label;

.10 serious structural deficiencies (refer to resolution MSC.310(88)); and

.11 tie-down attachments of road tank vehicles.

1.3 Definitions

.1 *Door-end inspection:* a visual inspection of the contents of a CTU without breaking the plane of the door end.

.2 *Safety strap:* a strap attached to or secured around the locking bars of a CTU to minimize the free movement of the right-side door when it is first opened.

.3 *Tailgate inspection:* an internal inspection of a CTU that is limited to that interior volume of a CTU, beginning at the door sill and ending at an imaginary plane established at the lesser of either the first meter of the container itself or the first tier of dunnage.

2 Targeting methodology and undeclared dangerous goods

2.1 Commensurate with available resources, Member Governments are encouraged to inspect a representative number of CTUs carrying dangerous goods by sea. CTUs should be targeted for inspection with consideration given to risk-based principles. For example, Member Governments should focus their inspection resources on those shipments that have historically presented the greatest safety risk. Targeting criteria could also assist Member Governments in addressing dangerous goods being shipped in an undeclared manner.

2.2 The presence of undeclared dangerous goods should not be underestimated. Undeclared dangerous goods can occur when hazardous materials are placed within a CTU with no markings to indicate the presence of dangerous goods, and when required documents fail to declare the presence of dangerous goods or are missing altogether.

.1 A targeted selection method should be used to identify general cargo CTUs with a higher probability of carrying undeclared hazardous materials. The inspection of general cargo transport units should complement those performed on CTUs with declared dangerous goods.

.2 Methods for tracking parties responsible for repeatedly violate dangerous goods shipping standards are encouraged.

2.3 Actions undertaken upon discovery of a CTU with a deficiency may include placing the cargo on hold or putting the CTU out of service, and/or providing appropriate penalty actions against those responsible under the IMDG Code, CSC and/or applicable national legislation, as appropriate.

3 General safety considerations

3.1 Given the safety and health risks CTUs present, all inspections should be conducted with caution.

.1 CTU inspections should be carried out in safe areas. If it is necessary to carry out inspections in port areas, appropriate precautions should be taken to prevent persons being struck by vehicles.

.2 Precautions must be taken to minimize risks associated with entry and potential exposure during inspections.

.3 CTU inspections should not be carried out by individual inspectors, but by a team of at least two inspectors or in conjunction with a representative from the facility and/or carrier with custody of CTU.

.4 While inspecting a CTU, inspectors shall be alert to any attempt by facility personnel to inadvertently move that CTU.

.5 Inspectors should minimize the likelihood of slips, trips or falls especially while inspecting CTUs loaded on chassis or when climbing on to and walking along the tops of CTUs. Inspectors should follow applicable occupational safety regulations in order to view the CTU components (corner fittings, top side rails, roof, etc.) otherwise not readily visible from the ground. Inspectors should not climb any CTU if it is stacked on top of another CTU.

.6 Inspectors should observe caution when opening a CTU's doors as cargoes may have shifted and may be resting against the doors.

.7 Inspectors should not open a CSC container's doors if that container is part of a stack. CSC container doors are a structural part of a container and, if opened while stacked, may compromise the structural integrity of the container and stack.

.8 Given possible interactions with hazardous materials, inspectors should not smoke while conducting inspections.

.9 Inspectors should be aware of the potential hazards of the atmosphere inside CTUs. These may result from residues from previous cargo, spillage from damaged packages inside the CTUs, hazardous cargoes, decomposition products, reduced oxygen content, fumigants and fumigant residues.

.10 Exposure through inadvertent ingestion, absorption, injection or inhalation of hazardous materials from a CTU may be harmful or fatal.

.11 Exposure to radioactive materials may pose potential health risks. Inspectors should be aware of the commodities reportedly contained within the CTU and should be in possession of appropriate radiation monitoring equipment.

3.2 Inspectors should be familiar with procedures of response to hazardous material releases or exposures established by local authorities.

