RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

Part B Class Surveys

Rules for the Survey and Construction of Steel Ships
Part B 2014 AMENDMENT NO.2
Guidance for the Survey and Construction of Steel Ships
Part B 2014 AMENDMENT NO.2

Rule No.55 / Notice No.40 30th June 2014
Resolved by Technical Committee on 4th February 2014
Approved by Board of Directors on 24th February 2014

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NIPPON KAIJI KYOKAI

RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

RULES

Part B Class Surveys

2014 AMENDMENT NO.2

Rule No.55 30th June 2014

Resolved by Technical Committee on 4th February 2014

Approved by Board of Directors on 24th February 2014

Rule No.55 30th June 2014
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 2-1

Chapter 1 GENERAL

1.1 Surveys

1.1.6 Modification of the Requirements

Sub-paragraph -5 has been amended as follows.

5 For Intermediate Surveys carried out at the time of the third Annual Survey in accordance with the requirements in **1.1.3-1(2)(a)**.~~Where~~ examinations ~~from the~~ required for Intermediate Surveys ~~to be~~ carried out during the period between the 2nd and 3rd Annual Surveys as a part of another survey ~~are carried out prior to the Intermediate Survey, said examinations to be carried out as part of the Intermediate Survey~~ may be given special consideration or omitted at the discretion of the Surveyor. However, at a minimum the examinations required in **Chapter 3** are to be carried out at the Intermediate Survey.

Chapter 4 INTERMEDIATE SURVEYS

4.1 General

4.1.1 Surveys Equivalent to Special Surveys

Sub-paragraphs -3 and -4 have been amended as follows.

3 Where the Intermediate Survey is commenced in accordance with the requirements in **1.1.3-1(2)(b)**, the thickness measurement required in **5.2.6** is to be carried out at the commencement of the Survey in order to facilitate planning repairs, as far as practicable. Where the Intermediate Survey is commenced at the time of an Annual Surveys, at a minimum ~~of~~ the examinations required ~~for Annual Surveys specified~~ in **Chapter 3** are to be carried out.

4 Where the Intermediate Survey is commenced at any time between the second and third Annual

Surveys and is completed at the third Annual Survey in accordance with the requirements in **1.1.3-1(2)(b)**, at a minimum ~~of~~ the examinations required in ~~**3.2.2**, **3.2.3**, **3.3.1** and **3.3.2**~~ **Chapter 3** are to be carried out at the completion of the Intermediate Survey. ~~Where considered necessary by the Surveyor as a result of these examinations, examinations may be increased to include those which have already been carried out.~~ However, the Surveyor may, based upon the above results, require examinations already carried out to be conducted again when deemed necessary.

Chapter 5 SPECIAL SURVEYS

5.1 General

Paragraph 5.1.1 has been amended as follows.

5.1.1 Examinations to be Carried out at the Commencement or Completion of Special Surveys

1 Where the Special Survey is commenced in accordance with the requirements in **1.1.3-1(3)(b)** or **(c)**, the thickness measurements required in **5.2.6** are to be carried out at the commencement of the Survey if possible in order to facilitate planning repairs. Where the Special Survey is commenced at or prior to the time of the 4th Annual Survey, at a minimum ~~of~~ the examinations required ~~for Annual Surveys specified~~ in **Chapter 3** are to be carried out.

2 Where the Special Surveys is completed in accordance with the requirements in **1.1.3-1(3)(b)** or **(c)**, at a minimum ~~of~~ the examinations required in ~~**3.2.2**, **3.2.3**, **3.3.1** and **3.3.2**~~ **Chapter 3** are to be carried out at the completion of the Special Survey. ~~Where considered necessary by the Surveyor as a result of these examinations, examinations may be increased to include those which have already been carried out.~~ However, the Surveyor may, based upon the above results, require examinations already carried out to be conducted again when deemed necessary.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 30 June 2014.

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 2-2

Chapter 5 SPECIAL SURVEYS

5.3 Special Surveys for Machinery

5.3.2 Performance Tests and Pressure Tests

Table B5.26 has been amended as follows.

