RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part B Class Surveys

2012 AMENDMENT NO.1

Rule No.29 15th June 2012

Resolved by Technical Committee on 10th February 2012

Approved by Board of Directors on 6th March 2012

Rule No.29 15th June 2012
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 B CLASS SURVEYS

Amendment 1-1

Chapter 1 GENERAL

1.3 Definitions

1.3.1 Terms

Sub-paragraph (15) has been amended as follows.

(15) "General dry cargo ships" are ships constructed or converted to carry solid cargoes other than:
- bulk carriers;
- container carriers;
- dedicated forest product carriers (except for ships carrying timber cargoes);
- ro-ro cargo ships;
- car carriers;
- refrigerated cargo ships;
- dedicated wood chip carriers; and
- dedicated cement carriers
- ships of double side-skin construction, with double side-skin extending for the entire length of the cargo area, and for the entire height of the cargo hold to the upper deck

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 15 June 2012.

Amendment 1-2

Chapter 4 INTERMEDIATE SURVEYS

4.2 Intermediate Surveys for Hull, Equipment, Fire extinction and Fittings

Paragraph 4.2.2 has been amended as follows.

4.2.2 General Examination

At Intermediate Surveys, examinations of hull, equipment, fire-extinction and fittings specified in **3.2.2** are to be carried out. In addition, ~~conditions of spare parts for fire-extinguishing systems are to be generally examined~~ examinations specified in the following **(1)** and **(2)** are to be carried out.

(1) General examinations of the spare parts of extinguishing systems

(2) Visual examinations or examinations considered appropriate by the Society of cross flooding equipment

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 15 June 2012.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-3

Chapter 1 GENERAL

1.3 Definitions

1.3.1 Terms

Sub-paragraph (6) has been amended as follows.

(6) "Substantial corrosion" is an extent of corrosion such that assessment of corrosion pattern indicates wastage in excess of 75% of allowable margins, but within acceptable limits. Notwithstanding the above, for the following (a) to (c), "substantial corrosion" is an extent of corrosion such that the assessment of the corrosion pattern indicates a gauged (or measured) thickness which is within the range of 0.5*mm* to the renewal thickness stipulated in the relevant provisions. "Renewal thickness" refers to the minimum allowable thickness below which the renewal of structural members is to be carried out.
   (a) For ships complying with the provisions of **Part CSR-B** and **Part CSR-T.**
   (b) For hatch covers and hatch coamings for cargo holds of the ships stipulated otherwise by the Society.
   (c) For transverse watertight bulkheads in cargo hold complying with the provision of **Chapter 31A, Part C** or **Chapter 31B, Part C.**

Sub-paragraph (18) has been added as follows.

(18) "Pitting corrosion" is defined as scattered corrosion spots/areas with local material reductions which are greater than the general corrosion in the surrounding area. Pitting intensity is defined in **Fig. B1.1**.

Sub-paragraph (19) has been added as follows.

(19) "Edge corrosion" is defined as local corrosion at the free edges of plates, stiffeners, primary support members as well as around openings. An example of edge corrosion is shown in **Fig. B1.2**.

Sub-paragraph (20) has been added as follows.

(20) "Grooving corrosion" is defined as local corrosion adjacent to weld joints along abutting stiffeners or at stiffener or plate butts or seams. An example of grooving corrosion is shown in **Fig. B1.3**.

Fig. B1.1 has been added as follows.

Fig. B1.1 Pitting intensity diagram

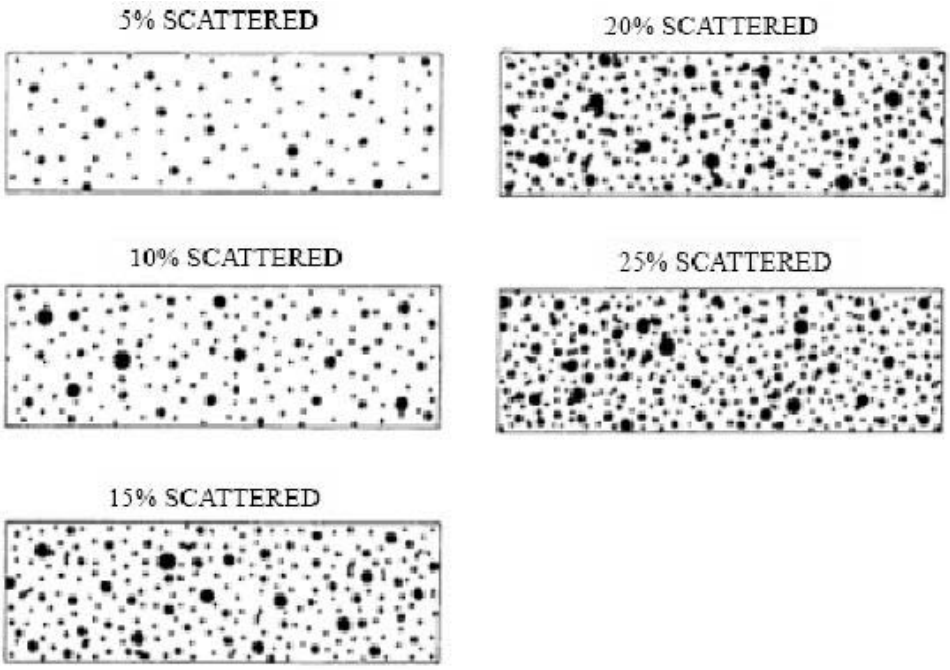


Fig. B1.2 has been added as follows.

Fig. B1.2 Edge corrosion

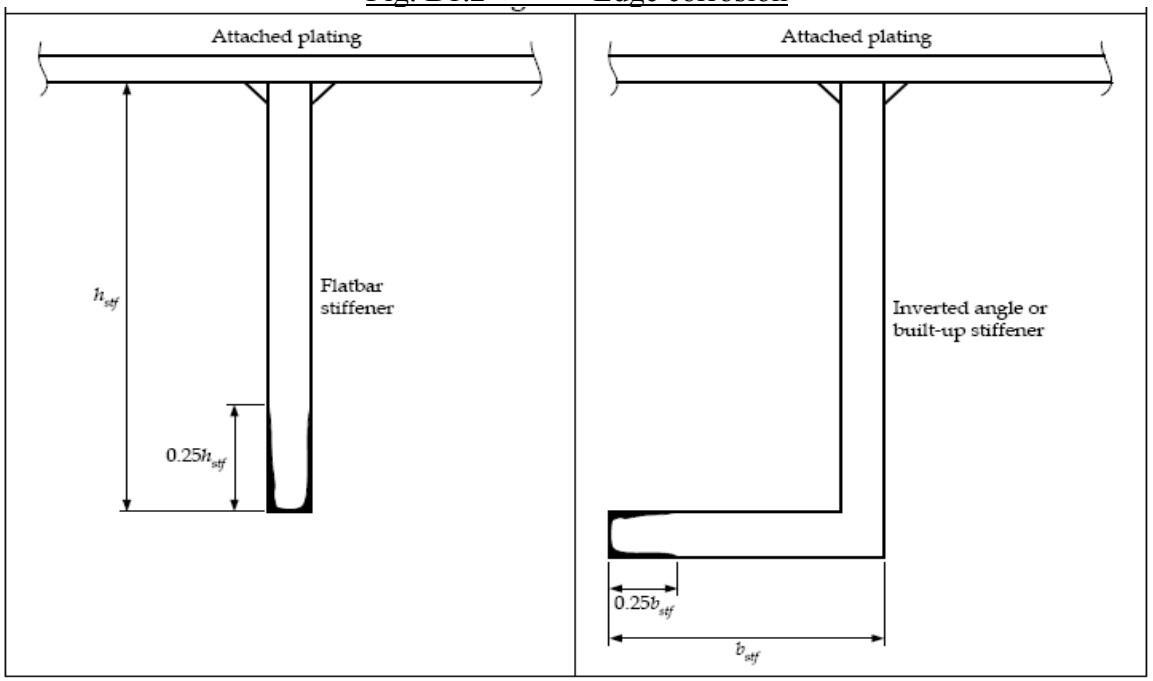
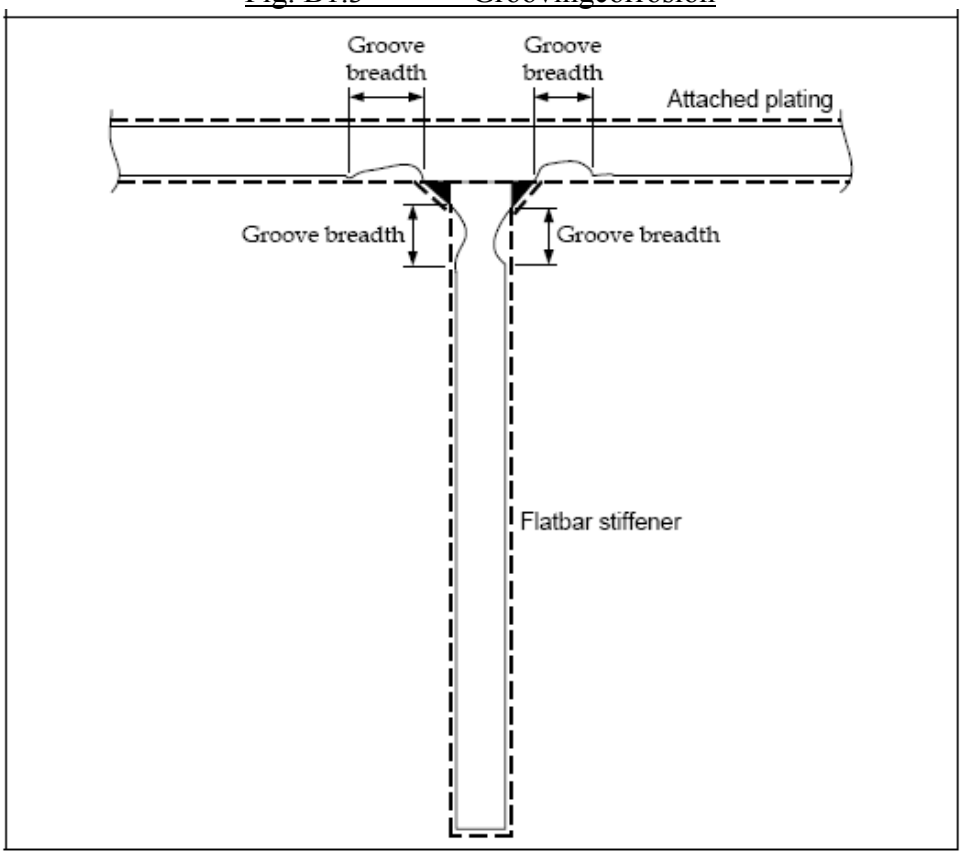


Fig. B1.3 has been added as follows.

Fig. B1.3 Groovingcorrosion



Chapter 3 ANNUAL SURVEYS

3.2 Annual Surveys for Hull, Equipment, Fire Extinction and Fittings

3.2.3 Performance Test

Table B3.3 has been amended as follows.

Table B3.3 Performance tests

Items	Tests
1 Weathertight hatch covers	・ Hose test listed in **Table B2.1** (when deemed necessary by the Surveyor) ・ Random checking of the satisfactory operation of mechanically operated hatch covers <u>including hydraulic and power components, wires, chains and link drives</u> ・ For mechanically operated hatch covers on bulk carriers, hatch cover sets within the forward $0.25L_f$ and at least one additional set, <u>including hydraulic and power components, wires, chains and link drives,</u> are to be checked for satisfactory operation so that all sets on the ship are checked at least once every 5 *years* between special surveys
2 Closing appliances of watertight door on watertight bulkheads and openings on superstructure end bulkheads	・ Checking whether the appliances work in good order is to be made as deemed necessary by the Surveyor.
3 Appliances related to fire protection and escape	・ Checking whether the appliances work in good order is to be carried out.
4 Fire detection system and fire alarm system including manually operated call points	・ Checking whether the systems work in good order (including proper operation of malfunction indicator) is to be made.
5 Fire pumps (including emergency fire pumps) piping, hydrants, hoses, nozzles etc.	・ Performance test of the fire fighting system composed of fire pump, hydrants, etc. is to be carried out. For ships with fire pumps in periodically unattended machinery spaces, an operation test of the remote control system or automatic operation system of one pump is to be carried out.
6 Fixed deck foam system	・ Checking whether the system works in good order is to be carried out by delivering water.
7 Ventilation system	・ Checking whether the system works in good order is to be carried out.
8 Stability Computer	・ A performance test is to be carried out on computers for stability calculation that are installed as a supplement to the stability information booklet on board ships contracted for construction on or after 1 July 2005.
9 Water level detection and alarm systems	・ Checking whether the systems work in order is to be made at random.
10 Dewatering arrangements	・ Checking whether the systems work in order is to be made.
11 Bow doors, inner doors, side shell doors and stern doors	・ Checking whether the appliances work in good order is to be carried out. ・ Hose test (when deemed necessary by the Surveyor)

Paragraph 3.2.6 has been amended as follows.