.1 Inspectors should immediately egress from the exposure area and muster in a safe location upwind. This action is referred to as an emergency egress. The following, among others, are indications of possible exposure that should require immediate emergency egress:

.1 leaks, odours, or sounds (such as when compressed gas is released);

.2 atmospheric monitor or meter alarms;

.3 feelings of dizziness, light-headedness or shortness of breath; and

.4 unexpected chemical smells or dermal sensations such as burning.

.2 Actions to be taken in an emergency egress include immediate notification to the facility so that response plans can be activated.

.3 Inspectors should not re-enter any CTU until it has been determined that it is safe to do so.

3.3 Provisions should be in place for swift emergency medical treatment:

.1 Chemical-specific emergency response information should be available during inspections and consulted for appropriate initial decontamination in the event of exposure to a hazardous material. The inspector should be aware of appropriate emergency medical services such as hospitals, fire departments, first aid stations, and chemical decontamination stations.

3.4 Inspection controls should be established for specific hazards.

.1 Shipments of radioactive materials, identified in section 2.7.2 of the IMDG Code, should be inspected taking into account the unique nature of the hazard. Radioactive materials shipped properly pose little risk of exposure and are required to be prepared in compliance with the same standards as all other hazardous material shipments. The inspection of radioactive materials should be done with extreme caution.

.2 CTUs, with toxic commodities bearing the labels of 2.3 or 6.1 or with "FUMIGANT" warning signs as per paragraph 5.5.2.3.2 of the IMDG Code, may be opened but should only be inspected visually without having the inspector cross the plane of the doorway if it has not been adequately ventilated.

.3 Even if fumigant warning signs are not posted, inspectors should look for signs or indicators of fumigant having been applied to the CTU.

4 Conduct of inspections

4.1 CTU inspection preparation, assessment and opening procedures should be established.

.1 Contact the facility and/or carrier with custody of CTUs to be inspected.

.2 Establish an inspection team communications plan. Reliable voice communications that take into account Administration and facility safety procedures.

.3 Identify CTUs for inspection and inform facility and/or carrier. A risk assessment methodology should be used to select CTUs posing the highest threat and consequence for non-compliance with regulations.

.4 Identify the contents of CTUs selected for inspection by obtaining and reviewing the dangerous goods transportation documents. A bill of lading or other descriptive document should be obtained for CTUs with general cargoes.

.5 Assemble personal protective equipment and needed inspection equipment:

.1 Personnel should wear hard hats, safety glasses, safety shoes, high visibility or reflective vests, and gloves, and properly calibrated hazardous condition sensing devices. As appropriate, inspectors should consider the use of additional personal protective equipment such as chemical protective clothing, air purifying respirators or emergency escape breathing apparatus to prevent inadvertent exposure to hazardous materials within the CTU.

.2 Personnel should assemble a container inspection kit containing all required tools, references (including regulatory provisions for quick reference), and paperwork.

.6 A safety brief should be conducted prior to the first inspection. The safety brief should cover the following:

.1 operational risk assessment to determine if present and predicted conditions, such as weather and personnel readiness, allow for a safe operation;

.2 assignment of roles and responsibilities for all members of the inspection team. At least one member should be assigned safety duties to ensure that proper procedures are followed and to implement protocols in emergency situations;

.3 a review of personal protective equipment and its use;

.4 a review of safe work practices;

.5 a discussion of emergency egress situations, muster location, and other emergency protocols;

.6 known hazards that exist at the location where the inspection is to occur; and

.7 accidental exposure procedures.

.7 Stage CTUs for inspection in a manner that will maximize natural ventilation and provide safety from existing traffic patterns, CTU handling operations and concentrations of CTUs scheduled for movement. Staging areas should have adequate lighting, and be away from water runoff drains and electrical outlets. As an additional precaution, when a CTU is on the chassis, place cones or park a vehicle, if available, immediately in front of the CTU to prevent a vehicle from connecting up to the chassis during the inspection.