Table B5.26 Additional Requirements at Special Surveys

Items	Examinations
1 Speed governors, generator circuit breakers and associated relays	Performance tests are to be carried out with all generators operating under loaded condition, either separately or in parallel, as far as practicable.
2 Condensers, evaporators, and receivers	For those that use NH_3 (*R*717) as the refrigerant, the parts exposed to the primary refrigerant are to be tested at a pressure of 90% of the design pressure (the pressure may be reduced down to 90% of the setting pressure of the relief valves). However, the pressure test may be replaced by other means as deemed appropriate by the Society.
3 All other piped machinery and parts not specified in -2 above	Pressure tests are to be handled in accordance with the requirements of **2.2.2(2)** where deemed necessary by the Surveyor.
4 Lighting systems, communication and signalling systems, ventilating systems, and other electrical equipment	Performance tests (including operation tests) of interlocking devices used to ensure safe operation are to be carried out where deemed necessary by the Surveyor.
5 Electric generator sets, etc.	Performance tests of electric generator sets and important auxiliaries are to be carried out.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 30 June 2014.

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 1 July 1998 which are not equipped with monitoring and control systems for periodically unattended machinery spaces.
(Note) The term "*a similar stage of construction*" means the stage at which the construction identifiable with a specific ship begins and the assembly of that ship has commenced comprising at least 50 *tonnes* or 1% of the estimated mass of all structural material, whichever is the less.

Amendment 2-3

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

Chapter 3 ANNUAL SURVEYS

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

3.2.5 Close-up Surveys

Table B3.5 has been amended as follows.

Table B3.5 Close-up Surveys

Items	Examinations
(Omitted)	
Requirements for General Dry Cargo Ships of not less than 500 *gross tonnage*	
1 Hatch covers and hatch coamings	・ Close-up survey of hatch cover plating and hatch coaming plating and their stiffeners is to be carried out.
2 Cargo hold frames	・ For general dry cargo ships carrying timber cargoes over 5 *years* and up to 15 *years* of age, the extent of survey is to be increased to the satisfaction of the Surveyor where deemed necessary by the Surveyor as a consequence of the survey carried out in accordance with **Table B3.4**. ・ For general dry cargo ships over 15 *years* of age, a close-up survey of sufficient extent (i.e. a minimum of 25% of the frames) is to be carried out, to establish the condition of the lower region of the shell frames including approximately the lower one third length of the frames at side shell and side frame end attachment and the adjacent shell plating in the forward ~~lower~~ cargo hold (the forward lower cargo hold in the case of tween deck spaces) and one other selected ~~lower~~ cargo hold (one other selected lower cargo hold in the case of tween deck spaces). ・ Where this level of survey reveals the need for remedial measures, the survey is to be extended to include a close-up survey of all of the shell frames and adjacent shell plating of those cargo holds and associated tween deck spaces (as applicable) as well as a close-up survey of sufficient extent of all remaining cargo holds and tween deck spaces (as applicable).

Note:

*1: For bulk carriers with hybrid cargo hold arrangements, e.g. with some cargo holds of single side skin and others of double side skin, the Requirements for Double Skin Bulk Carriers are to apply to cargo holds of double side skin and associated wing spaces.

Chapter 5 SPECIAL SURVEYS

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

5.2.5 Close-up Surveys

Table B5.5-1 has been amended as follows.