3.2.6 Thickness Measurements

At Annual Surveys, the thickness measurements **(1)** ~~and~~ to **(~~2~~3)** below are to be carried out. As to the gauging equipment and thickness measurement report, the provisions of **5.2.6-1** are to be applied correspondingly as well.

(1) Spaces and Tanks listed in **Table B3.6**

(2) Suspect areas identified at previous survey (excluding cargo tanks of oil tankers, ships carrying dangerous chemicals in bulk and ships carrying liquefied gases in bulk)

(3) Substantial corrosion areas identified at the previous survey (excluding cargo tanks of oil tankers other than ships built under **Part CSR-T of the Rules**, ships carrying dangerous chemicals in bulk and ships carrying liquefied gases in bulk). For bulk carriers built under **Part CSR-B of the Rules**, thickness measurements may be dispensed with at Surveyor's discretion in cases where a protective coating has been applied in accordance with coating manufacturer's requirements and is maintained in good condition.

Table B3.6 has been amended as follows.

Table B3.6 Thickness measurements

Items	Note
Requirements for Cargo Ships except when specified otherwise	
1 Structural members in ballast tanks	・When extensive corrosion is found in the examination specified in **Table B3.4** which is required for ships over 5 *years* of age, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-2**.
2 Bow doors, inner doors, side shell doors and stern doors	・When deemed necessary by the Surveyor as a consequence of the examination specified in **Table B3.2**, thickness measurements are to be carried out.
Requirements for Tankers, Ships Carrying Dangerous Chemicals in bulk and Ships Carrying Liquefied Gases in bulk	
1 Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in cargo pump rooms and cargo compressor rooms and on weather decks	・When deemed necessary by the Surveyor as a consequence of the examination specified in **Table B3.2**, thickness measurements are to be carried out.
2 Structural members in ballast tanks	・When extensive corrosion is found in the examination of ballast tanks specified in **Table B3.4** which is required for oil tankers, ships carrying dangerous chemicals in bulk with integral tanks and ships carrying liquefied gases in bulk over 5 *years* of age, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-3** or **-4**.
Requirements for Bulk Carriers	
1 Structural members in ballast tanks	・When extensive corrosion is found in the examination of ballast tanks specified in **Table B3.4** which is required for bulk carriers over 5 *years* of age, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-4~~5~~**.

Items	Note
2 Hatch covers and hatch coamings	・ When deemed necessary by the Surveyor as a consequence of the internal examination required in **Table B3.4** or the close-up survey required in **Table B3.5**, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-~~4~~5**.
3 Structural members in cargo holds	
Requirements for General Dry Cargo Ships of not less than 500 *gross tonnage*	
1 Structural members in ballast tanks	・ When extensive corrosion is found in the examination of ballast tanks specified in **Table B3.4** which is required for general dry cargo ships over 5 *years* of age, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-~~5~~6**.
2 Hatch covers and hatch coamings	・ When deemed necessary by the Surveyor as a consequence of the close-up survey required in **Table B3.5**, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-~~5~~6**.
3 Structural members in cargo holds	・ For general dry cargo ships over 10 *years* of age, when deemed necessary by the Surveyor as a consequence of the internal examination required in **Table B3.4** and the close-up survey required in **Table B3.5**, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provisions of **5.2.6-~~5~~6**.

Chapter 4 INTERMEDIATE SURVEYS

4.2 Intermediate Surveys for Hull, Equipment, Fire extinction and Fittings

Paragraph 4.2.6 has been amended as follows.

4.2.6 Thickness Measurements

At Intermediate Surveys, thickness measurements ~~of the areas listed in **Table B4.4** and suspect areas identified in the previous survey are to be carried out~~ of the area listed in **(1)** to **(3)** below are to be carried out. As to the gauging equipment and thickness measurement report, the provisions of **5.2.6-1** are to be applied correspondingly as well.

(1) Structural members, etc. listed in **Table B4.4**
(2) Suspect areas identified in the previous survey
(3) Substantial corrosion areas identified in the previous survey

Table B4.4(1) has been amended as follows.

Table B4.4(1) Thickness measurements

Items	Note
Requirements for Cargo Ships except those specified in the followings	
1 Structural members in ballast tanks	For cargo ships over 5 *years* of age ・Where considered necessary by the Surveyor as a result of the survey specified in **Table B4.2**, thickness measurements are to be carried out at the discretion of the Surveyor, where a poor coating condition, corrosion or other defects are found in a ballast tank or where a protective coating has not been applied from the time of construction. ・Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provision of **5.2.6-2**.
2 Bow doors, inner doors, side shell doors and stern doors	・When deemed necessary by the Surveyor as a consequence of the examination specified in **4.2.2**, thickness measurements are to be carried out.
Requirements for Tankers, Ships Carrying Dangerous Chemicals in bulk and Ships Carrying Liquefied Gases in bulk	
1 Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in cargo pump rooms and cargo compressor rooms and on weather decks	・When deemed necessary by the Surveyor as a consequence of the examination specified in **4.2.2**, thickness measurements are to be carried out.
2 Structural members in ballast tanks (for ships over 5 *years* of age)	・Where considered necessary by the Surveyor as a result of the survey specified in **Table B4.2**, thickness measurements are to be carried out at the discretion of the Surveyor, where a poor coating condition, corrosion or other defects are found in a ballast tank or where a protective coating has not been applied from the time of construction. ・If the results of thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements is to be increased in accordance with the provision of **5.2.6-3** or **-4.**

3 Structural members in cargo tanks	・For ships over 5 *years* of age (excluding ships carrying liquefied gases in bulk), if the results of thickness measurements specified in **4.2.6** indicate that substantial corrosion is found, the extent of thickness measurements is to be increased in accordance with the provision of **5.2.6-3** or **-4.**
Requirements for the Bulk Carriers over 5 *years* of age	
1 Structural members in ballast tanks	・Where considered necessary by the Surveyor as a result of the survey specified in **Table B4.2**, thickness measurements are to be carried out at the discretion of the Surveyor, where a poor coating condition, corrosion or other defects are found in a ballast tank or where a protective coating has not been applied from the time of construction ・If the results of thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements is to be increased in accordance with the provision of **5.2.6-45**. ・In addition to the above, for bulk carriers built under **Part CSR-B of the Rules**, identified substantial corrosion areas are to be in accordance with either the following **(1)** or **(2)**: (1) Be protected by coatings applied in accordance with coating manufacturer requirements and examined annually to confirm said coatings are still in good condition; or, (2) Have thickness measurements taken annually
2 Hatch covers and hatch coamings	・Where considered necessary by the Surveyor as a result of the close-up survey of the bulk carriers specified in **Table B4.3**, thickness measurements are to be carried out at the discretion of the Surveyor. If the results of thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements is to be increased in accordance with the provision of **5.2.6-45**. ・In addition to the above, for bulk carriers built under **Part CSR-B of the Rules**, identified substantial corrosion areas are to be in accordance with either the following **(1)** or **(2)**: (1) Be protected by coatings applied in accordance with coating manufacturer requirements and examined annually to confirm said coatings are still in good condition; or, (2) Have thickness measurements taken annually
3 Structural members in cargo holds	・Thickness measurements are to be carried out to an extent that determines both general and local corrosion levels at the area subject to close-up survey. ・The thickness measurements may be dispensed with provided the Surveyor is satisfied by the results of the close-up survey: that there is no structural diminution and the protective coating remains effective. ・If the results of thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements is to be increased in accordance with the provision of **5.2.6-45**. ・In addition to the above, for bulk carriers built under **Part CSR-B of the Rules**, identified substantial corrosion areas are to be in accordance with either the following **(1)** or **(2)**: (1) Be protected by coatings applied in accordance with coating manufacturer requirements and examined annually to confirm said coatings are still in good condition; or, (2) Have thickness measurements taken annually.

Table B4.4(2) has been amended as follows.

Table B4.4(2)　Thickness measurements

Items	Note
Requirements for General Dry Cargo Ships of not less than 500 *gross tonnage*	
1　Structural members in ballast tanks	・ Where considered necessary by the Surveyor as a result of the survey specified in **Table B4.2**, thickness measurements are to be carried out at the discretion of the Surveyor, where a poor coating condition, corrosion or other defects are found in a ballast tank or where a protective coating has not been applied from the time of construction. ・ If the results of thickness measurements indicate that substantial corrosion is found, the extent of thickness measurements is to be increased in accordance with the provision of **5.2.6-~~5~~6**.
2　Hatch covers and hatch coamings	・ When deemed necessary by the Surveyor as a consequence of the close-up survey required in **Table B4.3**, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provision of **5.2.6-~~5~~6**.
3　Structural members in cargo holds	1　For ships carrying timber cargoes over 5 *years* of age ・ Thickness measurements of structural members that were subject to close-up survey in all cargo holds is to be carried out to the same extent as the previous Special Survey. ・ The thickness measurements may be dispensed with provided the Surveyor is satisfied by the results of the close-up survey: that there is no structural diminution and the protective coating remains effective. 2　For general dry cargo ships over 10 *years* of age (excluding ships carrying timber cargoes) ・ When deemed necessary by the Surveyor as a consequence of the internal examination required in **Table B4.2**, thickness measurements are to be carried out to the satisfaction of the Surveyor. Where substantial corrosion is found, additional thickness measurements are to be carried out according to the provision of **5.2.6-~~5~~6**.

Chapter 5 SPECIAL SURVEYS

5.2 Special Surveys for Hull, Equipment, Fire Extinction and Fittings

Paragraph 5.2.3 has been amended as follows.

5.2.3 Performance Test

1 At Special Surveys, performance tests specified in **4.2.3** are to be carried out. In addition to such performance tests, it is to be confirmed that the loading instrument required in **34.1.1** and **34.3.2, Part C** works in order. Moreover, the performance tests for mooring and anchoring arrangements specified in item 3 of **Table B4.1** may not be omitted.

2 In addition to **-1** above, the performance tests and operation tests specified in **(1)** to **(9)** below are to be carried out.

(1) Operation test for all mechanically operated hatch covers, including the testing of all hydraulic and power components, wires, chains and link drives

(2) Hose tests listed in **Table 2.1** or equivalent, for all weathertight hatch covers

(3) Performance tests and operation tests for all bilge and ballast piping system

(4) Hose tests or equivalent, for all bow doors, inner doors, side shell doors and stern doors

(5) For oil tankers and ships carrying dangerous chemical in bulk, performance tests and operation tests of cargo and ballast piping systems within all cargo tanks, all ballast tanks and all tanks and spaces bounding cargo tanks such as pump rooms, pipe tunnels, cofferdams and void spaces, and on the weather deck

(6) For ships carrying liquefied gases in bulk, performance test and operation test of cargo and ballast piping systems within all cargo tanks, all ballast tanks and all tanks and spaces bounding cargo tanks such as pump rooms, cargo compressor rooms, pipe tunnels, cofferdams and void spaces, and on weather deck

(7) For bulk carriers and general dry cargo ships of 500 *gross tonnage*, performance test and operation test of all piping systems within cargo holds, all ballast tanks and all tanks and spaces bounding cargo holds such as pipe tunnels, cofferdams, void spaces, and other similar spaces bounding cargo holds, and those on weather decks

(8) Performance tests listed in item 1 of **Table B4.1,** for all water level detection and alarm systems.

(9) Performance test for the means of embarkation and disembarkation, for ships not less than 500 *gross tonnage* which are engaged on international voyages.

3 Where considered necessary by the Surveyor, an execution of the inclining test and alterations to the stability information may be required.

5.2.6 Thickness Measurements

Sub-paragraph -5 has been amended as follows.

5 At Special Surveys for Bulk Carriers, notwithstanding the provision of **-2** above, thickness measurements are to be carried out according to **-1** above for structural members listed in **Table B5.15** and tanks and spaces identified as suspect areas at previous surveys. Where substantial corrosion is found as a result of such thickness measurements, additional thickness measurements are to be taken in accordance with **Tables B5.16** through **Table B5.20**. In addition to the above, for bulk carriers built under **Part CSR-B of the Rules**, identified substantial corrosion areas are to be in accordance with either the following **(1)** or **(2)**:

(1) Be protected by coatings applied in accordance with coating manufacturer requirements and examined annually to confirm said coatings are still in good condition; or,

(2) Have thickness measurements taken annually.

Sub-paragraph -7 has been renumbered to -8, and Sub-paragraph -7 has been added as follows.

7 At Special Surveys for double hull oil tankers built under **Part CSR-T of the Rules** and bulk carriers built under **Part CSR-B of the Rules**, thickness measurements are to be carried out in accordance with **(1)** through **(3)** below in addition to provisions **-3** and **-5** above.

(1) Interpretations specified in **Table B5.29** and **Table B5.30** are to be considered when structural members subject to thickness measurements and the extent of thickness measurements are determined in accordance with **Table B5.10-1** to **Table B5.15**. The locations of the points to be measured are to be given for the most important items of the structure.