.8 Establish a safety watch and review safety procedures before starting the inspection:

.1 discuss inspection activity with the safety watch;

.2 once the potential hazards of the commodities in the selected CTUs are known, these should be reviewed with the team;

.3 assess the staging area and discuss any unique aspects that may pose potential safety hazards. This should include identification of the safe egress routes; and

.4 the final step before beginning the inspections should be to conduct a second operational risk assessment to determine if conditions have changed from the previous assessment. When appropriate, reassess safety procedures to reduce risk and, if unsure, seek guidance from a supervisor.

.9 Conduct an external assessment, to include a complete walk-around, of selected CTUs to ensure safety of inspection personnel. Remain alert for indications of potential internal hazards such as cargo leaks or severe CTU damage. If any leaks are discovered, stop the inspection and initiate established response procedures.

.10 For closed CTUs, it is highly encouraged to perform atmospheric monitoring before and continuously during the inspection cycle:

.1 **Inspectors should not enter a CTU if tests indicate that the atmosphere in it is potentially hazardous until it is determined that it is safe to do so.**

.2 When an inspector enters a CTU, atmospheric measurements should be taken above the inspector's head near the top of the container, at head or breathing zone level, at waist level, and near the bottom of the container. After adequate ventilation, the oxygen level at the container door end should equal ambient levels. Entry into the enclosed space of the container should only occur when the meter readings match those obtained for the ambient atmosphere. **Under no circumstances should a tailgate inspection occur when door-end readings differ from normal ambient atmospheric readings or if combustible gas readings indicate a hazardous condition.**

.11 The use of a safety strap is encouraged. Exercise caution when opening closed freight containers. The safety strap will be secured to minimize the free movement of the right side door when it is first opened by crossing the vertical seam between both doors. This can reduce the risk of personal injury from shifted cargo. The safety strap, and other associated components such as ratcheted cargo tie downs, should have a minimum breaking strength of 1,800 kg. If the safety strap is made of synthetic material, such as that found in shock cords, it should not be elasticized.

.12 For CTUs, an assessment of the door end should be performed to identify shifted cargo. With the safety strap in place, carefully crack open the right door enough to determine if there is any danger from spilled or shifted cargo. A second inspector can do this by looking into the container standing to the left of the left door and at a safe distance:

.1 If cargo has shifted and poses a safety threat, notify the facility immediately so that it can be opened safely prior to continuing the inspection.

.13 Ventilate the CTU. For CTUs other than those that have been fumigated or contain toxic materials, loosen the safety strap and ventilate the CTU by fully opening the doors for natural ventilation:

.1 To maximize natural ventilation, open the right and left doors a minimum of 180 degrees so that they are perpendicular to the CTU sides, and ventilate the container for a minimum prescribed time.

.2 For CTUs that have been fumigated, ensure that at least 24 hours have elapsed since the time of fumigation before opening the doors. Upon opening the doors, the fumigant and residues must be completely ventilated using natural ventilation or mechanical means prior to entry.

.3 Inspectors should be aware that residual hazards may remain in ventilated CTUs (see paragraph 3.1.8).

.14 Conducting a tailgate inspection. The number of persons entering the CTU to conduct tailgate inspections should be limited to the minimum necessary. Exercise caution when trying to examine cargo forward of the doors; climbing on packages or dunnage is dangerous and should be avoided.

4.2 Procedures for internal inspections of a closed CTU should be established.

.1 Normally, inspectors should not have a need to proceed beyond a door-end inspection to complete their duties. An inspector should not enter an enclosed space within a CTU, if he or she does not feel it is safe. However, in situations that call for entry beyond the door end, the following steps should be adhered to:

.1 Determine the risk of conducting an internal inspection and assess access and egress routes. Examine the interior of the CTU at the door end and determine if the enclosed space has limited access or egress. If the nature of the cargo or loading procedure does not leave a direct or unobstructed egress path, the inspector should consider the CTU a confined space. If the inspector needs access to a cargo in a potential confined space to verify compliance, then the inspector should take appropriate measures to require de-vanning of the cargo to allow unrestricted access to it or utilize specialized remote viewing equipment. Never climb on packages containing dangerous goods, unless such an inspection is necessary and appropriate safety precautions have been taken.