Table B5.5-1 Requirements of Close-up Surveys for Oil tankers and Ships Carrying Dangerous Chemicals in bulk

~~Special Survey~~	~~Structural members subject to the Close-up Survey~~
~~Special Survey for ships up to 5 *years* of age (Special Survey No.1)~~	~~1. One Web Frame Ring (A) - in a ballast double hull tank[*1] for ships having double hull structure, or in a ballast wing tank, if any, or a cargo wing tank used primarily for water ballast for ships without double hull structure.~~ ~~2. One Deck Transverse (B) - in a cargo tank or on deck~~ ~~3. One Transverse Bulkhead (C) - in a ballast double hull tank[*1] (only for double hull)~~ ~~4. The lower part of one Transverse Bulkhead (D) - in a ballast tank (except for double hull)~~ ~~5. The lower part of one Transverse Bulkhead (D) - in a cargo wing tank[*2]~~ ~~6. The lower part of one Transverse Bulkhead (D) - in a cargo centre tank~~
~~Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)~~	~~1. All Web Frame Rings (A) - in a ballast double hull tank[*1] for ships having double hull structure, or in a ballast wing tank, if any, or a cargo wing tank used primarily for water ballast for ships without double hull structure.~~ ~~2. The knuckle area and the top part of one Web Frame Ring (G) - in each remaining ballast tank (only for double hull)~~ ~~3. One Deck Transverse (B) - in or on each of the remaining ballast tanks, if any (except for double hull)~~ ~~4. One Deck Transverse (B) - in or on a cargo wing tank (except for double hull)~~ ~~5. One Deck Transverse (B) - in or on two cargo centre tanks (two cargo tanks for double hull)~~ ~~6. One Transverse Bulkhead (C) - in all ballast double hull tanks[*1] (only for double hull)~~ ~~7. Both Transverse Bulkheads (C) - in a ballast wing tank, if any, or a cargo wing tank used primarily for water ballast (except for double hull)~~ ~~8. The lower part of one Transverse Bulkhead (D) - in each remaining ballast tank (except for double hull)~~ ~~9. The lower part of one Transverse Bulkhead (D) - in a cargo wing tank[*2]~~ ~~10. The lower part of one Transverse Bulkhead (D) - in two cargo centre tanks~~
~~Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)~~	~~1. All Web Frame Rings (A) - in all ballast tanks~~ ~~2. All Web Frame Rings (A) - in a cargo wing tank (or a cargo tank for double hull oil tankers)~~ ~~3. A minimum of 30% of all Web Frame Rings (A) - in each remaining cargo wing tank[*3] (only for single hull oil tankers)~~ ~~4. One Web Frame Ring (A) - in each remaining cargo tank (except for single hull oil tankers)~~ ~~5. All Transverse Bulkheads (C) - in all cargo and ballast tanks~~ ~~6. A minimum of 30% of all Deck and Bottom Transverses (E) - in each cargo centre tank (only for single hull oil tankers)~~ ~~7. Other areas considered necessary by the Surveyor (F) (only for oil tankers)~~
~~Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)~~	~~As Special Survey No.3.~~ ~~Additional transverses included as deemed necessary by the Surveyor.~~

