RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part C Hull Construction and Equipment

2009 AMENDMENT NO.2

Rule No.45 30th October 2009

Resolved by Technical Committee on 24th June 2009

Approved by Board of Directors on 28th July 2009

Rule No.45 30th October 2009
AMENDMENT TO THE RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

"Rules for the survey and construction of steel ships" has been partly amended as follows:

Part C HULL CONSTRUCTION AND EQUIPMENT

Amendment 2-1

Title of Chapter 33 has been amended as follows.

Chapter 33 DAMAGE CONTROL ~~FOR DRY CARGO VESSELS~~

33.1 General

Paragraph 33.1.1 has been amended as follows.

33.1.1 Application

~~1~~ The requirements in this Part apply to ~~dry~~ cargo vessels of not less than 500 *gross tonnage* which are engaged in international voyages.

~~2 Dry cargo vessel is defined as a cargo ship that does not engage in carrying liquids.~~

33.3 Booklet and Plan for Damage Control

Paragraph 33.3.3 has been added as follows.

33.3.3 Damage Stability Information

Ships subject to **Chapter 4** or **Chapter 4, Part CS** are to be provided with damage stability information deemed appropriate by the Society.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 1 January 2009.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.
(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1%* of the estimated mass of all structural material, whichever is the less.

Amendment 2-2

33.3 Booklet and Plan for Damage Control

33.3.1 Damage Control Plan

Sub-paragraph -3 has been added as follows.

1 A Damage control plan approved by the Society is to be permanently exhibited or readily available on the navigation bridge, for the guidance of the officer in charge of the ship.
2 The damage control plan is to show clearly for each deck and hold, the boundaries of the watertight compartments, the openings therein with their means of closure (including the position of any controls thereof), and the arrangements for the correction of any list due to flooding.
3 The damage control plan is recommended to be prepared in the working language of the ship. Where the language used in preparation of the plan is not English, a translation into English is to be included.

33.3.2 Booklet

Sub-paragraph -3 has been added as follows.

1 The Booklet is to contain the information shown in the damage control plan.
2 The Booklet is to be provided at a suitable place which is made available to the officers of the ship.
3 The Booklet is recommended to be prepared in the working language of the ship. Where the language used in preparation of the Booklet is not English, a translation into English is to be included.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 30 October 2009.
2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships for which the date of contract for construction is before the effective date.

Amendment 2-3

Chapter 23 BULWARKS, GUARDRAILS, FREEING ARRANGEMENTS, CARGO PORTS AND OTHER SIMILAR OPENINGS, SIDE SCUTTLES, RECTANGULAR WINDOWS, VENTILATORS AND GANGWAYS

Section 23.8 has been added as follows.

23.8 Means of Embarkation and Disembarkation

23.8.1 General

Ships are to be provided with appropriate means of embarkation on and disembarkation from ships for use in port and in port related operations, unless specially approved by the Society.

Chapter 27 EQUIPMENT

Section 27.4 has been added as follows.

27.4 Emergency Towing Procedures

27.4.1 General

1 Ships are to be provided with an emergency towing procedure that describes the towing procedure to be used in emergency situations.

2 The procedure specified in **-1** above is to be based on existing arrangements and equipment available on board the ship and is to include the following:

(1) drawings of fore and aft deck showing possible emergency towing arrangements;

(2) inventory of equipment on board that can be used for emergency towing;

(3) means and methods of communication; and

(4) sample procedures to facilitate the preparation for and conducting of emergency towing operations.

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 January 2010.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

Part C Hull Construction and Equipment

2009 AMENDMENT NO.2

Notice No.62 30th October 2009

Resolved by Technical Committee on 24th June 2009

Notice No.62 30th October 2009
AMENDMENT TO THE GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

"Guidance for the survey and construction of steel ships" has been partly amended as follows:

Part C HULL CONSTRUCTION AND EQUIPMENT

Amendment 2-1

C25 CEMENTING AND PAINTING

C25.2 Painting

Paragraph C25.2.2 has been amended as follows.

