1st in 2026

Editorial Correction for Technical Rules and Guidance

Issued on 29 June 2026

Nippon Kaiji Kyokai (ClassNK)

About this document:

This document is a compilation of corrections of editorial corrections of the Society's Technical Rules.

Errata in this document refer to corrections that do not change the requirements, intent, or technical background of the requirements specified in the rules and guidance, e.g., correction of typographical errors or references.

Content:

Rules for the survey and construction of steel ships Part B Chapter 1 1.4.2-1

Correction	Present	Note
1 All such preparations as required for classification, periodical and other surveys and thickness measurements specified in this part as well as those which may be required as necessary by the Surveyor in accordance with the provisions in this Part are to be made by the Owners or their representatives at their responsibilities. The preparations are to include provisions of an easy and safe access, necessary facilities, certificates and records for the execution of the survey and thickness measurements, open-up ~~examinations~~ of equipment, removal of obstructions and cleaning. Inspection, measuring and test equipment, which Surveyors rely on to make decisions affecting classification are to be individually identified and calibrated to a standard deemed appropriate by the Society. However, the Surveyor may accept simple measuring equipment (*e.g.* rulers, measuring tapes, weld gauges, micrometers) without individual identification or confirmation of calibration, provided they are of standard commercial design, properly maintained and periodically compared with other similar equipment or test pieces. The Surveyor may also accept equipment fitted on board a ship and used in examination of shipboard equipment (*e.g.* pressure, temperature or rpm gauges and meters) based either on calibration records or comparison of readings with multiple instruments.	**1** All such preparations as required for classification, periodical and other surveys and thickness measurements specified in this part as well as those which may be required as necessary by the Surveyor in accordance with the provisions in this Part are to be made by the Owners or their representatives at their responsibilities. The preparations are to include provisions of an easy and safe access, necessary facilities, certificates and records for the execution of the survey and thickness measurements, open-up examinations of equipment, removal of obstructions and cleaning. Inspection, measuring and test equipment, which Surveyors rely on to make decisions affecting classification are to be individually identified and calibrated to a standard deemed appropriate by the Society. However, the Surveyor may accept simple measuring equipment (*e.g.* rulers, measuring tapes, weld gauges, micrometers) without individual identification or confirmation of calibration, provided they are of standard commercial design, properly maintained and periodically compared with other similar equipment or test pieces. The Surveyor may also accept equipment fitted on board a ship and used in examination of shipboard equipment (*e.g.* pressure, temperature or rpm gauges and meters) based either on calibration records or comparison of readings with multiple instruments.	Wording correction

Rules for the survey and construction of steel ships Part B Chapter 2 Table B2.11

Correction	Present	Note

Table B2.11 Survey – Sea Trials *1

Test Items	Details
(1 to 11 are omitted.)	
12 Performance tests for automatic and remote control systems for main propulsion machinery, controllable pitch propel-lers, boilers and electric generating sets *4	(1) For the control systems of main propulsion machinery and controllable pitch propellers, the tests specified in the following **(a)** to **(d)** are to be carried out. (a) Main propulsion machinery or controllable pitch propellers are to be subjected to starting tests, ahead-astern tests and running tests in the whole range of output, by means of remote control devices in main control stations or the main control stations on the bridge. (b) In addition to output increase and decrease tests, operation tests of main propulsion machinery or the controllable pitch propellers using the bridge control devices are to be carried out. Where operation tests were carried out for the entire output range by the bridge control devices, consideration may be given to reduction of the test items with the exception of the starting tests specified in **(a)** above. (c) Where there are two or more control stations for main propulsion machinery or controllable pitch propellers, tests on transfer of control are to be carried out while the ship is running ahead and while it is running astern. Where the remote devices for main propulsion machinery or controllable pitch propellers are in accordance with **18.3.2-2(3)(b), Part D of the Rules**, the above tests may be carried out while the main propulsion machinery is stopped. (d) After completion of the tests specified in **(c)** above, demonstrations that main propulsion machinery or controllable pitch propellers can be smoothly operated from the respective control stations are to be carried out. (2) Notwithstanding **(1)** above, the control systems for controllable pitch propellers intended for main propulsion are to be in accordance with **Annex 2.3.1.4-3 "Testing Procedures for Control Systems for Controllable Pitch Propellers Intended for Main Propulsion", Part B of the Rules**. (3) Function tests of boiler control systems are to be carried out in accordance with the following **(a)** to **(c)**. (a) Devices for feed water control, combustion, etc. are to operate stably in response to the load variations of main boilers, and the main boilers can supply steam stably to main propulsion machinery, electric generating sets and auxiliary machinery essential for main propulsion of the ship without local manual operation. (b) Essential auxiliary boilers are to supply steam stably to auxiliary machinery essential