Special Survey	Structural members subject to the Close-up Survey
Requirements for Tankers and Ships Carrying Dangerous Chemicals in bulk without Double Hull Structure	
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. One Web Frame (A) - in a ballast wing tank, if any, or a cargo wing tank used primarily for water ballast 2. One Deck Transverse (B) - in a cargo tank or on deck 3. The lower part of one Transverse Bulkhead (D) - in a ballast tank 4. The lower part of one Transverse Bulkhead (D) - in a cargo wing tank 5. The lower part of one Transverse Bulkhead (D) - in a cargo centre tank
Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)	1. All Web Frames (A) - in a ballast wing tank, if any, or a cargo wing tank used primarily for water ballast 2. One Deck Transverse (B) - in or on each of the remaining ballast tanks, if any 3. One Deck Transverse (B) - in or on a cargo wing tank 4. One Deck Transverse (B) - in or on two cargo centre tanks 5. Both Transverse Bulkheads (C) - in a ballast wing tank, if any, or a cargo wing tank used primarily for water ballast 6. The lower part of one Transverse Bulkhead (D) - in each remaining ballast tank 7. The lower part of one Transverse Bulkhead (D) - in a cargo wing tank 8. The lower part of one Transverse Bulkhead (D) - in two cargo centre tanks
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. All Web Frames (A) - in all ballast tanks 2. All Web Frames (A) - in a cargo wing tank 3. A minimum of 30%[*1] of all Web Frames (A) - in each remaining cargo wing tank (only for oil tankers) 4. One Web Frame (A) - in each remaining cargo tank (except for oil tankers) 5. All Transverse Bulkheads (C) - in all cargo and ballast tanks 6. A minimum of 30%[*1] of all Deck and Bottom Transverses (E) - in each cargo centre tank (only for oil tankers)
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	As Special Survey No.3. Additional transverses included as deemed necessary by the Surveyor.
Requirements for Tankers and Ships Carrying Dangerous Chemicals in bulk having Double Hull Structure	
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. One Web Frame (A) - in a ballast double hull tank[*2] 2. One Deck Transverse (B) - in a cargo tank or on deck 3. One Transverse Bulkhead (C) - in a ballast double hull tank[*2] 4. The lower part of one Transverse Bulkhead (D) - in a cargo wing tank[*3] 5. The lower part of one Transverse Bulkhead (D) - in a cargo centre tank
Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)	1. All Web Frames (A) - in a ballast double hull tank[*2] 2. The knuckle area and the top part of one Web Frame (G) - in each remaining ballast tank 3. One Deck Transverse (B) - in or on two cargo tanks 4. One Transverse Bulkhead (C) - in all ballast double hull tanks[*2] 5. The lower part of one Transverse Bulkhead (D) - in a cargo wing tank[*3] 6. The lower part of one Transverse Bulkhead (D) - in two cargo centre tanks
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. All Web Frames (A) - in all ballast tanks 2. All Web Frames (A) - in a cargo wing tank (or a cargo tank for oil tankers) 3. One Web Frame (A) - in each remaining cargo tank 4. All Transverse Bulkheads (C) - in all cargo and ballast tanks
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	As Special Survey No.3. Additional transverses included as deemed necessary by the Surveyor.

Notes:

Letters in this table mean:

(A): Cross ties and complete transverse web frame ring including adjacent structural members such as shell plating, longitudinal bulkheads, longitudinal stiffeners, and brackets

(B): Including deck structural members adjacent to deck transverses such as deck plating, longitudinal stiffeners, and brackets

(C) and (D): Including vertical and horizontal girders and structural members adjacent to transverse bulkheads such as longitudinal bulkheads, inner bottom plating, hopper plating, bottom girders, brackets, and stiffeners; and internal structure of lower and upper stools, where fitted

(E): Including structural members adjacent to deck and bottom transverses such as deck plating, bottom plating, and longitudinal stiffeners

(F): Additional complete transverse web frame ring including adjacent structural members listed in A

(G): The knuckle area includes the slope hopper plating and where it connects to the inner hull bulkhead and inner bottom plating; up to 2 *meters* from the corners along the bulkhead and double bottom; and adjacent structural members
The top part includes the top 5 *meters* (3 *meters* for ships carrying dangerous chemicals in bulk) of the web frame and adjacent structural members

*1: The 30% is to be rounded up to the next whole integer

*~~1~~2: "Ballast ~~D~~double hull tank" ~~includes~~ means all ballast tanks consisting of the double bottom tank, double side tank, and double deck tank, as applicable, even though these tanks are separate

*~~2~~3: For double hull that have no centre cargo tanks (as in the case of tanks with a centre longitudinal bulkhead), transverse bulkheads in wing tanks are to be surveyed

~~*3: The 30% is to be rounded up to the next whole integer~~

Table B5.5-2 has been amended as follows.

Table B5.5-2 Requirements of Close-up Surveys for Ships Carrying Liquefied Gases in Bulk

Special Survey	Structural members subject to the Close-up Survey*2
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. One web frame ~~ring~~ in a representative ballast tank of the topside, hopper side and double hull side type*~~1~~ (A) 2. Lower part of one transverse bulkhead in a ballast tank*~~2~~1 (C)
Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)	1. All web frames ~~rings~~ in a ballast tank, which is to be a double hull side tank or a topside tank (If such tanks are not fitted another ballast tank is to be selected.*~~2~~1) (A) 2. One web frame ~~rings~~ in each remaining ballast tank (A) 3. One transverse bulkhead in each ballast tank (B)
Special Survey for ships over 10 *years* of age (Special Survey No.3 and subsequent Special Surveys)	1. All web frames ~~rings~~ in all ballast tanks (A) 2. All transverse bulkheads in all ballast tanks (B)

Notes:

Letters in this table mean:

(A): Cross Ties and complete transverse web frame rings including adjacent structural members such as shell plating, longitudinal bulkheads, longitudinal stiffeners, brackets, etc.