(2) Thickness measurement results are to comply with the criteria specified in **Chapter 13, Part CSR-B of the Rules** or **Section 12, Part CSR-T of the Rules**.

(3) Thickness measurement results for areas subject to pitting corrosion, edge corrosion and grooving corrosion are to comply with the respective criteria for each type of corrosion.

~~7~~**8** The ship's longitudinal strength is to be evaluated by using the thickness of structural members measured in transverse sections specified in **Table B5.8**, **Table B5.10**, **Table B5.15** and **Table B5.21**.

Table B5.8 has been amended as follows.

Table B5.8 Requirements for thickness measurements for cargo ships

Special Survey	Structural members subject to thickness measurement
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. Suspect areas 2. All bow doors, inner doors, side shell doors and stern doors when deemed necessary by the Surveyor (plating and stiffeners)
Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)	1. Suspect areas 2. Each plate in one section of the strength deck plating for the full beam of the ship within 0.5*L* amidships 3. All bow doors, inner doors, side shell doors and stern doors when deemed necessary by the Surveyor (plating and stiffeners)
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. Suspect areas 2. Each plate and member in two transverse sections within 0.5*L* amidships. (in way of two different cargo spaces, if applicable). When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. 3. Internals in fore and aft. peak tank 4. Both ends and middle part of each hatch side and end coaming (plating and stiffeners) 5. All cargo hold hatch covers (plating and stiffeners) 6. All bow doors, inner doors, side shell doors and stern doors when deemed necessary by the Surveyor (plating and stiffeners)
Special Survey for ships over 15 *years* and up to 20 *years* of age (Special Survey No.4)	1. Suspect areas 2. Following portions of structural members: (1) All exposed main deck plates, full length (2) Each plate and member in three transverse sections of cargo areas within 0.5*L* amidships. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. (3) All wind and water strakes, port and starboard, full length 3. Representative exposed superstructure deck plating (poop, bridge and forecastle deck) 4. All keel plates, full length, and an appropriate number of bottom plates in way of cofferdams, machinery spaces and aft end of tanks 5. Plating of sea chests, and shell plating in way of overboard discharges (as deemed necessary by the Surveyor) 6. In all cargo holds, all lowest strakes and strakes in way of tween decks of all watertight transverse bulkheads in cargo spaces together with internals in way 7. Structural members specified in 3. to 5. of Special Survey No.3
Special Survey for ships over 20 *years* of age (Special Survey No.5 and subsequent Special Surveys)	1. Suspect areas 2. Structural members specified in 2. to 7. of Special Survey No.4

Table B5.10-1(1) has been amended as follows.

Table B5.10-1(1) Requirements of thickness measurements for oil tankers and ships carrying dangerous chemicals in bulk

Special Surveys	Structural members subject to thickness measurement
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. Suspect areas 2. Each deck plating in one transverse section in way of a ballast tank, if any, or a cargo tank used primarily for water ballast within the cargo area 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in **5.2.2**
Special Survey for ships over 5 years and up to 10 *years* of age (Special Survey No.2)	1. Suspect areas 2. Within the cargo area: (1) Each deck plate (2) One transverse section. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. Selected wind and water strakes outside the cargo area 5. Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in **5.2.2**
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. Suspect areas 2. Within the cargo area: (1) Each deck plate (2) Two transverse sections. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. Selected wind and water strakes outside the cargo area 5. All wind and water strakes within the cargo area 6. Internals in fore and aft. peak tank 7. Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in **5.2.2** 8. For ships carrying dangerous chemicals in bulk, selected steel cargo pipes outside cargo tanks and ballast pipes passing through cargo tanks

Table B5.10-1(2) has been amended as follows.

B5.10-1(2) Requirements of thickness measurements for oil tankers and ships carrying dangerous chemicals in bulk

Special Surveys	Structural members subject to thickness measurement
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	1. Suspect areas 2. Within the cargo area: (1) Each deck plate (2) Three transverse sections. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. (3) Each bottom plate 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. All wind and water strakes 5. Internals in fore peak tank and after peak tank 6. All exposed main deck plating outside the cargo area 7. Representative exposed superstructure deck plating (poop, bridge and forecastle deck) 8. All keel plates, full length, and an appropriate number of bottom plates in way of cofferdams, machinery space, and aft end of tanks 9. Plating of sea chests, and shell plating in way of overboard discharges (as deemed necessary by the Surveyor) 10. Cargo oil, fuel oil, ballast, vent pipes including vent masts and headers, inert gas pipes and all other piping in pump room and on weather decks, when deemed necessary by the Surveyor as a consequence of general examinations specified in **5.2.2** 11. For ships carrying dangerous chemicals in bulk, selected steel cargo pipes outside cargo tanks and ballast pipes passing through cargo tanks

Table B5.10-2 has been amended as follows.

Table B5.10-2 Requirements of thickness measurements for ships carrying liquefied gases in bulk

Special Surveys	Structural members and so forth subject to thickness measurement
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. Suspect area 2. One transverse section of deck plating for the full beam of the ship within 0.5*L* amidships in way of a ballast tank, if any 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern
Special Survey for ships over 5 years and up to 10 *years* of age (Special Survey No.2)	1. Suspect area 2. Within the cargo area: (1) Each deck plate (2) One transverse section within 0.5*L* amidships in way of a ballast tank, if any. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. Selected wind and water strakes outside the cargo area
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. Suspect area 2. Within the cargo area (1) Each deck plating (2) Two transverse sections. At least one section is to include a ballast tank within 0.5*L* amidships, if any. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. (3) All wind and water strakes 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. Selected wind and water strakes outside the cargo area 5. Internals in fore peak tank and after peak tank
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	1. Suspect area 2. Within the cargo area: (1) Each deck plate (2) Three transverse sections. At least one section is to include a ballast tank within 0.5*L* amidships, if any. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. (3) Each bottom plate (4) Duct keel plating and internals 3. Structural members subject to close-up survey for general assessment and recording of corrosion pattern 4. All wind and water strakes 5. Internals in fore peak tank and after peak tank 6. All exposed main deck plating outside the cargo area 7. Representative exposed superstructure deck plating (poop, bridge and forecastle deck) 8. All keel plates, full length, and an appropriate number of bottom plates in way of cofferdams, machinery space, and aft end of tanks 9. Plating of sea chests, and shell plating in way of overboard discharges (as deemed necessary by the Surveyor)

Table B5.15(2) has been amended as follows.

Table B5.15(2) Requirements of thickness measurements for bulk carriers

Special Surveys	Structural members subject to thickness measurement
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. Suspect areas 2. Structural members within the cargo length area: (1) Each deck plating outside the line of cargo hatch openings (2) Two transverse sections, one in the midship area, outside the line of cargo hatch openings. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. 3. At least the following structural members for general assessment and recording of corrosion pattern: (1) All shell frames including their end brackets in the forward and one other cargo hold of single side skin (2) A sufficient number (at least 1/2 of total number) of shell frames including their end brackets at forward, middle, and aft parts on both sides of each remaining cargo hold of single side skin (3) Other structural members subject to close-up survey 4. Internals in fore and aft peak tanks 5. All wind and water strakes within the cargo length area 6. Selected wind and water strakes outside the cargo length area
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	1. Suspect areas 2. Structural members within the cargo length area: (1) Each deck plating outside the line of cargo hatch openings (2) Three transverse sections, one in the midship area, outside the line of cargo hatch openings. When the selected section is a transversely framed section, adjacent frames and their end connections in way of the transverse section are to be included. (3) Each bottom plate 3. At least the following structural members for general assessment and recording of corrosion pattern: (1) All shell frames including their end brackets in all cargo holds of single side skin (2) Other structural members subject to close-up survey 4. Internals in fore and after peak tanks 5. All exposed main deck plating outside the cargo length area 6. Representative exposed superstructure deck plating (poop, bridge and forecastle deck) 7. All keel plates, full length, and an appropriate number of bottom plates in way of cofferdams, machinery space, and aft end of tanks 8. Plating of sea chests, and shell plating in way of overboard discharges (as deemed necessary by the Surveyor) 9. All wind and water strakes

Table B5.29 has been added as follows.

Table B5.29 Interpretations of rule requirements for the number and location of thickness measurements for CSR bulk carriers

Item	Interpretation	Reference
Selected plates on deck, tank top, bottom, double bottom and wind-and- water area	«Selected» means at least a single point on one out of three plates, to be chosen as representative areas of average corrosion	
All deck, tank top and bottom plates and wind-and-water strakes	At least two points on each plate to be taken either at each 1/4 extremity of plate or at representative areas of average corrosion	
Transverse section	Single side skin construction: A transverse section includes all longitudinal members (i.e., plating, longitudinals and girders, etc.) at the deck, side, bottom; inner bottom and hopper side plating and bottom plating in top wing tanks. Double side skin construction: A transverse section includes all longitudinal members (i.e., plating, longitudinals and girders, etc.) at the deck, sides, bottom, inner bottom, hopper sides, inner sides and top wing inner sides.	**Fig B5.1**
All cargo hold hatch covers and coamings	Including plates and stiffeners	**Fig. B5.2**
Transverse section of deck plating outside line of cargo hatch openings	Two single points on each deck plate (to be taken either at each 1/4 extremity of the plate or at representative areas of average corrosion) between the ship sides and hatch coamings in the concerned transverse section	
All deck plating and underdeck structure inside line of hatch openings between cargo hold hatches	«All deck plating» means at least two points on each plate to be taken either at each 1/4 extremity of the plate or at representative areas of average corrosion. "Under deck structure": at each short longitudinal girder: three points for web plating (fwd/middle/aft), one point for face plate, one point for web plating and one point for face plating of transverse beams in way. At each end of transverse beams, one point for web plating and one point for face plate	**Fig. B5.6**
Selected side shell frames in cargo holds of single side skin construction	Includes side shell frames, upper and lower end attachments and adjacent shell plating. • 25% of frames: one out of four frames should preferably be chosen throughout the cargo hold length on each side. • 50% of frames: one out of two frames should preferably be chosen throughout the cargo hold length on each side. «Selected frames» means at least 3 frames on each side of cargo holds	**Fig. B5.3**
Transverse frame in double skin tank of double side skin construction	---	**Fig. B5.1**
Transverse bulkheads in cargo holds	Includes bulkhead plating, stiffeners and girders. Also includes internal structures of upper and lower stools, where fitted. Two selected bulkheads: one is to be the bulkhead between the two foremost cargo holds and the second may be chosen in another position	**Fig. B5.4**
One transverse bulkhead in each cargo hold	This means that close-up surveys and related thickness measurements are to be performed on one side of the bulkhead; the side is to be chosen based on the outcome of the overall survey of both sides. In the event of doubt, the Surveyor may also require (possibly partial) close-up surveys on the other side	**Fig. B5.4**
Transverse bulkheads in one topside, hopper, double bottom ballast tank and side ballast tank(double side skin)	Includes bulkhead and stiffening systems. The ballast tank is to be chosen based on the history of ballasting among those prone to have the most severe conditions	**Fig. B5.5**
Transverse webs in ballast tanks	Includes web plating, face plates, stiffeners and associated plating and longitudinals. One of representative tanks of each type (i.e. topside or hopper or side tank) is to be chosen for in the forward part	**Fig. B5.1** **Fig. B5.3**

Table B5.30 has been added as follows.