.2 Ensure the CTU has been properly ventilated (see paragraphs 3.1.8 and 4.1.13.3).

.3 Continue to evaluate the interior of the space throughout the inspection. If at any time there is an obvious change to the interior environment or the inspector feels unsafe, the inspector should immediately egress from the container and re-evaluate the situation.

.4 Continuously monitor the internal atmosphere using sensing devices.

.5 Maintain readiness for emergency egress. Each inspector should be ready to immediately exit the CTU when changes in sensing devices indicate the presence of atmospheric hazards or if any of the symptoms identified in paragraph 3.2.1 are detected. In the event that the inspector becomes incapacitated and rescue requires entry to be made into the CTU, emergency response personnel with the proper training and equipment should be used to effect the rescue.

4.3 Establish procedures for resealing a CTU. Procedures should be established for the replacement, recording and information sharing with facilities and carriers of seals that have been removed in the conduct of a container inspection. Such procedures shall conform with applicable national legislation and should take into account Securing and facilitating global trade (MSC-FAL.1/Circ.1).*

5 Items to check during an inspection

Checking documentation for compliance and to identify the hazards of a substance, material or article

5.1 The following documentation required by chapter 5.4 of the IMDG Code shall be checked for compliance with the code including being properly signed as required and in order to identify the hazards of the consignment (a substance, material or article):

.1 dangerous goods transport document;

.2 container/vehicle packing certificate;

.3 documentation for tanks used to transport dangerous goods; and

.4 other information and documentation, if provided.

5.2 The following information, at a minimum, for each dangerous substance, material or article offered for transport should be checked for compliance with section 5.4.1 of the IMDG Code:

.1 UN number preceded by the letters "UN";

.2 proper shipping name. Proper shipping names that are assigned special provision 274 in column 6 of the dangerous goods list shall be supplemented with their technical or chemical group names as described in paragraph 3.1.2.8 of the IMDG Code;

.3 primary hazard class or division of the goods;

* MSC-FAL.1/Circ.1 provides information on the WCO's SAFE Framework of Standards, which in its "Customs to Customs" pillar encourages the use by Customs Authorities of advance electronic information as part of a risk-based cargo security strategy. Requirements on the use of high security mechanical seals, as part of a seal integrity programme for containers, form an important element of this pillar. One of these requirements is that, if public or private officials remove a seal to inspect the container, they will install an acceptable replacement seal and note the particulars of the action, including the new seal number, in the cargo documentation.

.4 subsidiary hazard class or division number(s); and packing group for the substance or article that may be preceded by "PG", if provided;

.5 other applicable information required by section 5.4.1 of the IMDG Code; and

.6 proper certification or declaration required by paragraph 5.4.1.6 of the IMDG Code. In case of doubt, information should be checked whether the classification of the goods is consistent with the properties of the material as described in the Material Safety Data Sheet.

5.3 In addition, the information included in the container/vehicle packing certificate should be checked in order to confirm that the operation of packing or loading dangerous goods was appropriately carried out in accordance with IMDG Code, section 5.4.2.

5.4 If appropriate, in the case of documentation for tanks used to transport dangerous goods, the following should be checked:

.1 the certificate mentioned in paragraph 4.2.1.8 of the IMDG Code, used to attest the suitability of portable tanks for sea transport;

.2 the certificate mentioned in paragraph 6.8.3.1.3.2 of the IMDG Code, used to attest the suitability of road tanks used for sea transport of class 3-9 substances;

.3 the certificate mentioned in paragraph 6.8.3.2.3.2 of the IMDG Code, used to attest the suitability of road tanks for the sea transport of class 2 substances (IMO type 6), non-refrigerated liquefied gases; and

.4 the certificate mentioned in paragraph 6.8.3.3.3.2 of the IMDG Code, used to attest the suitability of road tanks for the sea transport of refrigerated liquefied gases (IMO type 8).