(B): Including vertical and horizontal girders, adjacent structural members and adjacent longitudinal bulkhead structure

(C): Including vertical and horizontal girders and adjacent structural members

~~*1: One ballast tank is to be selected from ballast tanks consisting of topside, double hull side and hopper side. Even if the aforementioned portions are separated tanks, they are to be considered as one ballast tank.~~

*~~2~~1: One ballast tank can be selected from ballast tanks including peak tanks.

*~~3~~2: For ships having independent tanks of type *C*, with a midship section similar to that of a general cargo ship, the extent of close-up surveys may be specially considered at the discretion of the Surveyor.

Table B5.6-2 has been amended as follows.

Table B5.6-2 Requirements of Close-up Surveys for Ore Carriers

Special Survey	Structural members subject to Close-up Survey
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. One web frame rings in a ballast wing tank (A) 2. Lower part of one transverse bulkhead in a ballast ~~wing~~ tank (D) 3. Two selected cargo hold transverse bulkheads (including stiffeners and girders) (E) 4. Air pipes and sounding pipes in cargo holds in way of tank top 5. All hatch cover plating, hatch coaming plating, and stiffeners
Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)	1. All web frame rings in a ballast wing tank (A) 2. One deck transverse in each remaining ballast tank (B) 3. Forward and aft transverse bulkheads in a ballast wing tank (C) 4. Lower part of one transverse bulkhead in each remaining ballast tank (D) 5. One transverse bulkhead in each cargo hold (including stiffeners and girders) (E) 6. All deck plating and under deck structure inside line of hatch openings between cargo hold hatches 7. All piping arrangements in cargo holds. If the surveyor considers it necessary, airtight tests are to be carried out. 8. All hatch cover plating, hatch coaming plating, and stiffeners
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. All web frame rings in each ballast tank (A) 2. All transverse bulkheads in each ballast tank (C) 3. One web frame ring in all in each wing void space (A) However, additional close-up surveys may be carried out for other web frame rings in void spaces as deemed necessary by the Surveyor. 4. All transverse bulkhead in each cargo hold (including stiffeners and girders) (E) 5. Structural members specified in 6. to 8. of Special Survey No.2 above
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	1. As for Special Survey No.3

Notes:

(1) Letters in this table mean:

(A): Cross Ties and complete transverse web frame rings including adjacent structural members such as shell plating, longitudinal bulkheads, longitudinal stiffeners, brackets, etc.

(B): Including deck structures adjacent to deck transverse such as deck plating, longitudinal stiffeners, brackets, etc.

(C) and (D): Including vertical and horizontal girders, and adjacent structural members such as longitudinal bulkheads, inner bottom plating, hopper plating, bottom girders, brackets, stiffeners, etc.

(E): Including plating and internal structures of lower and upper stools, where fitted

(2) Close-up Surveys of transverse bulkheads are to be carried out at least at four levels as specified as follows:

(i): Immediately above the inner bottom and immediately above the line of gussets (if fitted) and shedders for ships without lower stool.

(ii): Immediately above and below the lower stool shelf plate (for those ships fitted with lower stools), and immediately above the line of the shedder plates.

(iii): About mid-height of the bulkhead.

(iv): Immediately below the upper deck plating and immediately adjacent to the upper wing tank, and immediately below the upper stool shelf plate for those ships fitted with upper stools, or immediately below the topside tanks.

Table B5.7 has been amended as follows.