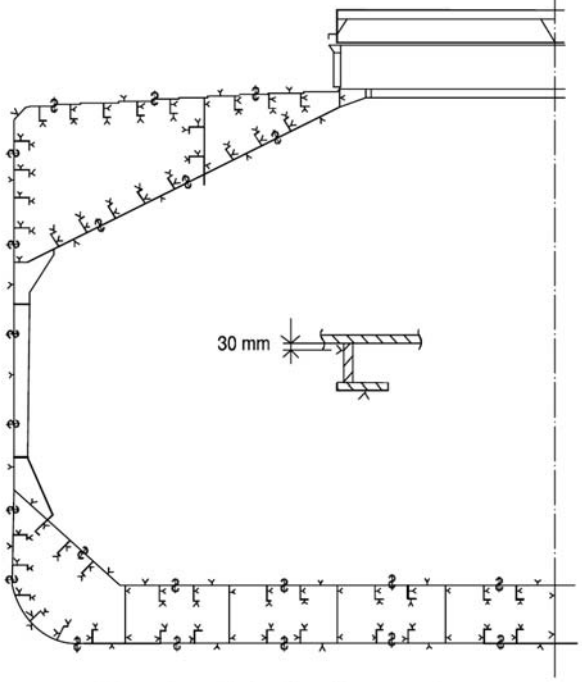
Table B5.30 Interpretations of rule requirements for the number and location of thickness measurements for CSR double hull oil tankers

Item	Interpretation	Reference
Selected plates	«Selected» means at least a single point on one out of three plates, to be chosen as representative areas of average corrosion.	
Deck, bottom plates and wind-and-water strakes	At least two points on each plate to be taken either at each 1/4 extremity of plate or at representative areas of average corrosion.	
Transverse section	Measurements to be taken on all longitudinal members (i.e., plating, longitudinals and girders, etc.) at the deck, side, bottom, longitudinal bulkheads, inner bottom and hopper. One point to be taken on each plate. Both web and flange to be measured on longitudinals, if applicable. For tankers older than 10 years of age: • Within 0.1*D* (where *D* is the ship's moulded depth) of the deck and bottom at each transverse section to be measured, • Every longitudinal and girder is to be measured on webs and face plates • Every plate is to be measured at one point between longitudinals.	**Fig. B5.7**
Transverse rings (1) in cargo and ballast tanks	• At least two points on each plate in a staggered pattern and two points on the corresponding flange, where applicable. • Minimum 4 points on the first plate below deck. Additional points in way of curved parts. • At least one point on each of two stiffeners between stringers / longitudinal girders.	**Fig. B5.8**
Transverse bulkheads in cargo tanks	• At least two points on each plate. Minimum 4 points on the first plate below main deck. • At least one point on every third stiffener to be taken between each stringer. • At least two points on each plate of stringers and girders, and two points on the corresponding flange. Additional points in way of curved parts. • Two points of each diaphragm plate of stools (if fitted).	**Fig. B5.9**
Transverse bulkheads in ballast tanks	• At least 4 points on plates between stringers / longitudinal girders, or per plate if stringers / girders are not fitted. • At least two points on each plate of stringers and girders, and two points on the corresponding flange. Additional points in way of curved parts. • At least one point on two stiffeners between each stringer / longitudinal girder.	**Fig. B5.10**
Adjacent structural members	• On adjacent structural members, one point per plate and one point on every third stiffener / longitudinal.	

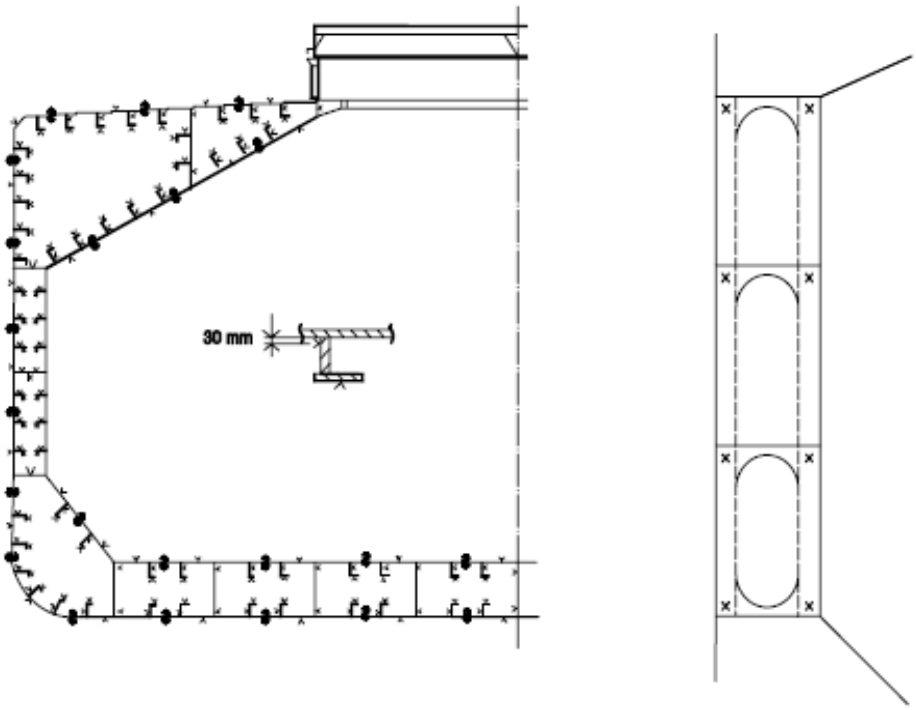
(1) "Transverse rings" means all transverse material appearing in a cross-section of the ship's hull in way of a double bottom floor, vertical web and deck transverse

Fig. B5.1 has been added as follows.

Fig. B5.1 Example of locations subject to thickness measurements in transverse sections (bulk carriers)



Single side bulk carriers

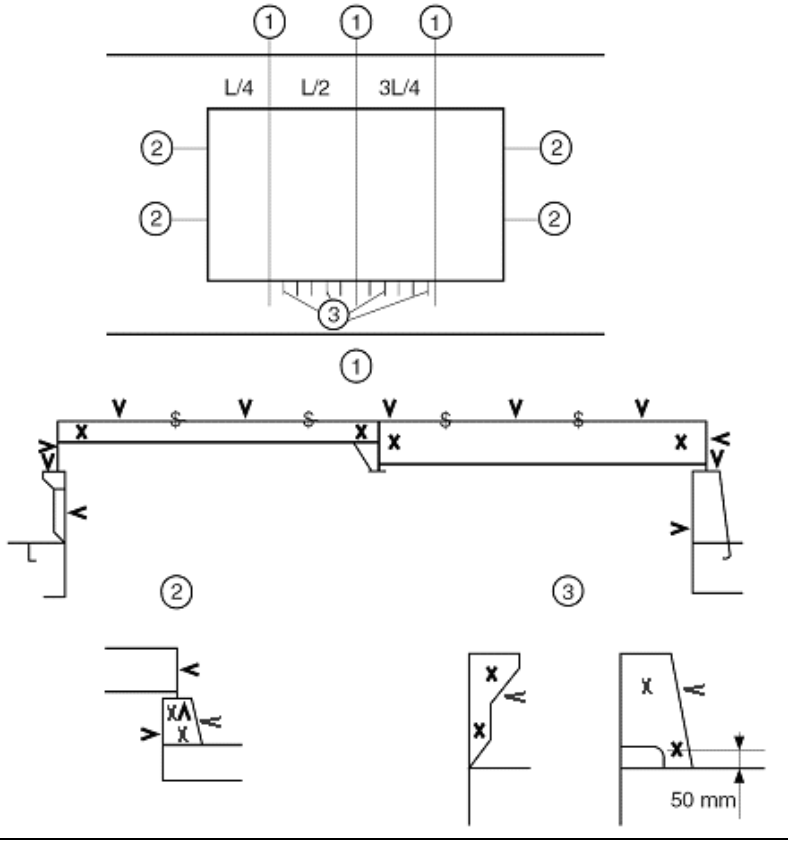


Double side bulk carrier

Note: Measurements are to be taken for both the port and starboard sides of the selected transverse section.

Fig. B5.2 has been added as follows.

Fig. B5.2 Example of locations subject to thickness measurements on hatch covers and hatch coamings (bulk carriers)

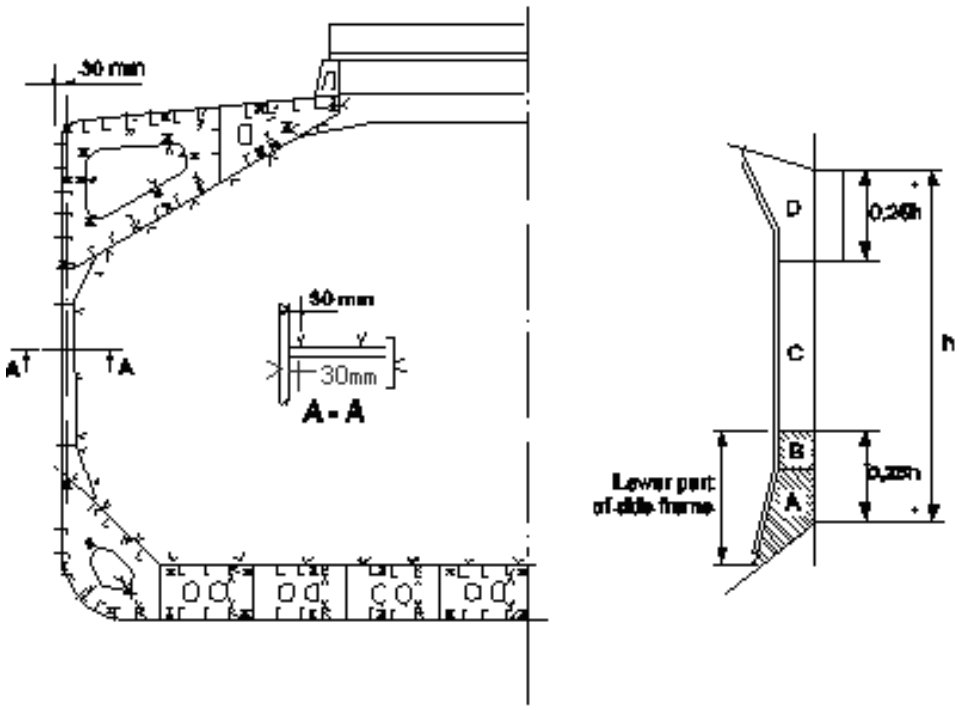


Notes:

1. Three sections at $L/4$, $L/2$, $3L/4$ of hatch cover length, including:
   - one measurement of each hatch cover plate and skirt plate
   - measurements of adjacent beams and stiffeners
   - one measurement of coaming plates and coaming flanges, for each side
2. Measurements of both ends of hatch cover skirt plates, coaming plates and coaming flanges
3. One measurement (two points for web plates and one point for face plates) of one out of three hatch coaming brackets and bars, on both sides and both ends

Fig. B5.3 has been added as follows.

Fig. B5.3 Example of locations subject to thickness measurements in cargo holds and water ballast tanks (single side skin bulk carriers)

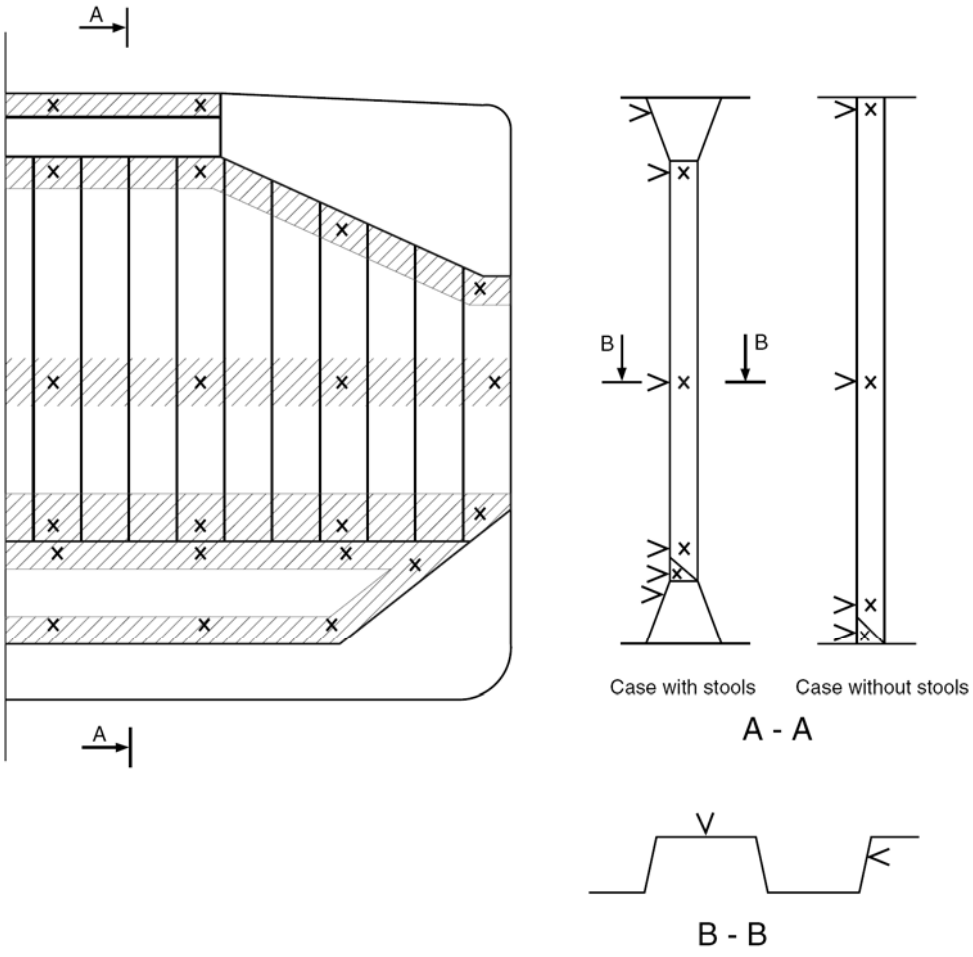


Note:

The gauging pattern for web plates is to be a three point pattern for zones A, C and D, and a two point pattern for zone B (see figure). The gauging report is to reflect the average reading. The average reading is to be compared with the allowable thickness. If the web plate has general corrosion then this pattern is to be expanded to a five-point pattern.

Fig. B5.4 has been added as follows.