C25.2.2 Protective Coatings in dedicated seawater ballast tanks and double-side skin spaces

1 The application of **25.2.2-1**, **Part C of the Rules** with respect to coating system applications is to be in accordance with IACS Unified Interpretations SC223, as may be amended.

2 With respect to the provision of **25.2.2-1, Part C of the Rules,** tanks identified as "Spaces included in Net Tonnage" in the International Convention on Tonnage Measurement of Ships, 1969 are not considered to be dedicated seawater ballast tanks.

~~2~~**3** The "deemed appropriate by the Society" specified in **25.2.2-2**, **Part C of the Rules** means that full hard coatings in dedicated seawater ballast tanks (including the slop tanks) are to comply with the following **(a)** to **(f)**:

(a) Applicable paints are to be an epoxy type or a type that is as durable and effective against corrosion.
(b) The surfaces of steels are to be properly prepared before coating and the thickness of the coating is to be adequate.
(c) Painting is to be of a hard protective coating unless otherwise approved by the Society.
(d) It is recommended that cathodic protection is applied together with the coatings as a backup.
(e) For dedicated seawater ballast tanks and double-side skin spaces of ship, the coatings are preferably to be of a light colour easily distinguishable from rust.
(f) For cargo holds used as seawater ballast spaces, coating of certain parts may be dispensed with provided that alternative measures are taken for the parts in question.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 1 July 2008.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships other than ships that fall under the following:

(1) for which the building contract is placed on or after 1 July 2008; or

(2) in the absence of a building contract, the keels of which are laid or which are at *a similar stage of construction* on or after 1 January 2009; or

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

(3) the delivery of which is on or after 1 July 2012

Amendment 2-2

Annex C1.1.7-5 GUIDANCE FOR THE USE OF FIBER REINFORCED PLASTIC (FRP)

1.2 General for FRP

Paragraph 1.2.1 has been amended as follows.

1.2.1 General

1 All FRP have to be approved by the Society in accordance with the requirements in **Chapter 9**, **Part 2** of **Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use** and be adequate for the service conditions of its use.

~~**2** All FRP used in hazardous areas are to have no electrostatic properties.~~

~~**3**~~**2** All FRP are to be resistant to any substances they are expected to be exposed to during service.

1.3 Requirements for FRP Depending on Service and/or Locations

Sub-paragraph -4 has been added as follows.

1.3.1 Requirements for FRP Depending on Service and/or Locations

4 In cases where FRP are installed in the hazardous areas specified in **4.3 and 4.7**, **Part H of the Rules**, the risks of FRP taking charge are to be taken into account. In cases where FRP are installed in cargo tanks, fuel oil tanks or the areas deemed necessary by the Society, such FRP are not to have electrostatic properties. Generally, in cases where like gratings of personnel walkways are installed in areas except for those mentioned above, FRP that have electrostatic properties may be used. No electrostatic properties means that the earth resistance of these products at any point is not greater than $1M\Omega$.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 30 October 2009.

Amendment 2-3

Title of Chapter C33 has been amended as follows.

C33 DAMAGE CONTROL ~~FOR DRY CARGO VESSELS~~

C33.3 Booklet and Plan for Damage Control

Paragraph C33.3.1 has been amended as follows.

C33.3.1 Damage Control Plan

1 The damage control plan to be provided on board ships ~~applicable to **Chapter 4, Part C** of the Rules~~ is to include the contents shown in **Table C33.3.1-1**. ~~Where the ship is provided with means or equipment for controlling damage other than those shown in **Table C33.3.1-1**, these are to be added to the damage control plan appropriately.~~

~~**2** The damage control plan to be provided onboard ships not applicable to **Chapter 4, Part C** of the Rules is to include the contents shown in the following **(1)** to **(5)**, notwithstanding the contents of **Table C33.3.1-1**.~~

~~(1) Watertight compartment~~

~~(2) Weathertight compartment~~

~~(3) Closing appliances for watertight doors, cargo ports and other similar openings required in **33.2, Part C** of the Rules and their control position~~

~~(4) Position of closing appliances required in **Part V**~~

~~(5) Locations of remotely operated closing appliances (*e.g.* valves) of pipes, ducts, and tunnels that control flooding between compartments, and their control positions~~

Table C33.3.1-1 has been amended as follows.