Table B5.7 Requirements of Close-up Surveys for General Dry Cargo Ships of not less than 500 *gross tonnage*

Special Survey	Structural members subject to Close-up Survey
Special Survey for ships up to 5 *years* of age (Special Survey No.1)	1. Selected shell frames in one forward and one after cargo holds and associated tween deck spaces and lower part of remaining shell frames including their end attachments and adjacent shell plating 2. Lower parts of shell frames in remaining cargo holds including their end attachments and adjacent shell plating 3. One selected transverse bulkhead and lower part of remaining transverse bulkheads (including stiffeners and girders) 4. Air pipes and sounding pipes in cargo holds in way of tank top 5. All hatch cover plating, hatch coaming plating, and stiffeners
Special Survey for ships over 5 *years* and up to 10 *years* of age (Special Survey No.2)	1. Selected shell frames in all cargo holds and associated tween deck spaces and lower part of remaining shell frames including their end attachments and adjacent shell plating 2. One transverse bulkhead and lower part of the remaining transverse bulkhead in each cargo hold (including stiffeners and girders) 3. Both forward and aft bulkhead (including stiffeners and girders) in one side ballast tank 4. One transverse web with associated plating and longitudinals in two representative ballast tanks of each type (topside, bilge hopper, side tank or double bottom tank) 5. Selected area of deck plating and under deck structure inside the line of hatch openings between cargo hatches ~~(2)~~ 6. Selected area of inner bottom plating 7. Air pipes and sounding pipes in cargo holds in way of tank top 8. All hatch cover plating, hatch coaming plating, and stiffeners
Special Survey for ships over 10 *years* and up to 15 *years* of age (Special Survey No.3)	1. All shell frames in the forward ~~lower~~ cargo hold (the forward lower cargo hold in the case of tween deck spaces), and 25% of frames in each of the remaining cargo holds ~~and~~ (tween deck spaces including the cargo holds except for the forward lower cargo hold in the case of tween deck spaces), and lower part of remaining shell frames including their end attachments and adjacent shell plating 2. All transverse bulkheads (including stiffeners and girders) in all cargo holds 3. All transverse bulkheads (including stiffeners and girders) in all ballast tanks 4. All transverse webs with associated plating and longitudinals in each ballast tank ~~(topside, bilge hopper, side tank or double bottom tank)~~ 5. All deck plating and under deck structure inside the line of hatch openings between cargo hold hatches ~~(2)~~ 6. All area of inner bottom plating 7. Air pipes and sounding pipes in cargo holds in way of tank top 8. All hatch cover plating, hatch coaming plating, and stiffeners
Special Survey for ships over 15 *years* of age (Special Survey No.4 and subsequent Special Surveys)	1. All shell frames in all cargo holds and associated tween deck spaces including their end attachments and adjacent shell plating 2. Structural members specified in 2. to 8. of Special Survey No.3 above

Notes:

~~(1)~~ Close-up Surveys of transverse bulkheads are to be carried out at least at three levels as specified as follows:

~~(A)~~ Immediately above the inner bottom and immediately above the tween decks, as applicable.

~~(B)~~ Mid-height of the bulkheads for holds without tween decks.

~~(C)~~ Immediately below the upper deck plating and tween deck plating.

~~(2) Deck plating and under deck structure inside the line of hatch openings between cargo hold hatches~~

5.2.6 Thickness Measurements

Sub-paragraph -1(2) has been amended as follows.

1 At Special Surveys, thickness measurements are to be carried out in accordance with **(1)** through **(5)** below.

(1) Thickness measurements are to be carried out using appropriate ultra-sonic gauging machines or other approved means. The Surveyor may request that the accuracy of the equipment be demonstrated.

(2) Thickness measurements are to be carried out ~~within 12 *months* prior to completion of the survey in question~~ at or after the time of the 4th Annual Survey under the attendance of the Surveyor by the firm approved by the Society under the "**Rules for Approval of Manufactures and Service Suppliers**" or equivalent firm. The surveyor may request to have the measurements taken again to ensure acceptable accuracy.