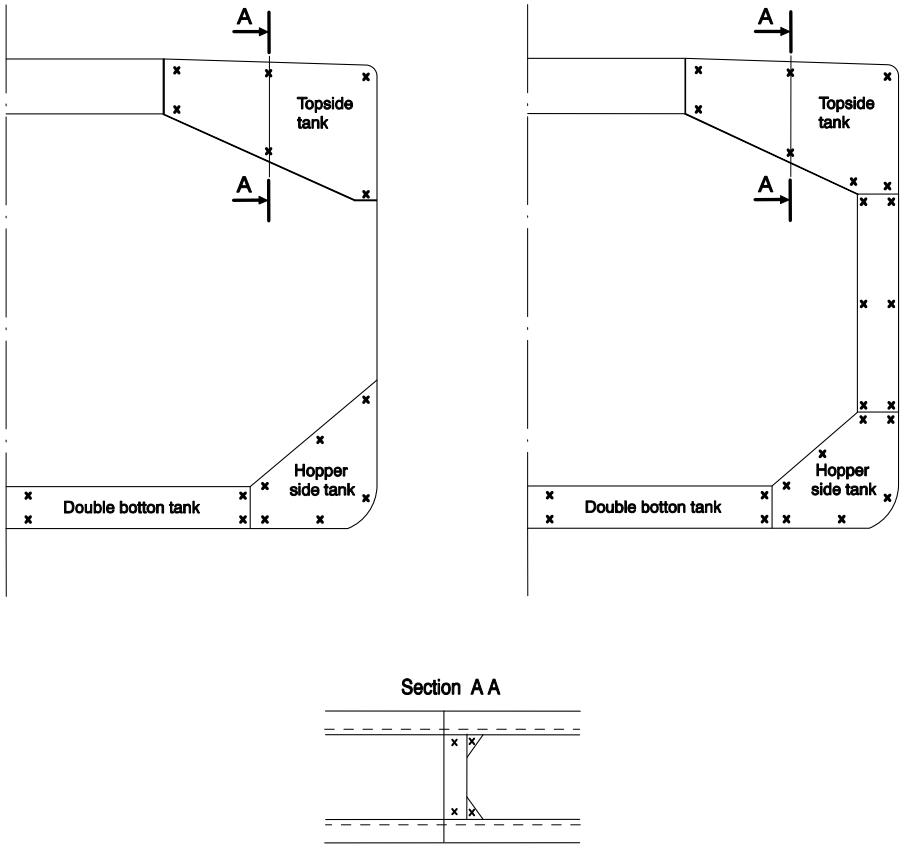
Fig. B5.4 Example of locations subject to thickness measurements on cargo hold transverse bulkheads (bulk carriers)



Note: Measurements are to be taken in each shaded area as shown in A-A and B-B

Fig. B5.5 has been added as follows.

Fig. B5.5 Example of locations subject to thickness measurements on transverse bulkheads of topside, hopper, double hull and double bottom tanks (bulk carriers)



Note: Measurements are to be taken in each shaded area as shown in A-A and B-B

Fig. B5.6 has been added as follows.

Fig. B5.6 Example of locations subject to thickness measurements on underdeck structures (bulk carriers)

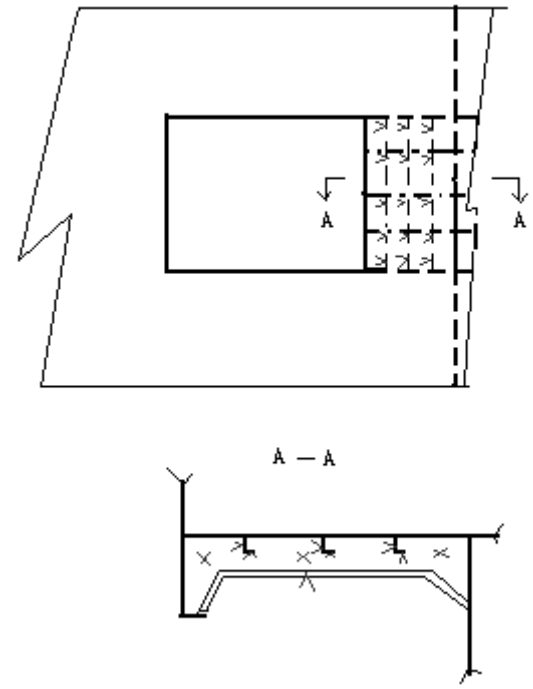


Fig. B5.7 has been added as follows.

Fig. B5.7 Example of locations subject to thickness measurements in transverse sections (double hull oil tankers)

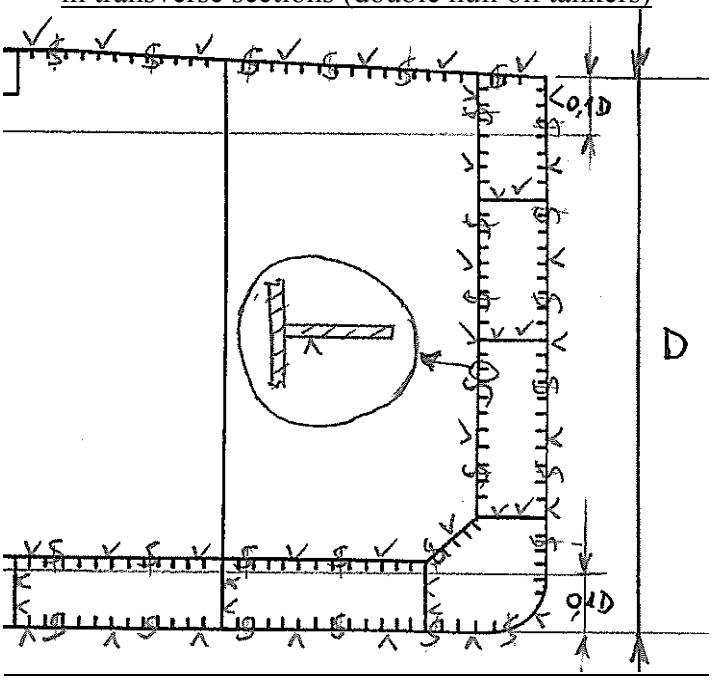


Fig. B5.8 has been added as follows.

Fig. B5.8 Example of locations subject to thickness measurements on transverse rings in cargo and ballast tanks (double hull oil tankers)

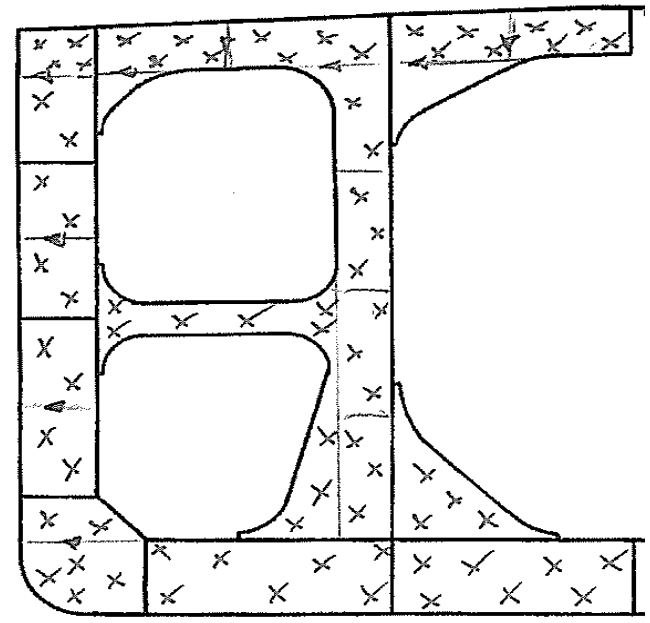


Fig. B5.9 has been added as follows.

Fig. B5.9 Example of locations subject to thickness measurements on transverse bulkheads in cargo tanks (double hull oil tankers)

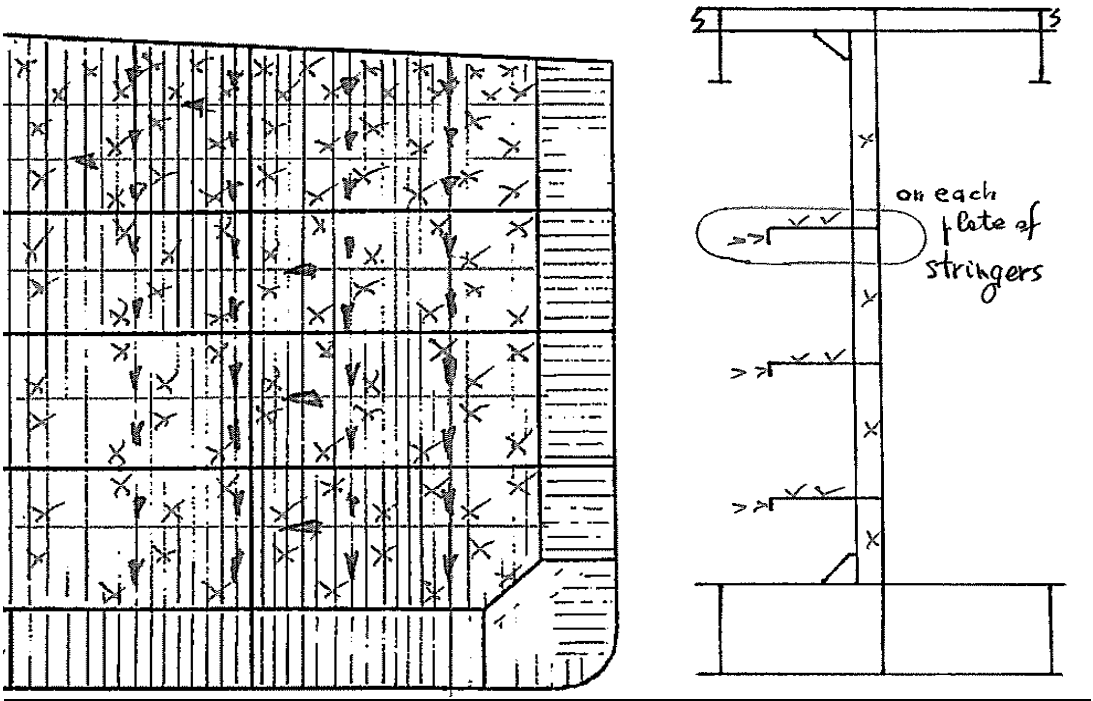
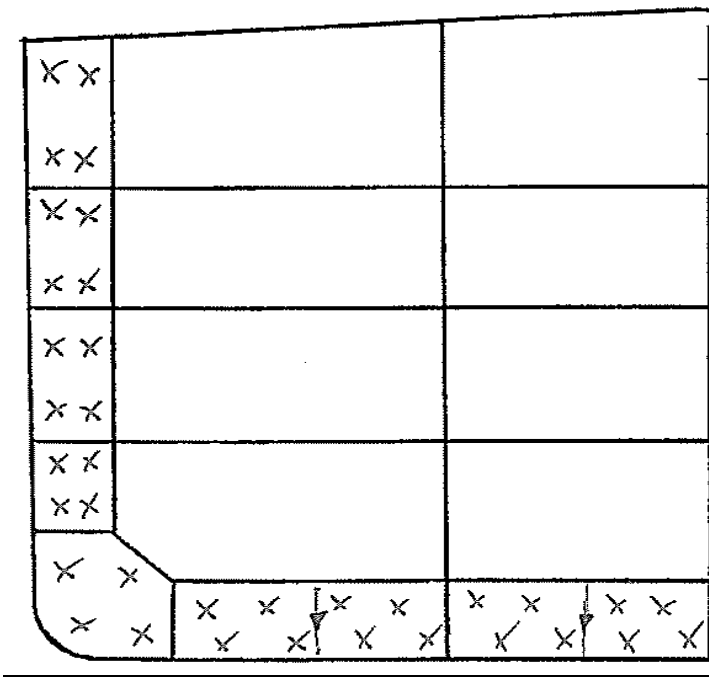


Fig. B5.10 has been added as follows.

Fig. B5.10 Example of locations subject to thickness measurements on transverse bulkhead in ballast tanks (double hull oil tankers)



EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 1 July 2012.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-4

Chapter 2 CLASSIFICATION SURVEYS

2.3 Sea Trials and Stability Experiments

Paragraph 2.3.1 has been amended as follows.

2.3.1 Sea Trials

1 In the Classification Survey of all ships, sea trials specified in following **(1)** to **(11~~0~~)** are to be carried out in full load condition, in the calmest possible sea and weather condition and in deep unrestricted water. However, where sea trials cannot be carried out in full load condition, sea trials may be carried out in an appropriate loaded condition.

((1) to (9) are omitted.)

(10) Measurement of the sound pressure levels of fixed fire detection and fire alarm systems

(11~~0~~)Other tests where deemed necessary by the Society

EFFECTIVE DATE AND APPLICATION (Amendment 1-4)

1. The effective date of the amendments is 1 July 2012.

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 1-5

Chapter 5 SPECIAL SURVEYS

5.4 Special Requirements for Ships Carrying Liquefied Gases in Bulk

5.4.2 Examinations

Table B5.27 has been amended as follows.