Table C33.3.1-1 The Items and Contents of the Damage Control Plan

Items	Contents
(1) Boundaries of Compartments	Boundaries of watertight compartments~~ required in **Chapter 4 Part C** of the Rules~~
(2) Watertight closing appliances of openings in ~~boundary walls~~ the boundaries of compartments	Positions of the watertight closing appliances, indicators and alarms of openings and their control positions
(3) Weathertight closing appliances of openings in boundary walls	Positions of openings, however these are to be distinguished from the watertight ones mentioned above (2).
(4) Cross-flooding appliances, if provided	Cross-flooding appliances and their control Positions
(5) Valves etc. remotely operated in order to control flooding through pipes, ducts and tunnels into other compartments	Positions of bilge and ballast pumps and their control positions and associated ~~V~~valves, etc. and control positions
(6) Doors in the shell of the ship	Positions of doors, including the positions of indicators, leakage detection and surveillance devices
(7) Weathertight closing appliances in local subdivision boundaries above bulkhead decks and exposed weather decks, if provided	Positions of weathertight closing appliances, including the positions of their controls and indicators

(Notes)

~~1.~~ Closing appliances provided with non-weathertight openings (e.g. gastight) for flooding calculations need not be shown in the damage control plan.

~~2. Indicators showing whether the doors are open or closed are to be provided at the navigation bridge, where it is considered serious flooding will occur through these openings when kept open.~~

Paragraph C33.3.2 has been amended as follows.

C33.3.2 Booklet

1 The booklet to be provided on board ships ~~applicable to **Chapter 4, Part C** of the Rules~~ is to include the contents shown in **Table C33.3.~~1~~2-1**. ~~Where the ship is provided with means or equipment for controlling damage other than those shown in **Table C33.3.1-1**, these are to be added to the booklet appropriately.~~

~~**2** The booklet to be provided onboard ships not applicable to **Chapter 4, Part C** of the Rules is to include the contents shown in the following **(1)** to **(5)**, notwithstanding the contents of **Table C33.3.2-1**.~~

~~(1) Watertight compartment~~

~~(2) Weathertight compartment~~

~~(3) Closing appliances for watertight doors, cargo ports and other similar openings required in **33.2, Part C** of the Rules and their control position, and the procedures of their appliances.~~

~~(4) Position of closing appliances required in **Part V**~~

~~(5) Locations of remotely operated closing appliances (*e.g.* valves) of pipes, ducts, and tunnels that control flooding between compartments, and their control positions~~

~~3~~**2** The booklet specified in **33.3.2, Part C of the Rules** is ~~recommended~~ to contain the following **(1)** and **(2)**.

(1) General precautions

General precautions are to consist of a list of equipment conditions and operational procedures, considered by the Society to be necessary to maintain watertight integrity under normal ship operations.

(2) Specific precautions
Specific precautions are to consist of a list of elements (i.e. closures, sounding of alarms, etc.) considered by the Society to be vital to the survival of the ship.

Table C33.3.2-1 has been amended as follows.