(3) Additional thickness measurements are to be carried out before the completion of the survey.

(4) A thickness measurement record is to be prepared and submitted to the Society.

(5) Thickness measurements of structures in areas where close-up surveys are required are to be carried out simultaneously with close-up surveys.

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 and subsequent Special Surveys)	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~~6. 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~~

5.4 Special Requirements for Ships Carrying Liquefied Gases in Bulk

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	(Omitted)
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 and acceptance criteria approved in advance. However, low differential pressure tests are not to be considered an acceptable test for the tightness of secondary barriers. 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~~ if the verification results do not satisfy the approved acceptance criteria, an investigation is to be carried out and additional testing such as thermographic or acoustic emissions testing is to be carried out. ・ 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	(Omitted)
4 Cargo and process piping	(Omitted)
5 Cargo handling equipment	(Omitted)
6 Emergency shutdown devices	(Omitted)
7 Electrical installations in hazardous areas	(Omitted)

Note:
(Omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 2-3)

1. The effective date of the amendments is 1 July 2014.

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.

GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS

GUIDANCE

Part B Class Surveys

2014 AMENDMENT NO.2

Notice No.40 30th June 2014

Resolved by Technical Committee on 4th February 2014

Notice No.40 30th June 2014
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 2-1

B2 CLASSIFICATION SURVEYS

B2.3 Sea Trials and Stability Experiments

B2.3.1 Sea Trials

Sub-paragraph -7 has been amended as follows.

7 Function tests of the control systems for main propulsion machinery or controllable pitch propellers, boilers and electric generating sets required by **2.3.1-1(7), Part B of the Rules** are to be carried out in accordance with the following **(1)** to **(~~4~~5)**. However, where these tests have been carried out when the ship was anchored or at dockside, some of these tests may be dispensed with at the sea trial.
((1) to (3) are omitted.)

(4) For the electric generating sets specified in **3.2.1-3, Part H of the Rules** the following items are to be confirmed while the main propulsion machinery is operating in normal continuous cruise output. However, in cases where the main propulsion machinery is operating at an output other than normal continuous cruising output, the tests may be carried out while main propulsion machinery is operating at said output on the condition that all active peripheral equipment are operating at outputs that are the same as the normal continuous cruising output of the main propulsion machinery.
   (a) Where only one electric generating set is normally used, the standby generator, air circuit breakers, and important auxiliary machinery start up automatically when the main source of electrical power is stopped by tripping a circuit breaker
   (b) Where two electric generating sets are normally used, preference tripping of unnecessary loads is performed and propulsion and steering of the ship are maintained, when the circuit breaker of one of the sets is tripped

(5) The "electric generating sets specified in **3.2.1-3, Part H of the Rules**" mentioned in **(4)** above, refer to the application of **6.2.11-1** and **-3, Part H of the Rules** for the ships specified in **6.1.1, Part H of the Rules**.

B5 SPECIAL SURVEYS

B5.3 Special Surveys for Machinery

B5.3.2 Performance Tests and Pressure Tests

Sub-paragraphs -4 and -5 have been added as follows.

4 The "Performance tests of electric generator sets and important auxiliaries" mentioned in item 5 of **Table B5.26, Part B of the Rules** are to verify the following for the electric generator sets specified in **3.2.1-3, Part H of the Rules**.

(1) Where only one electric generating set is normally used, the standby generator, air circuit breakers, and important auxiliary machinery start up automatically when the main source of electrical power is stopped by tripping a circuit breaker.

(2) Where two electric generating sets are normally used, preference tripping of unnecessary loads is performed when the circuit breaker of one of the sets is tripped.

5 The "electric generating sets specified in **3.2.1-3, Part H of the Rules**" mentioned in **-4** above, refer to the application of **6.2.11-1** and **-3, Part H of the Rules** for the ships specified in **6.1.1, Part H of the Rules**.

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 30 June 2014.

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 1 July 1998 which are not equipped with monitoring and control systems for periodically unattended machinery spaces.