Table B5.27 Special Requirements for Ships Carrying Liquefied Gases in bulk

Items	Examinations
1 Cargo tanks	The following examinations are to be carried out [*1]: (a) An internal examination of all cargo tanks (b) A visual examination of insulation[*2] or cargo tank surface (if insulation is not fitted) Special attention is to be paid to chocks, supports, keys and other parts of the tank foundations. Removal of insulation may be required where deemed necessary by the Surveyor. (c) Thickness measurements for cargo tank plate (where deemed necessary by the Surveyor) (d) Non-destructive test for independent tank of Type *B* in accordance with the approved program This program is to be prepared according to the cargo tank design. Cargo tanks other than independent tanks of Type *B* are to be examined by non-destructive tests on welded connections of the tank shell, main structural members and other parts liable to bear high stress[*3]. However, non-destructive testing for independent tanks of Type *C* cannot be dispensed with totally. (e) Leak tests of all cargo tanks However, the leak test of membrane tanks, semi-membrane tanks and independent tanks below deck may be omitted, if it is verified by the log book or other proper means that gas detecting devices are in normal condition and no leak is recorded. Where there is any doubt on the integrity of any of the cargo tanks as a result of the examinations (a) through (e) above, the tank is to be tested under the pressures specified below. For independent tanks of Type *C*: Not less than 1.25 times maximum allowable design pressure (hereinafter referred to as *MARVS*) of pressure relief valves For independent tanks of Type *A* and *B* and integral tanks: Appropriate pressure according to the cargo tank design For independent tanks of Type *C*, either of the following tests (i) or (ii) is to be carried out at every second Special Survey in addition to examinations (a) through (e). (i) Tests at a pressure 1.25 times *MARVS*, and thereafter, the non-destructive test stipulated in (d) (ii) Non-destructive test according to the program prepared for the cargo tank design[*4]
2 Hold spaces and secondary barriers	・ Tank supporting and surrounding hull structures in hold spaces, secondary barriers and their insulation are to be visually examined. ・ For membrane containment systems, it is to be verified that secondary barriers keep a specific level of tightness required in the system design in accordance with programs approved in advance. For membrane containment systems with glued secondary barriers, the values obtained are to be compared with previous results or results obtained at newbuilding stage. If significant differences are observed, an evaluation of them and additional testing are to be carried out as necessary. ・ For other cargo containment systems, in cases where there is any doubt about integrity of secondary barriers, the integrity is to be verified by pressure or vacuum test or other proper means.[*5]
3 Venting system for cargo tanks	Pressure relief valves for cargo tanks are to be overhauled, readjusted, performance-tested and sealed.[*6] Pressure/vacuum relief devices and associated safety systems for interbarrier spaces and hold spaces are to be examined, overhauled and tested depending on their design.[*6]

4 Cargo and process piping	Examinations (a) and (b) are to be carried out. Removal of insulation may be required where deemed necessary by the Surveyor. (a) Where deemed necessary by the Surveyor; whole or a part of the valves and associated fittings are to be overhauled, or a pressure test at a pressure 1.25 times *MARVS* is to be carried out and after the pipes that were removed are reinstalled, a leak test is to be carried out (b) Pressure relief valves are to be visually examined and whole or a part of these valves are to be overhauled, readjusted, performance tested and sealed.
5 Cargo handling equipment	Examinations and tests (a) through (c) are to be carried out. (a) Cargo pumps, cargo gas compressors and gas blowers, and their prime movers are to be overhauled and performance tests for safety devices are to be carried out. Overhaul of electric motors as prime movers may be dispensed with. *~~6~~7 (b) Heat exchangers, pressure vessels and evaporators are to be overhauled and pressure relief valves are to be performance tested. If an internal examination of vessels is impracticable, a pressure test of vessels and a performance test of pressure relief valves are to be carried out.*~~6~~7 (c) The following tests (i) through (iii) are to be carried out for refrigerating equipment. (i) Overhaul of pumps and compressors and performance tests of pressure vessels such as condensers, evaporators, inter-coolers, oil separators and relief valves*~~6~~7 (ii) Leak test of pressure vessels and heat exchangers at a pressure of not less than 90% of the set pressure of relief valves (iii) Leak test of refrigerant piping system at a pressure of not less than 90% of set pressure of relief valves
6 Emergency shutdown devices	For emergency shutdown valves, open-up examinations and leakage testing of valve seats are to be carried out. *6 *8
~~6~~7 Electrical installations in hazardous areas	Examinations specified in item 2 for tankers of **Table B5.25** are to be carried out.

Note:

(*1) For membrane and semi-membrane tanks and internal insulation tanks, examination and testing are to be carried out in accordance with programs specially prepared according to approved methods for each tank system.

(*2) If visual examination of the insulation of tanks is impossible, the surrounding structural members are to be examined for cold spots when the cargo tanks are cooled. However, where integrity of cargo tanks and their insulation is verified by the cargo log book, the examination of cold spots may be omitted.

(*3) Parts liable to bear high stress:

- cargo tank supports and anti-rolling / anti-pitching devices
- web frames or stiffening rings
- swash bulkhead boundaries
- dome and sump connections to tank shell
- foundations for pumps, towers, ladders, etc.
- pipe connections

(*4) If an approved non-destructive test program does not exist, then a non-destructive test of at least 10 % of the length of the welded connections in each of the highly stressed areas below is to be conducted. This test is to be carried out from both inside and outside of the tank as appropriate and insulation is to be removed, as necessary.

- cargo tank supports and anti-rolling / anti-pitching devices
- stiffening rings
- Y-connections between tank shell and a longitudinal bulkhead of bilobe tanks
- swash bulkhead boundaries
- dome and sump connections to tank shell
- foundations for pumps, towers, ladders, etc.
- pipe connections

(*5) Appropriate pressure or vacuum tests and examination for cold spots are to be carried out. However, where integrity of insulation is verified by the log book, examination for cold spots may be omitted.

(*6) For valves of which continuous open-up examinations and operation tests have been carried out in the presence of a Surveyor after the previous Special Survey and whose test records are confirmed, open-up examinations may be

replaced by visual examinations to the extent that such visual examinations are feasible.

(*~~6~~7) Equipment that has the open inspection at Planned Machinery Surveys need only be visually examined at Special Surveys.

(*8) In cases where the conditions of valve bodies and valve seats can be checked without removing their valve casings from the fitted piping, internal confirmatory examinations may be regarded as open-up examinations. In cases where the condition of the valve is confirmed to be good during such examinations, leakage testing may be omitted.

EFFECTIVE DATE AND APPLICATION (Amendment 1-5)

1. The effective date of the amendments is 15 December 2012.

2. Notwithstanding the amendments to the Rules, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-6

Chapter 2 CLASSIFICATION SURVEYS

2.1 Classification Survey During Construction

2.1.2 Submission of Plans and Documents for Approval

Sub-paragraph -11 has been amended as follows.

11 For ~~dedicated seawater ballast tanks of all type of ships of not less than 500 *gross tonnage* engaged on international voyages and double side skin spaces arranged in bulk carriers engaged on international voyages of 150*m* in length and upwards as defined in **31A.1.2(1), Part C**~~ ships required to have a Coating Technical File in accordance with the requirements of **25.2.2, Part C**, **22.4.2, Part CS**, **1.2.2 Section 5 Chapter 3, Part CSR-B** or **2.1.1.2 Section 6, Part CSR-T**, ~~the Coating Technical File~~ this file is to be submitted for review by the Society.

Sub-paragraph -12 has been added as follows.

12 For ships required to have a Coating Technical File and/or a Corrosion Resistant Steel Technical File in accordance with the requirements of **25.2.3, Part C** or **22.4.3, Part CS**, these files are to be submitted for review by the Society.

2.1.3 Submission of Other Plans and Documents

Sub-paragraph -1(3) has been amended as follows.

1 When it is intended to build a ship to the classification with the Society the following plans and documents are to be submitted, in addition to those required in **2.1.2**:

(3) Corrosion prevention scheme (Items included in the Coating Technical Files specified in **2.1.2-11** and **-12** may be omitted.)

2.1.6 Documents to be Maintained on Board

Sub-paragraph -1 has been amended as follows.

1 At the completion of a classification survey, the Surveyor confirms that the finished versions of the following applicable drawings, plans, manuals, lists, etc., are on board.

(1) Documents approved by the Society or their copies
(omitted)
(l) Coating Technical File (**25.2.2, Part C**, **22.4.2, Part CS**, **1.2.2 Section 5 Chapter 3, Part CSR-B** and **2.1.1.2 Section 6, Part CSR-T**)
(m) Coating Technical File and/or Corrosion Resistant Steel Technical File (**25.2.3, Part C**

and **22.4.3, Part CS**)

(~~m~~n) Plans and documents for in-water surveys (**6.1.2-2**)
(omitted)

Paragraph 2.1.8 has been amended as follows.

2.1.8 Verification of Coating Application

1 The following items will be carried out by the Society prior to reviewing the Coating Technical File for the coatings of internal spaces subject to **25.2.2, Part C**, **22.4.2, Part CS**, **1.2.2 Section 5 Chapter 3, Part CSR-B** or **2.1.1.2 Section 6, Part CSR-T**:

(1) Check that the Technical Data Sheet and Statement of Compliance or Type Approval Certificate comply with the *"PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR DEDICATED SEAWATER BALLAST TANKS IN ALL TYPE OF SHIPS AND DOUBLE-SIDE SKIN SPACES OF BULK CARRIERS"* (*IMO Performance Standard for Protective Coatings for Seawater Ballast Tanks, etc. / IMO* resolution *MEPC*.215(82) as may be amended), however, the Statement of Compliance or Type Approval Certificate is to be a certificate deemed appropriate by the Society

(2) Check that the coating identification on representative containers is consistent with the coating identified in the Technical Data Sheet and Statement of Compliance or Type Approval Certificate in **(1)** above

(3) Check that the inspector is qualified in accordance with the qualification standards deemed appropriate by the Society

(4) Check that the inspector's reports of surface preparation and the coating's application indicate compliance with the manufacturer's Technical Data Sheet and Statement of Compliance or Type Approval Certificate in **(1)** above

(5) Monitor implementation of the coating inspection requirements deemed appropriate by the Society

2 The following items will be carried out by the Society prior to reviewing the Coating Technical File for the coatings of internal spaces subject to **25.2.3, Part C** or **22.4.3, Part CS**:

(1) Check that the Technical Data Sheet and Statement of Compliance or Type Approval Certificate comply with the *"PERFORMANCE STANDARD FOR PROTECTIVE COATINGS FOR CARGO OIL TANKS OF CRUDE OIL TANKERS"* (*IMO Performance Standard for Protective Coatings for Cargo Oil Tanks / IMO* resolution *MEPC*.288(87) as may be amended), however, the Statement of Compliance or Type Approval Certificate is to be a certificate deemed appropriate by the Society

(2) Check that the coating identification on representative containers is consistent with the coating identified in the Technical Data Sheet and Statement of Compliance or Type Approval Certificate in **(1)** above

(3) Check that the inspector is qualified in accordance with the qualification standards deemed appropriate by the Society

(4) Check that the inspector's reports of surface preparation and the coating's application indicate compliance with the manufacturer's Technical Data Sheet and Statement of Compliance or Type Approval Certificate in **(1)** above

(5) Monitor implementation of the coating inspection requirements deemed appropriate by the Society

Chapter 3 ANNUAL SURVEYS

Table B3.1 has been amended as follows.

Table B3.1 Examination of Plans and Documents

Items	Examination
(Omitted)	(Omitted)
10 Coating Technical File and/or Corrosion Resistant Steel Technical File	・ For ships required to have a Coating Technical File on board in accordance with the requirements of **25.2.2, Part C**, **22.4.2, Part CS**, **1.2.2 Section 5 Chapter 3, Part CSR-B** or **2.1.1.2 Section 6, Part CSR-B**, confirmation that the file is kept on board and that maintenance and repair work are properly recorded and kept on ~~in~~ the file is to be made. ・ For ships required to have a Coating Technical File and/or a Corrosion Resistant Steel Technical File on board in accordance with the requirements of **25.2.3, Part C** or **22.4.3, Part CS**, confirmation that the files are kept on board and that maintenance and repair work are properly recorded and kept on the files is to be made.

EFFECTIVE DATE AND APPLICATION (Amendment 1-6)

1. The effective date of the amendments is 1 January 2013.

2. Notwithstanding the amendments to the Rules, 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 January 2013; 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 July 2013; 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 January 2016

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

Part B Class Surveys

2012 AMENDMENT NO.1

Notice No.43 15th June 2012

Resolved by Technical Committee on 10th February 2012

Notice No.43 15th June 2012
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 B CLASS SURVEYS

Amendment 1-1

B1 GENERAL

B1.1 Surveys

B1.1.3 Intervals of Class Maintenance Surveys

Sub-paragraph -5(11) has been amended as follows.