Table C33.3.2-1 The Items and Contents of the Booklet

Items	Contents
(1) Boundaries of Compartments	Same as **Table C33.3.1-1** (1) (A reduced scale may be accepted.)
(2) Watertight closing appliances of openings in ~~boundary walls~~ the boundaries of compartments	In addition to **Table C33.3.1-1** (2), it is clearly to be stated that closing appliances not used during navigation shall be kept closed and that closing appliances to be used during navigation shall be closed immediately after passage.
(3) Weathertight closing appliances of openings in boundary walls	In addition to **Table C33.3.1-1** (3), it is clearly to be stated that closing appliances shall be closed immediately after passage.
(4) Cross-flooding appliances, if provided	In addition to **Table C33.3.1-1** (4), operating procedures and an operating time to reach equilibrium condition for cross-flooding appliances are to be included.
(5) Valves etc. remotely operated in order to control flooding through pipes, ducts and tunnels into other compartments	In addition to **Table C33.3.1-1** (5), it is clearly to be stated that valves, etc. shall be closed during navigation unless they are being used, and that valves, etc. being used at time of collision shall be closed immediately.
(6) Ballast line with hydraulic control line along the pipe	It is clearly to be stated that valves, etc. shall be closed during navigation unless they are being used.
(7) Non-automatic closing appliances of non-watertight openings through which progressive flooding might occur, if applicable	Position of opening. In addition, it is clearly to be stated that closing appliances to be used during navigation shall be closed immediately after passage.
(8) The results of the subdivision and damage stability analyses, if included	In addition to the results of subdivision and damage stability analyses, additional guidance is to be provided to ensure that the ship's officers referring to that information are aware that the results are included only to assist them in estimating the ship's relative survivability.
(9) Miscellaneous	(a) The booklet is to contain additional details regarding the following information shown on the damage control plan, if required: ・Positions of flooding detection systems, sounding devices, tank vents and overflows which do not extend above weatherdecks ・Pump capacities and piping diagrams ・Means of accessing and escaping from watertight compartments below bulkhead decks ・Alerting ship management and other organizations to stand by and co-ordinate assistance (b) The booklet is to include general instructions for controlling the effects of damage, such as the following: ・Establishing the locations and safety of persons on board ・To ascertain the extent of damage by sounding tanks and compartments ・To determine rates of flooding by repeated soundings ・Cautionary advice regarding the cause of any list ・Cautionary advice regarding the cause of liquid transfer operations to lessen list or trim ・Effects of creating additional free surfaces ・Effects of initiating pumping operations to control the ingress of water

Paragraph C33.3.3 has been added as follows.

C33.3.3 Damage Stability Information

The "damage stability information deemed appropriate by the Society" referred to in **33.3.3, Part C of the Rules** is to contain the following **(1)** and **(2).**

(1) The following information for providing a master a simple and easily understandable way of assessing ship's survivability in damage cases.

(a) The diagram of the results of the damage stability calculation required in **Chapter 4, Part C of the Rules** or **Chapter 4, Part CS of the Rules** as a rapid means to evaluate the consequences of any ship damage (e.g., such as damage consequence diagrams categorized by probability of survival as shown in **Fig.C33.3.3**).