Checking Container Safety Convention (CSC) Safety Approval Plate, tank, road tank and MEGC identification plate marking, and serious structural deficiencies of cargo transport units

5.5 The following items should be checked by the inspector:

.1 Container Safety Convention (CSC) Safety Approval Plate and its validity:

.1 Approved Continuous Examination Program (ACEP); or

.2 Periodic Examination Scheme (PES) label;

.2 serious structural deficiencies of frame elements including corner and intermediate fittings (refer to resolution MSC.310(88)) and, for portable tanks, the condition of tank accessories;

.3 tie-down attachments of road tank vehicles;

.4 with respect of tanks and MEGCs, the metal plate as described in chapter 6 of the IMDG Code, its validity and periodic inspection and test dates, where appropriate:

.1 the metal plate on portable tanks as described in paragraphs 6.7.2.20, 6.7.3.16, and 6.7.4.15;

.2 the metal plate on MEGCs as described in paragraph 6.7.5.13;

.3 the metal plate on road tanks used for sea transport (IMO type 4) as described in paragraph 6.8.3.1.3.4;

.4 the metal plate on road tanks used for sea transport (IMO type 6) as described in paragraph 6.8.3.2.3.4;

.5 the metal plate on road tanks used for sea transport (IMO type 8) as described in paragraph 6.8.3.3.3.4; and

.6 the metal plates on tanks may show markings required by other regulations.

Confirming the placarding and marking of CTUs

5.6 After identifying the hazards and classification of the goods, the inspector shall confirm a clear display of appropriate placards and marks on CTUs in compliance with the provision of chapter 5.3 of the Code.

.1 A CTU containing dangerous goods or residues of dangerous goods should display placards clearly as follows:

.1 freight container, trailer or portable tank: one on each side and one on each end of unit;

.2 railway wagon: at least on each side;

.3 multiple-compartment tank containing more than one dangerous substance or their residue: along each side at the positions of the relevant compartments; and

.4 any other CTU: at least on both sides and on the back of the unit.

.2 The proper shipping name of contents shall be marked on at least both sides of:

.1 tank transport units containing dangerous goods;

.2 bulk containers containing dangerous goods; or

.3 any other CTU containing packaged dangerous goods of a single commodity for which no placard, UN number or marine pollutant mark is required; and

.3 The UN number for the goods and, if required, other placarding and marking such as elevated temperature, marine pollutant, limited quantity and fumigation warning sign, as provided in IMDG Code, should be displayed.

.4 In case of class 7, the transport index (TI) indicated on the placard should be verified by a measurement of the radiation level in accordance with paragraph 5.1.5.3 of the IMDG Code and/or by calculation (sum of TI of packages).

Confirming the marking and labelling of packages

5.7 Appropriate marking and labelling of packages included in the following items should be confirmed by the inspector:

.1 proper shipping name for the dangerous goods;

.2 UN number;

.3 other special marking provision (e.g. marine pollutant mark); and

.4 appropriate label; for class 7 the transport index (TI) on the label should be verified by a measurement of the radiation level in accordance with paragraph 5.1.5.3.

Confirming the condition of packaging

5.8 The following items shall be checked by the inspector:

.1 the type of packaging is permitted for the goods according to the applicable packing instruction of the dangerous goods list;

.2 the packing is of a design type approved as required by paragraph 4.1.1.3 of the IMDG Code;

.3 the approved packing group(s) of the design type (X, Y or Z) are consistent with the packing group of the goods (I, II or III);

.4 single packagings used for liquids are approved for liquids;

.5 for plastic drums and jerricans, plastic inner receptacles of IBC, check that the five years period of use is not exceeded;

.6 for rigid IBCs check that the periods of inspections as required in paragraph 4.1.2.2.1 of the IMDG Code are not exceeded; and

.7 the packages are sound and without serious damages; the inspecting authority should develop guidelines for the distinction between simple defects and serious damages. (Simple defects, e.g. traces of use, are insignificant under safety aspects and have no effects on the legally prescribed performance level of the package.)