(11) Carriage of Dangerous Goods
For cargo ships with cargo spaces intended for the carriage of packaged dangerous goods which are not less than 500 *gross tonnage* and had been at the beginning stage of construction on or after 1 September 1984 but before 1 January 2010 or which are less than 500 *gross tonnage* and had been at the beginning stage of construction on or after 1 February 1992 but before 1 January 2011, a survey is to be carried out to verify compliance with the requirement specified in **19.3, Part R of the Rules** in accordance with **Tables 19.1** and **19.3,** by the first special survey of the ship after 1 January 2011. However, the following provisions may apply:
(a) Cargo ships not less than 500 *gross tonnage* which had been at the beginning stage of construction on or after 1 September 1984 but before 1 July 1986 need not comply with **19.3.3, Part R of the Rules** provided that they comply with the requirements which were in effect when such ships were constructed.
(b) Cargo ships not less than 500 *gross tonnage* which had been at the beginning stage of construction on or after 1 September 1984 but before 1 July 1998 need not comply with **19.3.10-1** and **19.3.~~11~~10-2, Part R of the Rules**.
(c) Cargo ships less than 500 *gross tonnage* which had been at the beginning stage of construction on or after 1 February 1992 but before 1 July 1998 need not comply with **19.3.10-1** and **19.3.~~11~~10-2, Part R of the Rules**.
(d) Cargo ships not less than 500 *gross tonnage* which had been at the beginning stage of construction on or after 1 February 1992 but before 1 July 2002 need not comply with **19.3.3, Part R of the Rules** provided that they comply with the requirements which were in effect when such ships were constructed.
(e) Cargo ships not less than 500 *gross tonnage* which had been at the beginning stage of construction on or after 1 September 1984 but before 1 July 2002 need not comply with **19.3.1, 19.3.5, 19.3.6** and **19.3.9, Part R of the Rules** provided that they comply with the requirements which were in effect when such ships were constructed.

EFFECTIVE DATE AND APPLICATION (Amendment 1-1)

1. The effective date of the amendments is 15 June 2012.

Amendment 1-2

B4 INTERMEDIATE SURVEYS

B4.2 Intermediate Surveys for Hull, Equipment, Fire extinction and Fittings

Paragraph B4.2.2 has been added as follows.

B4.2.2

"Examinations considered appropriate by the Society" stipulated in **4.2.2, Part B of the Rules** refers to performance tests of cross flooding equipment to confirm whether said equipment is in good working order.

EFFECTIVE DATE AND APPLICATION (Amendment 1-2)

1. The effective date of the amendments is 15 June 2012.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-3

B9.1.2 Continuous Machinery Surveys (CMS)

Sub-paragraph -6 has been amended as follows.

6 Confirmatory Survey

In ships deemed by the Society as maintaining their machinery and equipment well, overhaul inspections by the shipowner (or the ship management company) may forgo the open-up examination performed in the presence of Surveyors by conducting the following confirmatory surveys, provided that the machinery and equipment are overhauled as part of the ship's maintenance practices and the records from such overhauls are kept in good order. In this case, the date of the next open-up examination is to be within a 5-*year* period from the date of its last overhaul and inspection.

(1) Procedure of the confirmatory survey

(a) In the case of any machinery and equipment specified in **(2)** below overhauled and inspected by the Chief Engineer as routine maintenance work, one copy of the inspection report including the items mentioned below is to be submitted to, and reviewed by the attending Surveyor. Also, the Chief Engineer's profile is to be confirmed by the attending Surveyor.

i) Signature of the Chief Engineer and license number
ii) Date and place of the inspection
iii) Inspection items and their results
iv) Operating conditions before and after the inspection

(b) Parts replaced with spares or repaired are to be verified by visual examinations on by photographs.

(c) Visual examinations are to be carried out for main propulsion machinery, and examinations under operating conditions, as well as visual inspections are to be carried out for other machinery.

(d) Visual examinations of lubricating oil conditions are to be carried out through open-up inspections, etc. of the lubricating oil filters of crankshafts, main bearings, crankpin bearings, crankpin bolts as well as the camshafts and camshaft driving devices of main diesel engines.

(~~d~~e) As a result of the confirmatory survey stipulated in **(a)** to **(~~e~~d)** above, open-up examinations and/or re-examinations may be required when deemed necessary by the Surveyor.

(2) Items applicable to the confirmatory survey

Items of machinery and equipment applicable to the confirmatory surveys are as follows.

(a) Main diesel engines

~~However, crankshafts, main bearings, crank pin bearings, crank pin bolts, camshafts, and camshaft driving gears are to be excluded. Note that the number of items of the confirmatory surveys is to be restricted to half the number of total survey items for the main diesel engine within one cycle of the CMS.~~

(b) Diesel engines used for driving generators, auxiliary machinery essential for main propulsion or auxiliary machinery for manoeuvring and safety of the ship

However, an open-up examination of the diesel engine for driving the main generator is to be carried out in the presence of the Surveyor in cases where a single unit of such engines is fitted on ship.

(c) Auxiliary machinery (air compressors, pumps, heat exchangers, deck machinery and distilling plants)

(3) Timing of the confirmatory survey

A confirmatory survey is to be carried out by the time of next periodical survey from the day the item of the machinery and equipment intended for the confirmatory survey was overhauled and inspected at sea.

B9.1.3 Planned Machinery Maintenance Scheme (PMS)

Sub-paragraph -4 has been amended as follows.

4 Approval of PMS

Conditions for approval of PMS are as follows:

(1) (omitted)

(2) (omitted)

(3) Survey Schedule Table

Survey intervals of the survey items are not to exceed those specified in the machinery maintenance scheme. The following items are to be generally opened and examined in the presence of the Surveyor. Where the condition monitoring maintenance method is applied, the items are to be opened and examined only when an abnormal condition is observed.

~~(a) Crank pins and their bearings and crank journals and their bearings for main diesel engine~~

(~~b~~a) Rotors, casings, main bearings, couplings between turbine and reduction gear, nozzle valves and manoeuvring valves for main steam turbine

(~~c~~b) Auxiliary steam turbine for main generator

(~~d~~c) Thrust shaft and the bearings for main propulsion

(~~e~~d) Reduction gears for main propulsion

(~~f~~e) Flexible couplings for main propulsion

(~~g~~f) Other items deemed necessary by the Society.

When this survey schedule table is amended, the amended survey schedule table is to be submitted to the Society for approval.

(4) Machinery Maintenance Records

Machinery maintenance records are to include at least the following items. These records are to be retained on board the ship at all times.

(a) Date of maintenance work

(b) Signature by the Chief Engineer

(c) Details of maintenance work and results

(d) Total running hours (parts replacement intervals and overhaul intervals)

(e) Names of parts replaced

(f) Measuring data (including original design dimensions and allowable tolerance)

(g) The condition of damage and repair method

(h) Results of visual examinations of lubricating oil conditions carried out through open-up examinations of the lubricating oil filters, etc. of crankshafts, main bearings, crankpin bearings, crankpin bolts as well as camshafts and camshaft driving devices of main diesel engines (in cases where the principle components of such engines were inspected through independent open-up surveys conducted by chief engineers)

((5) to (7) are omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 1-3)

1. The effective date of the amendments is 15 June 2012.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-4

B1 GENERAL

B1.4 Preparation for Survey and Other Items

B1.4.2 Preparation for Surveys

Sub-paragraph -6 has been amended as follows.

6 In oil tankers, bulk carriers and ships carrying dangerous chemicals in bulk with integral tanks, the following documents from **(1)** to **(9)** are to be kept on board the ship to be readily available for the Surveyor. In general dry cargo ships of not less than 500 *gross tonnage*, at least **(1)** and **(3)** of the following documents are to be kept on board the ship.

(1) Records on structural surveys
(2) Condition evaluation report (and see the requirement in **B5.2.6-~~5~~6(~~4~~5)** for bulk carriers built under **Part CSR-B of the Rules** and all oil tankers)
(3) Thickness measurement reports
(4) Main structural plans for hull (for ships built under **Part CSR-B** or **CSR-T of the Rules**, these plans are to include both as-built and renewal thickness. Any thickness for voluntary additions is also to be clearly indicated on the plans. A midship section plan to be supplied on board the ship is to include the minimum allowable hull girder sectional properties for transverse sections in all cargo holds of bulk carriers or cargo tanks of double hull oil tankers specified in either **3.3 Section 2 Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules**.)
(5) Cargo and ballast history
(6) Previous repair history
(7) Records of inspections by ship's personnel with reference to structural deterioration in general, the leakage in bulkheads and piping and the condition of coating or corrosion prevention system, if any
(8) In oil tankers and ships carrying dangerous chemicals in bulk, extent of use of inert gas plant and tank cleaning procedures
(9) Any other information that will help identify Suspect Areas requiring inspection

However, ships which do not engage in international voyages and are classed for restricted service such as having class notation "Coasting Service", "Smooth Water Service", etc., as specified in **1.4.2-2, Part B of the Rules** need not keep onboard the document of (2) above.

B3 ANNUAL SURVEYS

B3.2 Annual Surveys for Hull, Equipment, Fire extinction and Fittings

B3.2.2 General Examination

Sub-paragraph -1 has been amended as follows.

1 The General examination of "closing appliances of hatchways" stipulated in item 3 of **Table B3.2, Part B of the Rules** is to confirm that the items specified in **(1)** to **(4)** below are in good condition.

(1) Where controlled atmosphere systems are installed on board, examination of controlled atmosphere zones in **D17.3(1)(a), Part D of the Guidance**

(2) All hatch cover plating, hatch coaming plating, and structural members (e.g. stiffeners)

(3) Stowage and securing in open condition, and proper fit and efficiency of sealing in closed condition for mechanically operated hatch covers. In addition, ~~I~~items **(a)** to **(k)** below of mechanically operated hatch covers
   (a) Tightness devices of longitudinal, transverse and intermediate cross junctions (gaskets, gasket lips, compression bars, drainage channels)
   (b) Clamping devices, retaining bars, and cleating
   (c) Closed cover locating devices
   (d) Chain or rope pulleys
   (e) Guides
   (f) Guide rails and track wheels
   (g) Stoppers and other similar devices
   (h) Wires, chains, gypsies, tensioning devices
   (i) Hydraulic systems essential to closing and securing
   (j) Safety locks and retaining devices
   (k) End and internal hinges, pins and stools

(4) Items through **(a)** to **(h)** below of portable hatch covers, wooden or steel pontoons
   (a) Wooden covers and portable beams, carriers or sockets for portable beam, and their securing devices
   (b) Steel pontoons
   (c) Tarpaulins
   (d) Cleats, battens and wedges
   (e) Hatch securing bars and their securing devices
   (f) Loading pads or bars and the side plate edge
   (g) Guide plates and chocks
   (h) Compression bars, drainage channels and drain pipes

B5 SPECIAL SURVEYS

B5.2 Special Surveys for Hull, Equipment, Fire extinction and Fittings

B5.2.6 Thickness Measurements

Sub-paragraph -1 has been amended as follows.

1 The thickness measurement record specified in **5.2.6-1(3), Part B of the Rules** is to give the position of each measuring point, the thickness measured as well as the corresponding original thickness, the allowable diminution, and extent of use of high tensile steels, if used. Furthermore, the record is to give the date when the measurement was carried out, the type of measuring equipment used, and names of the personnel and their qualifications with their signatures. In oil tankers ~~and~~, bulk carriers ~~and~~, double hull oil tankers built under **Part CSR-T of the Rules**, bulk carriers built under **Part CSR-B of the Rules** and ships carrying dangerous chemicals in bulk with integral tanks, the record is to be made in the approved format. The surveyor verifies and countersigns the thickness measurement record.

Sub-paragraph -5 has been amended as follows.

~~5~~**6** "Ship's longitudinal strength evaluation" required in **5.2.6-~~7~~8, Part B of the Rules** is to be carried out in accordance with the following.

(1) Transverse sectional areas of deck flanges (deck plating and deck longitudinals) and bottom flanges (bottom shell plating and bottom longitudinals) of the ship's hull girder are to be calculated by using the thickness of structural members measured in transverse sections specified in **Table B5.8**, **Table B5.10**, **Table B5.15** and **Table B5.21**, **Part B of the Rules**. It is to be confirmed that the diminution of the transverse sectional area does not exceed 10% of the as-built area.

(2) Where the diminution of sectional areas of either deck or bottom flange exceeds 10% of the respective as-built area, it is to be confirmed that the actual section moduli, which are calculated by using the thicknesses mentioned above, is not less than those specified in **Table B5.2.6-1**.

(3) For double hull oil tankers built under **Part CSR-T of the Rules**, notwithstanding provisions **(1)** and **(2)** above, it is to be confirmed that the condition of the ship satisfies the criteria specified in **1.5 Section 12, Part CSR-T of the Rules** by using the thickness of structural members measured in the transverse sections specified in **Table B5.10** and **Table B5.30**.