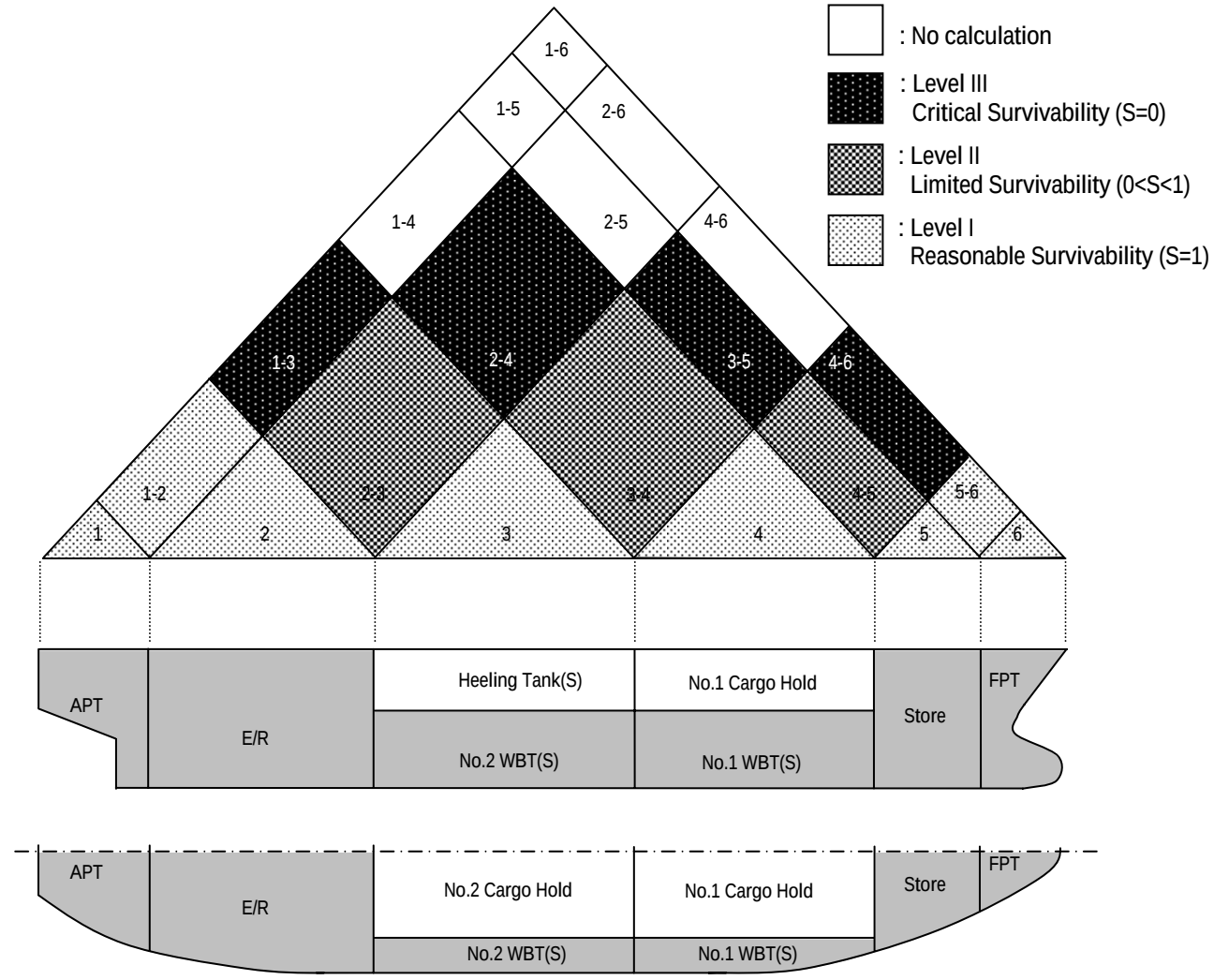
(b) A notice regarding the use of this information, which states that different results may be seen in cases where the flooding occured under actual loading conditions because the damage stability calculations given as reference are based on assumed conditions.

(2) In cases where a ship voluntarily enters into a contract to use a shore-based emergency response system, information needed for making damage stability assessment as well as the contact information for the shore-based facility is to be included as part of damage stability information.

Fig.C33.3.3 has been added as follows.

Fig. C33.3.3

Damage: Horizontal Extent from outside shell = 1.500m Vertical Extent from base line = 9.000 (m)