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

Amendment 2-2

B1 GENERAL

B1.4 Preparation for Survey and Other Items

B1.4.2 Preparation for Surveys

Sub-paragraph -3 has been amended as follows.

3 The applicant is to prepare the items indicated in **(1)** to **(~~3~~4)** below in addition to the preparations specified in **-1** and **-2** above. Furthermore, where the preparations for the survey are made by the crew members of the ship, the applicant is to give necessary instructions to the crew members in order to assist the Surveyor.

(1) A communication system between the survey party in the tank and the officer in charge on the deck
(2) A portable gas detector, potable oxygen-meter, breathing apparatus, whistle, safety belts, and lifelines
(3) Adequate and safe lighting and protective clothing
(4) If breathing apparatus and/or other equipment is used as "Rescue and emergency response equipment" then it is recommended that the equipment should be suitable for the configuration of the space being surveyed.

Sub-paragraph -10(1)(c) has been amended as follows.

10 "Provisions of an easy and safe access" referred to in **1.4.2-1, Part B of the Rules** are as specified in **(1)** through **(3)**.

(1) For close-up surveys of the hull structure, other than cargo hold shell frames of bulk carriers:
  (a) Permanent staging and passages through structures
  (b) Temporary staging and passages through structures
  (c) Hydraulic arm vehicles such as conventional cherry pickers, ~~L~~lifts and movable platforms
  (d) Boats or rafts for ballast tanks and cargo tanks
    Boats or rafts may be applied to void spaces and other similar spaces provided the structural capacity of the space is sufficient to withstand static loads at all levels of water.
  (e) Portable ladders
  (f) Other equivalent means

((2) and (3) are omitted.)

B5 SPECIAL SURVEYS

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

B5.2.3 Performance Test

Sub-paragraph -3 has been amended as follows.

3 The performance test specified in **5.2.3-2(~~9~~10), Part B of the Rules** is to be in accordance with the following:

(Omitted)

B5.2.7 Pressure Tests

Sub-paragraph -4 has been amended as follows.

4 With respect to the pressure tests for the cargo tanks of tankers and ships carrying dangerous chemicals in bulk, ~~when pressure tests of certain cargo tanks are conducted in accordance with the Rules at an appropriate time under the presence of the Master or any other representative personnel of the ship before the due date of the examination, such pressure tests may be regarded as the pressure tests required for Special Surveys provided that the following conditions **(1)** and **(2)** are met. In such cases, the Surveyor will carry out an examination on the bulkhead in question based on the results given in **(2)** and test records.~~ when pressure tests are conducted in the presence of the Master or any other representative personnel of the ship, such pressure tests may be regarded as the pressure tests required for Special Surveys at the discretion of the Surveyor provided the following **(1)** to **(5)** conditions are complied with:

(1) ~~The cargo tank subject to the pressure test is readily accessible by crew members for examination for leakage at sea such as a tank located contiguous to a cargo pump room.~~ The procedure for the pressure test has been submitted by the owner and reviewed by the Society prior to the pressure test being carried out.

(2) ~~Records of examination for leakage are kept by the crew.~~ There is no record of leakage, distortion or substantial corrosion that would affect the structural integrity of the tank.

(3) The pressure test has been satisfactorily carried out within special survey window not more than 3 months prior to the date of the survey on which the internal examination or close-up survey is completed.

(4) The satisfactory results of the pressure test are recorded in the ship's logbook.

(5) The internal and external condition of the tanks and associated structure are found satisfactory by the Surveyor at the time of the internal examination and close-up survey.

B5.4 Special Requirements for Ships Carrying Liquefied Gases in Bulk

B5.4.2 Examinations

Sub-paragraph -1 has been amended as follows.

1 The wording "programs and acceptance criteria approved in advance" in item 2 of **Table B5.27, Part B of the Rules** refers to the programs and acceptance criteria prepared by cargo containment systems' designers and approved by the Society in accordance with the provisions of **4.7.7, Part N of the Rules**.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 July 2014.

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.