(4) For bulk carriers built under **Part CSR-B of the Rules**, notwithstanding provisions **(1)** and **(2)** above, it is to be confirmed that the condition of the ship satisfies the criteria specified in **3.3 Section 2 Chapter 13, Part CSR-B of the Rules** by using the thickness of structural members measured in the transverse sections specified in **Table B5.15** and **Table B5.29**.

(~~3~~5) Where repairs are carried out to satisfy the requirements of the preceding **(1)** or **(2)**, the ship's longitudinal strength for other transverse sections is to be evaluated by using the result of additional thickness measurements.

(~~4~~6) For oil tankers of not less than 130*m* in length for freeboard, the result of the final evaluation of the ship's longitudinal strength carried out after the ship reaches 10 *years* of age is to be reported as a part of the condition evaluation report specified in **B1.4.2-6(2)**.

Sub-paragraph -5 has been added as follows.

5 "The criteria for each type of corrosion" stipulated in **5.2.6-7(3), Part B of the Rules** refers to the following **(1)** to **(3)**:

(1) Criteria for pitting corrosion are to be in accordance with following **(a)** to **(c)**:

(a) For plates with a pitting intensity of less than 20%, the measured thickness, t_m, of any individual measurement is to meet the lesser of the following criteria:

$t_m \geq 0.7\ (t_{as\text{-}built} - t_{vol\ add})\ mm$

$t_m \geq t_{ren} - 1\ mm$

$t_{as\text{-}built}$: As built thickness of the member under consideration (*mm*)

$t_{vol\ add}$: Voluntary thickness addition (*mm*) which is voluntarily added as the Owner's extra margin for corrosion wastage in addition to t_C

t_{ren}: Renewal criteria for general corrosion (*mm*) as defined in **Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules**

t_C: Corrosion addition (*mm*) as defined in **Section 3 Chapter 3, Part CSR-B** or **3 Section 6, Part CSR-T of the Rules**

t_m: Measured thickness (*mm*) on one item, i.e. average thickness on one item using various measurements taken for this same item during the ship's periodical in-service surveys.

(b) The average thickness across any cross section of the plating is not to be less than the renewal criteria for general corrosion as specified in **Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules**.

(c) For the side structures of bulk carriers built under **Part CSR-B of the Rules**, notwithstanding provisions **(a)** and **(b)** above, criteria for pitting corrosion are to be in accordance with following **i)** and **ii)**:

i) If the pitting intensity in an area where coating is required, according to **Section 5, Chapter 3, Part CSR-B of the Rules**, is higher than 15%, an area of 300 *mm* or more, at the most pitted part of the plate, is to be cleaned to bare metal and the thickness is to be measured in way of the five deepest pits within the cleaned area in order to check the extent of the pitting corrosion. The smallest thickness measured in way of any of these pits is to be taken as the thickness to be recorded.

ii) The minimum remaining thickness in pitting corrosion, grooving corrosion or other local areas is to be greater than the criteria below, without being greater than t_{ren}.

・75% of the as-built thickness, in the frame and end bracket webs and flanges

・70% of the as-built thickness, in the side shell, hopper tank and topside tank plating attached to the each side frame, over a width up to 30 *mm* from each side.

(2) Criteria for edge corrosion are to be in accordance with following **(a)** to **(c)**:

(a) Provided that the overall corroded height of the edge corrosion of a flange, or web in the case of flat bar stiffeners, is less than 25% of the stiffener flange breadth or web height, as applicable, the measured thickness, t_m, is to satisfy the lesser of the following criteria:

$t_m \geq 0.7\ (t_{as\text{-}built} - t_{vol\ add})\ mm$

$t_m \geq t_{ren} - 1\ mm$

(b) The average measured thickness across the breadth or height of the stiffener is not to be less than that defined in **Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules**.

(c) Plate edges at openings for manholes, lightening holes etc. may be less than the minimum thickness as specified in **Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules** subject to be in accordance with **i)** and **ii)** below:

i) The maximum extent of the reduced plate thickness, below the minimum thickness

defined in **Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules**, from the opening edge is not more than 20% of the smallest dimension of the opening and does not exceed 100 *mm*.

ii) Rough or uneven edges may be cropped-back provided that the maximum dimension of the opening is not increased by more than 10% and the remaining thickness of the new edge is not less than $t_{ren} - 1$ (*mm*)

(3) Criteria for grooving corrosion are to be in accordance with following **(a)** and **(b)**:

(a) Where the groove breadth is a maximum of 15% of the web height, but not more than 30 *mm*, the measured thickness, t_m, in the grooved area is to satisfy the lesser of the following criteria, but is not to be less than 6 *mm*:

$t_m \geq 0.75\ (t_{as\text{-}built} - t_{vol\ add})\ mm$

$t_m \geq t_{ren} - 0.5\ mm$

(b) Structural members with areas of grooving corrosion greater than those in **(a)** above are to be assessed based on the criteria for general corrosion as defined in **Chapter 13, Part CSR-B** or **Section 12, Part CSR-T of the Rules** using the average measured thickness across the plating/stiffener.

EFFECTIVE DATE AND APPLICATION (Amendment 1-4)

1. The effective date of the amendments is 1 July 2012.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-5

B2 CLASSIFICATION SURVEYS

B2.3 Sea Trials and Stability Experiments

Paragraph B2.3.1 has been amended as follows.

B2.3.1 Sea Trials

(-1 to -9 are omitted)

10 With respect to the measurement of the sound pressure levels of fixed fire detection and fire alarm systems specified in **2.3.1-1(10), Part B of the Rules**, the sound levels specified in **29.2.5-1(9), Part R of the Rules** are to be carried out by suitable instrument.

11~~0~~ "Tests where deemed necessary by the Society" in **2.3.1-1(11~~0~~), Part B of the Rules**, refers to the tests and examinations mentioned in the following **(1)** to **(7)**.

((1) to (7) are omitted)

Annex B2.3.1 GUIDANCE FOR THE TEST OF SHIP MANOEUVRABILITY

1.1 General Requirements

Paragraph 1.1.1 has been amended as follows.

1.1.1 General

1 This Guidance shows the standard testing and measurement method (hereinafter referred to as "test of ship manoeuvrability") of ship manoeuvrability. This includes stopping ability, turning ability, initial turning ability, yaw checking ability, and course keeping ability specified in **2.3.1-1(2)**, **(4)** and **-2, Part B of the Rules** and **B2.3.1-2(1)**, ~~and~~ **-4,** and **-11(7), Part B of the Guidance**.

2 (omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 1-5)

1. The effective date of the amendments is 1 July 2012.

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 1-6

B9 PLANNED MACHINERY SURVEYS

B9.1 Planned Machinery Surveys

B9.1.2 Continuous Machinery Surveys (CMS)

Sub-paragraph -1 has been amended as follows.

1 Application of CMS
(1) (omitted)
(2) Auxiliaries prescribed in item 5 of **Table B9.1, Part B of the Rules** are as follows:
((a) to (g) are omitted)
(h) Coolers
Main fresh water coolers (for cylinder jackets and pistons), F.O. valve cooling fresh water / oil coolers, fresh water coolers for turbochargers, cooling fresh water coolers for generator engines, F.O. coolers, main L.O. coolers, turbocharger L.O. coolers, camshaft L.O. coolers, reduction gear L.O. coolers, hydraulic oil coolers, coolers for C.P.P., stern tube L.O. coolers, and coolers for generator turbines
((i) to (o) are omitted)

Sub-paragraph -5 has been amended as follows.

5 Substitution for open-up examinations
The machinery and equipment listed below may be exempt from open-up examinations if they are found to be in satisfactory condition by carrying out the examinations listed and examining records such as the logbooks. However, when defects are found during the examinations, or if the maintenance condition is judged to be questionable as a result of examining the logbooks or other records, open-up examinations may be required.
(1) (omitted)
(2) Oil tanks, F.O. coolers and oil heaters
Visual examinations of general conditions
(3) (omitted)
(4) (omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 1-6)

1. The effective date of the amendments is 15 December 2012.

2. Notwithstanding the amendments to the Guidance, the current requirements may apply to the surveys for which the application is submitted to the Society before the effective date.

Amendment 1-7

B2 CLASSIFICATION SURVEYS

B2.1 Classification Survey during Construction

B2.1.2 Submission of Plans and Documents for Approval

Sub-paragraph -7 has been amended as follows.

7 For the coatings of internal spaces ~~subject to **25.2.2**, **Part C**, **22.4.2**, **Part CS**, **1.2.2 Section 5 Chapter 3**, **Part CSR-B** or **2.1.1.2 Section 6, Part CSR-T of the Rules**~~, the Coating Technical File specified in **2.1.2-11** and **-12, Part B of the Rules** must contain at least the following items:

(1) A copy of the Statement of Compliance or Type Approval Certificate specified in **2.1.8-1(1)** or **2.1.8-2(1), Part B of the Rules**;

(2) A copy of the Technical Data Sheet specified in **2.1.8-1(1)** or **2.1.8-2(1), Part B of the Rules**, including:
   (a) Product name and identification mark and/or number;
   (b) Materials, components and composition of the coating system, colours;
   (c) Minimum and maximum dry film thickness;
   (d) Application methods, tools and/or machines;
   (e) Condition of surface to be coated (de-rusting grade, cleanness, profile, etc.); and
   (f) Environmental limitations (temperature and humidity);

(3) Shipyard work records of coating application, including:
   (a) Applied actual space and area (in *square metres*) of each compartment;
   (b) Applied coating system;
   (c) Time of coating, thickness, number of layers, etc.;
   (d) Ambient condition during coating; and
   (e) Method of surface preparation;

(4) Procedures for inspection and repair of coating system during ship construction;

(5) Coating log issued by the coating inspector, stating that the coating was applied in accordance with the specifications to the satisfaction of the coating supplier representative and specifying deviations from the specifications, see *IMO* Resolution *MSC*.215(82) **Annex 2** or *MSC*.288(87) **Annex 2** for an example of the daily log and non-conformity report;

(6) Shipyard's verified inspection report, including:
   (a) Completion date of inspection;
   (b) Result of inspection;
   (c) Remarks (if given); and
   (d) Coating inspector's signature; and

(7) Procedures for in-service maintenance and repair of coating system.

Paragraph B2.1.8 has been amended as follows.

B2.1.8 Verification of Coating Application

1 The "Technical Data Sheet" stipulated in **2.1.8-1(1)** and **2.1.8-2(1), Part B of the Rules** refers to the paint manufacturers' Product Data Sheet which contains detailed technical instruction and information relevant to the coating and its application.

2 The "certificate deemed appropriate by the Society" stipulated in **2.1.8-1(1), Part B of the Rules** refers to one of the following **(1)** to **(3)**:

(1) The Society's approval certificate specified in **Chapter 4, Part 4 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**

(2) Statement of Compliance issued by the Research Institute of Marine Engineering, Japan (*RIME*) or MARINTEK

(3) Other documents approved by the Society

3 The "certificate deemed appropriate by the Society" stipulated in **2.1.8-2(1), Part B of the Rules** refers to one of the following **(1)** and **(2)**:

(1) The Society's approval certificate specified in **Chapter 4, Part 4 of Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use**

(2) Other documents approved by the Society

~~**3**~~**4** The "qualification standards deemed appropriate by the Society" stipulated in **2.1.8-1(3)** and **2.1.8-2(3), Part B of the Rules** refers to the qualifications that the coating inspector is to have, at least one of which is from the following **(1)** to **(3)**:

(1) NACE Coating Inspector Level 2

(2) FROSIO Inspector Level III

(3) Equivalent qualifications approved by the Society

~~**4**~~**5** The "coating inspection requirements deemed appropriate by the Society" stipulated in **2.1.8-1(5), Part B of the Rules** refers to the requirements specified in **6**, *IMO* Resolution *MSC*.215(82).

6 The "coating inspection requirements deemed appropriate by the Society" stipulated in **2.1.8-2(5), Part B of the Rules** refers to the requirements specified in **6**, *IMO* Resolution *MSC*.288(87).

B3 ANNUAL SURVEYS

B3.2 Annual Surveys for Hull, Equipment, Fire extinction and Fittings

B3.2.1 Examination of Plans and Documents

Sub-paragraph -3 has been amended as follows.

3 The record of maintenance and repair work, which is specified in No.10 of **Table B3.1, Part B of the Rules,** is to be in accordance with the "*Guidelines for maintenance and repair of protective coatings*" (*MSC*.1/*Circ*.1330) or the "*Guidelines on procedures for in-service maintenance and repair of coating systems of cargo oil tanks of crude oil tankers*" (*MSC*.1/*Circ*.1399).

EFFECTIVE DATE AND APPLICATION (Amendment 1-7)

1. The effective date of the amendments is 1 January 2013.

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 January 2013; 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 July 2013; 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 January 2016