Damage Zone	Damage Compartment	Horizontal Extent(m)	Vertical Extent(m)	S-value
1 Compartment flooding				
1	APT	Max	Max	1.000
2	E/R	Max	Max	1.000
3	No.2 WBT(S)	1.500	9.000	1.000
4	No.1 WBT(S)	1.500	9.000	1.000
5	STORE	Max	Max	1.000
6	FPT	Max	Max	1.000
2 Compartments flooding				
1-2	APT E/R	Max	Max	1.000
2-3	E/R No.2 WBT(S)	1.500	9.000	0.785
3-4	No.1 WBT(S) No.2 WBT(S)	1.500	9.000	0.458
4-5	No.1 WBT(S) STORE	1.500	9.000	0.882
5-6	STORE FPT	Max	Max	1.000
3 Compartments flooding				
1-3	APT E/R No.2 WBT(S)	1.500	9.000	0.0000
2-4	E/R No.1 WBT(S) No.2 WBT(S)	1.500	9.000	0.0000
3-5	No.1 WBT(S) No.2 WBT(S) STORE	1.500	9.000	0.0000
4-6	No.1 WBT(S) STORE FPT	1.500	9.000	0.0000
Notice: The above damage compartments are the flooding case of the least safety factor within the damage zone.				

EFFECTIVE DATE AND APPLICATION (Amendment2-3)

1. The effective date of the amendments is 30 October 2009.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships for which the date of contract for construction is before the effective date.

Amendment 2-4

C23 BULWARKS, GUARDRAILS, FREEING ARRANGEMENTS, CARGO PORTS AND OTHER SIMILAR OPENINGS, SIDE SCUTTLES, RECTANGULAR WINDOWS, VENTILATORS AND GANGWAYS

Section C23.8 has been added as follows.

C23.8 Means of Embarkation and Disembarkation

C23.8.1 General

1 The wording "specially approved by the Society" specified in **23.8.1, Part C of the Rules** means those cases where a ship is engaged in voyages between designated ports where appropriate shore accommodation/embarkation ladders (platforms) are provided.

2 With respect to the requirements specified in **23.8.1, Part C of the Rules**, the means of embarkation and disembarkation are to be in accordance with the following. However, ships that have small freeboards and are provided with boarding ramps needs not to be in accordance with the following:

(1) Accommodation ladders and gangways are to be constructed based on ISO 5488:1979 "*Shipbuilding - accommodation ladders*", ISO 7061 "*Shipbuilding - aluminium shore gangways for seagoing vessels*" or standards where deemed appropriate by the Society. Accommodation ladder winches are to be constructed based on ISO 7364:1983 "*Shipbuilding and marine structures – deck machinery – accommodation ladder winches*" or standards where deemed appropriate by the Society or are to be the one pursuant to aforementioned standards.

(2) The structure of the accommodation ladders and gangways and their fittings and attachments are to be such as to allow regular inspection, maintenance of all parts and, if necessary, lubrication of their pivot pin. Special care is to be paid to welding connection.

(3) As far as practicable, the means of embarkation and disembarkation are to be sited clear of the working area and are not to be placed where cargo or other suspended loads may pass overhead. However, in cases where the Society recognizes unavoidable circumstances, the means of embarkation and disembarkation may be installed within the above mentioned areas or places, provided that safe passage is ensured through description in operation manuals or the installation of warning plates.

(4) Each accommodation ladder is to be of such a length to ensure that, at a maximum design operating angle of inclination, the lowest platform will be not more than 600 *mm* above the waterline in the lightest seagoing condition (in this regard, trim is to be the condition resulting from the loading condition of the lightest seagoing condition), as defined in SOLAS Regulation III/3.13. However, in cases where the height of the embarkation/disembarkation deck exceeds 20 m above the waterline or is deemed appropriate by the Society, an alternative means of providing safe access to the ship or supplementary means of access to the bottom platform of the accommodation ladder may be accepted.

(5) The arrangement at the head of the accommodation ladder is to provide direct access between the ladder and the ship's deck by a platform securely guarded by handrails and handholds. The ladder is to be securely attached to the ship to prevent overturning.

(6) Each accommodation ladder or gangway is to be clearly marked at each end with a plate showing the restrictions on the safe operation and loading, including the maximum and

minimum permitted design angles of inclination, design load, maximum load on bottom end plate, etc. Where the maximum operational load is less than the design load, it is also to be shown on the marking plate.