Confirming the condition of the stowage/securing inside CTUs

5.9 The following items should be checked by the inspector:

.1 the mass of the cargo is evenly distributed over the floor; heavy packages are sufficiently supported;

.2 the centre of gravity is close to the mid-length of the CTU;

.3 where appropriate, void spaces are filled with dunnage, cardboard, air bags or other suitable material to ensure a minimum likelihood of movement of packages/cargo during transport;

.4 the cargo is secured against movement towards the door;

.5 if the cargo is secured by blocking or lashing: the securing material is of appropriate strength and lashings are sufficiently tensioned; and

.6 packing should comply with IMO/ILO/UNECE Guidelines for Packing Cargo Transport Units, as amended, and/or appropriate national legislation.

Confirmation of the segregation of dangerous goods inside CTUs

5.10 The following items should be checked by the inspector:

.1 the segregation table in paragraph 7.2.1.16 of the IMDG Code has been applied correctly for the hazard classes and subsidiary risks;

.2 specific segregation requirements as indicated in column 16 of the dangerous goods list have been complied with;

.3 specific segregation requirements for the different compatibility groups of class 1 have been complied with; and

.4 segregation requirements in relation to foodstuffs have been observed.

Control actions for deficiencies

5.11 Establish a process for issuing deficiency reports placing a CTU out of service or cargo on hold and/or appropriate penalty actions.

General procedures

.1 Issuing a deficiency report that details the non-compliance and describes the required corrective actions. For discrepancies that are quickly corrected, the inspector should note official records as such.

.2 Mark the CTU so it is evident that the CTU has been taken out of service and/or cargo placed on hold. The marking should be sufficiently visible on more than one side of the CTU. While the marking should not be permanent in nature, it should not be easily removable. The use of a large sticker may be appropriate.

.3 Immediately notify the facility and/or carrier having actual custody of the deficient CTU or cargo and ensure prompt notification is made to the CTU owner or agent.

Serious structural deficiencies

.4 If a CSC container is determined to be seriously structurally deficient or has not been examined as required, the inspector should place the container out of service.

.5 Clear detention statements should be used. The following sample text may be appropriate for both the deficiency report and marking for a seriously structurally deficient container: "Prior to reloading or reuse in international transportation, this container must be re-inspected for compliance in accordance with the procedures prescribed by [*insert appropriate legal authority*]".

Cargo deficiencies

.6 Cargo that fails to conform to the provisions of the IMDG Code should be placed on hold.

.7 The nature of the discrepancy should help determine who should correct it.

.8 If a discrepancy involves the cargo's package, label or other specification when the shipment was originally offered and accepted for transportation, the original shipper or freight forwarder shall be held accountable. The inspector should avoid taking action against the vessel, carrier, or waterfront facility simply because they are the most accessible party.

Road tank vehicle tie-down deficiencies

.9 Road tank vehicles that fail to conform to the provisions of the IMDG Code should be placed on hold.

5.12 Establish a procedure to monitor cargo placed on hold.

5.13 Establish follow-up procedures for CSC containers with serious structural deficiencies taken out of service.

.1 A CSC container removed from service due to serious structural deficiencies should be repaired and re-inspected in accordance with the owner's prescribed programme. Prior to returning a CSC container to service, the owner should notify the inspector in writing that the CSC container has been brought back into compliance per the CSC or other applicable standard.

.2 In situations where there is an unwillingness to repair a CSC container back to applicable standards, the container owner may remove the damaged container from international service and providing such proof to the inspector.