(7) Gangways are not to be used at an angle of inclination greater than 30 *degrees* from the horizontal and accommodation ladders are not to be used at an angle greater than 55 *degrees* from the horizontal, unless designed and constructed for use at angles greater than these and marked as such.

(8) Gangways are not to be secured to a ship's guardrails unless they have been designed for that purpose. If positioned through an open section of bulwark or railings, any remaining gaps are to be adequately fenced.

(9) Adequate lighting is to be provided to illuminate the means of embarkation and disembarkation, the position on deck where persons embark or disembark and the controls of the arrangement.

(10) A lifebuoy equipped with a self-igniting light and a buoyant lifeline is to be available for immediate use in the vicinity of the embarkation and disembarkation arrangement when in use.

(11) A safety net is to be mounted and arrangements that enable the installation of such net are to be provided to prevent falling accident in cases where it is possible that a person may fall from the means of embarkation and disembarkation or between the ship and quayside.

Appendix C5 has been added as follows.

Appendix C5 GUIDELINES FOR OWNERS/OPERATORS ON PREPARING EMERGENCY TOWING PROCEDURES (MSC.1/Circ.1255 ANNEX)

1 PURPOSE

The purpose of these Guidelines is to assist owners/operators in preparing ship-specific emergency towing procedures for ships subject to SOLAS regulation II-1/3-4. The procedures should be considered as part of the emergency preparedness required by paragraph 8 of part A of the International Safety Management (ISM) Code.

2 OBSERVATIONS

2.1 Owners, operators and crews should take into consideration that the nature of an emergency does not allow time for deliberation. Accordingly, the procedures should be practiced beforehand.
2.2 The towing procedures should be maintained on board the ship for ready use by the ship's crew in preparing their ship for towage in an emergency.
2.3 The crew should have good knowledge of equipment stowage location and accessibility. Any identified improvements to stowage arrangements should be implemented.
2.4 Crew dealing with an emergency situation should be aware of power availability required for winches and tools, as well as for deck lighting (for bad/low visibility and night time situations).
2.5 It is recognized that not all ships will have the same degree of shipboard equipment, so that there may be limits to possible towing procedures. Nevertheless, the intention is to predetermine what can be accomplished, and provide this information to the ship's crew in a ready-to-use format (booklet, plans, poster, etc.).

3 SHIP EVALUATION

3.1 The owner/operator should ensure that the ship is inspected and its capability to be towed under emergency situations is evaluated. Both equipment on board and available procedures should be reviewed. Items that need to be inspected are described in the following paragraphs.
3.2 The ability of the ship to be towed from bow and stern should be evaluated, and the following items should be reviewed:

.1 line handling procedures (passing and receiving messenger lines, towlines, bridles); and
.2 layout, structural adequacy and safe working loads of connection points (fairleads chocks, winches, bitts, bollards), etc.

3.3 The on-board tools and equipment available for assembling the towing gear and their locations should be identified. These should include but not be limited to:

.1 chains;
.2 cables;
.3 shackles;
.4 stoppers;
.5 tools; and
.6 line throwing apparatus.

3.4 The availability and characteristics of radio equipment on board should be identified, in order to enable communication between deck crew, bridge and the towing/salvage ship.

3.5 Unless the safe working loads of connection points are known, these loads should be determined by an engineering analysis reflecting the on-board conditions of the ship. The Guidance on shipboard towing and mooring equipment (MSC/Circ.1175) may be used for guidance.
3.6 The evaluation should be performed by persons knowledgeable in towing equipment and operations.

4 EMERGENCY TOWING BOOKLET

4.1 The Emergency Towing Booklet (ETB) should be ship specific and be presented in a clear, concise and ready-to-use format (booklet, plan, poster, etc.).
4.2 Ship-specific data should include but not be limited to:

.1 ship's name;
.2 call sign;
.3 IMO number;
.4 anchor details (shackle, connection details, weight, type, etc.);
.5 cable and chain details (lengths, connection details, proof load, etc.);
.6 height of mooring deck(s) above base;
.7 draft range; and
.8 displacement range.