.3 The removal of markings referenced in paragraph 5.11.2 should only be authorized by the inspector.

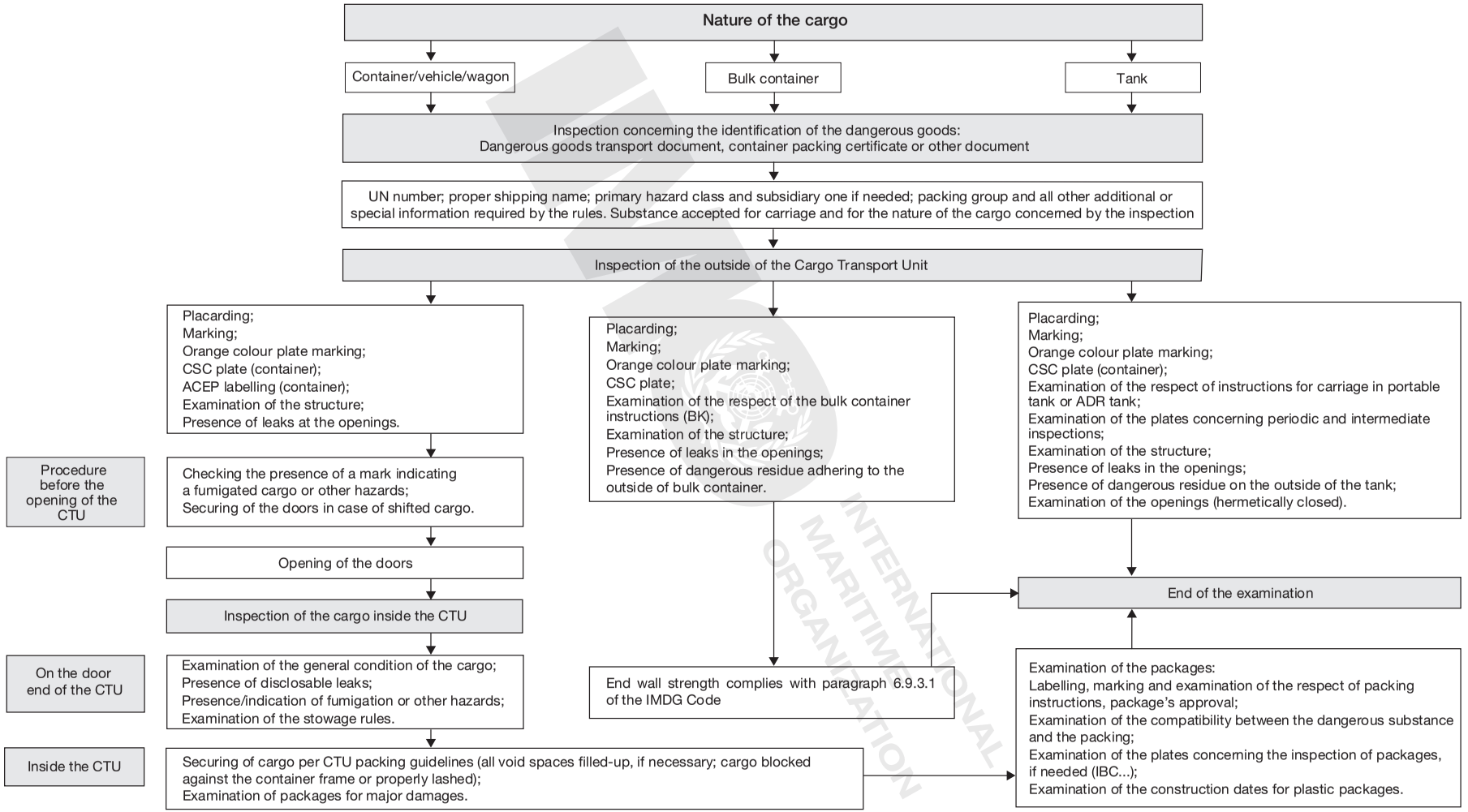
Inspection and recording of the results of the inspection and deficiencies record

5.14 Inspection results and deficiencies should be recorded and archived to allow for the completion of the report requested under paragraph 4 of this circular.