4.3 All procedures developed in accordance with section 5 should be presented in a clear and easy to understand format, which will aid their smooth and swift application in an emergency situation.
4.4 Comprehensive diagrams and sketches should be available and include the following:

.1 assembly and rigging diagrams;
.2 towing equipment and strong point locations; and
.3 equipment and strong point capacities and safe working loads (SWLs).

4.5 A copy should be kept at hand by the owners/operators in order to facilitate the passing on of information to the towage company as early as possible in the emergency. A copy should also be kept in a common electronic file format, which will allow faster distribution to the concerned parties.
4.6 A minimum of three copies should be kept on board and located in:

.1 the bridge;
.2 a forecastle space; and
.3 the ship's office or cargo control room.

5 DEVELOPING PROCEDURES

5.1 Ship-specific procedures should be identified during the ship's evaluation and entered accordingly in the ETB. The procedures should include, as a minimum, the following:

.1 a quick-reference decision matrix that summarizes options under various emergency scenarios, such as weather conditions (mild, severe), availability of shipboard power (propulsion, on-deck power), imminent danger of grounding, etc.;
.2 organization of deck crew (personnel distribution, equipment distribution, including radios, safety equipment, etc.);
.3 organization of tasks (what needs to be done, how it should be done, what is needed for each task, etc.);
.4 diagrams for assembling and rigging bridles, tow lines, etc., showing possible emergency towing arrangements for both fore and aft. Rigged lines should be lead such that they avoid sharp corners, edges and other points of stress concentration;
.5 power shortages and dead ship situations, which must be taken into account, especially

for the heaving across of heavy towing lines;

.6 a communications plan for contacting the salvage/towing ship . This plan should list all information that the ship's master needs to communicate to the salvage/towing ship. This list should include but not be limited to:

.1 damage or seaworthiness;

.2 status of ship steering;

.3 propulsion;

.4 on deck power systems;

.5 on-board towing equipment;

.6 existing emergency rapid disconnection system;

.7 forward and aft towing point locations;

.8 equipment, connection points, strong points and safe working loads (SWL);

.9 towing equipment dimensions and capacities; and

.10 ship particulars;

.7 evaluation of existing equipment, tools and arrangements on board the ship for possible use in rigging a towing bridle and securing a towline;

.8 identification of any minor tools or equipment providing significant improvements to the "towability" of the ship;

.9 inventory and location of equipment on board that can be used during an emergency towing situation;

.10 other preparations (locking rudder and propeller shaft, ballast and trim, etc.); and

.11 other relevant information (limiting sea states, towing speeds, etc.).

EFFECTIVE DATE AND APPLICATION (Amendment 2-4)

1. The effective date of the amendments is 1 January 2010.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships the keels of which were laid or which were at *a similar stage of construction* before the effective date.

(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Amendment 2-5

C4 SUBDIVISIONS

C4.1 General

Paragraph C4.1.1 has been amended as follows.

C4.1.1 Application

"Those ships specifically approved by the Society" refers to the following.

(1) Bulk carriers having freeboards of type *B*-60 or *B*-100 as specified in the requirements of **Part V** of the Rules; however, when carrying deck cargoes, the requirements of **Chapter 4, Part C** of the Rules apply

(2) Offshore supply vessels complying with the requirements of *IMO Resolution* ~~*A.*469(XII)~~ *MSC.*235(82)

(3) Special purpose ships complying with the requirements of *IMO Resolution* ~~*A.*534(13)~~ *MSC.*266(84)

EFFECTIVE DATE AND APPLICATION (Amendment 2-5)

1. The effective date of the amendments is 1 April 2010.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to ships for which the date of contract for construction is before the effective date.

3. Notwithstanding the provision of preceding **2.**, the amendments to the Guidance may apply to ships for which the application is submitted to the Society before the effective date upon request by the owner.