Flow chart summarizing the inspection of cargo transport units

5.15 The flow chart in the appendix identifies a general inspection sequence and takes into account different types of CTUs. It is intended as a job aid for inspectors.

Appendix
Inspection flow chart



Inspection of cargo transport units carrying dangerous goods for international transport by sea

Annex 2
Reports of inspection programmes

Country . . . . . .

Item	Number	Percentage
Inspected CTUs (5.14)		
CTUs with deficiencies (5.14) – Total – Loaded/filled inside the country – Loaded/filled outside the country		
Deficiencies (5.14) Documentation (1.2) – Dangerous Goods Declaration – Container/Vehicle Packing Certificate		
Placarding and marking of CTUs (1.2.3)		
Marking and labelling of packages (1.2.4)		
Packaging (inappropriate or damaged) (1.2.5)		
Portable tank or road tank vehicles not covered by CSC (inappropriate or damaged) (1.2.6)		
Stowage/securing inside the freight containers, vehicles and other CTUs (1.2.7)		
Segregation of cargo (1.2.8)		
Serious structural deficiencies (1.2.10)		
Tie-down attachments of road tank vehicles (1.2.11)		

Note: References in brackets are to paragraphs in annex 1.

MSC.1/Circ.1521
6 June 2016

Amendments to Inspection Programmes for Cargo Transport Units Carrying Dangerous Goods

1 The Maritime Safety Committee, at its ninety-sixth session (11 to 20 May 2016), approved amendments to Inspection programmes for cargo transport units carrying dangerous goods (MSC.1/Circ.1442), set out in the annex, which are consequential to the amendments (38-16) to the IMDG Code, as adopted by resolution MSC.406(96).

2 Member States are invited to bring the annexed amendments to MSC.1/Circ.1442 to the attention of all concerned, taking into account the voluntary application date of 1 January 2017 of amendment (38-16) of the IMDG Code, pending its envisaged mandatory entry into force date of 1 January 2018.

Annex
Amendments to the Inspection Programmes for Cargo Transport Units Carrying Dangerous Goods (MSC.1/Circ.1442)

Cover page

1 *In paragraph 3 of the cover page, add a new last sentence as follows:*

"In cases where the safety of the transport of dangerous goods is compromised as a result of serious or repeated infringements by an enterprise which has its headquarters on the territory of another competent authority, that competent authority should be notified of such infringements in order to investigate and take actions against those responsible."

Annex 1
Guidelines for the Implementation of the Inspection of Cargo Transport Units

2 Targeting methodology and undeclared dangerous goods

2 *In paragraph 2.2, a new subparagraph .3 is added as follows:*

".3 Reporting between competent authorities in cases where the safety of the transport of dangerous goods is compromised as a result of serious or repeated infringements by an enterprise which has its headquarters on the territory of another competent authority is strongly encouraged."

3 *In paragraph 2.3, after the words* "national legislation," *insert* ", including, but not limited to reporting the non-compliance to the competent authority of the State in which the infringing enterprise has its headquarters,"

5 Items to check during an inspection

Control actions for deficiencies

General procedures

4 *In paragraph 5.11, above the heading* "Serious structural deficiencies" *a new subparagraph* ".4" is added as follows:

".4 Reporting deficiencies to the relevant competent authority in cases where the safety of the transport of dangerous goods is compromised as a result of serious or repeated infringements by an enterprise which has its headquarters on the territory of another competent authority."

and the remaining subparagraphs are renumbered accordingly.

Serious structural deficiencies

5 *In paragraph 5.11, in the new subparagraph* ".9", *after the words* "If a discrepancy involves", *insert the words* "the non-declaration or misdeclaration of cargo,"