Reference correction

for main propulsion of the ship without manual operation.

(c) Where exhaust gas economisers are used as sources of steam for driving generators and boilers supply extra steam automatically during power loss, operation tests of the automatic control devices for such systems are to be carried out.

(4) Where generators supply electrical power to the loads necessary for ship propulsion and their motive power relies upon propulsion systems, tests of the functioning of the automatic or remote control systems for electric generating sets are to be carried out.

(5) For the electric generating sets specified in **3.2.1-3, Part H of the Rules**, the following **(a)** to **(c)** items are to be satisfied while main propulsion machinery is operating at normal continuous cruise output. However, in cases where main propulsion machinery is operating at outputs other than normal continuous cruising output, such tests may be carried out while main propulsion machinery is operating at said output on the condition that all active peripheral equipment is 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, standby generators, 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.

(c) Emergency sources of electrical power are automatically started and connected upon the failure of any main sources of electrical power.

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

(13 is omitted.)

Notes

*1: These tests may be dispensed with where such tests have been conducted while the ships are anchored or at dockside.

*2: In applying the requirements, the items specified in **(1)** or **(2)** are to be applied. Alternatively, designers or builders may use computational fluid dynamic (CFD) studies or experimental investigations to predict the rudder stock moment (torque in the rudder stock) under the full load condition and at the service speed.

(1) The rudder torque in the full load condition and at the speed of ship defined in **2.1.8, Part A of the Rules** is to be predicted using the following extrapolation formula. There is, however, no need for extrapolation where A_T is greater than $0.95A_F$.

Q_F: the rudder stock moment (torque in the rudder stock) for the full load condition and the speed of ship defined in **2.1.8, Part A of the Rules**

Q_T: the rudder stock moment (torque in the rudder stock) for the trial condition α : the extrapolation factor in accordance with the following formula: $\alpha = 1.25(\frac{A_F}{A_T})(\frac{V_F}{V_T})^2$ A_F: the total immersed projected area of the movable part of the rudder in the full load condition A_T: the total immersed projected area of the movable part of the rudder in the trial condition V_F: the contractual design speed of the vessel corresponding to the maximum continuous revolutions of the main engine in the full load condition V_T: the measured speed of the vessel (considering current) in the trial condition (2) Where rudder actuator system pressure is shown to have a linear relationship to rudder stock torque, **(1)** above can be taken in accordance with the following formula. Where constant volume fixed displacement pumps are utilised, **15.2.2(1)** or **15.2.3(1), Part D of the Rules** can be deemed satisfied if the estimated steering actuator hydraulic pressure in the full load condition is less than the specified maximum working pressure of the rudder actuator. Where a variable delivery pump is utilised, pump data are to be supplied and interpreted to estimate the delivered flow rate corresponds to the full load condition in order to calculate the steering time and allow it to be compared to the required time. $P_F = P_T\alpha$ P_F: the estimated steering actuator hydraulic pressure in the full load condition P_T: the maximum measured actuator hydraulic pressure in the trial condition *3: The following preparations are to be made before carrying out tests. (1) All relevant equipment for the safety of attending personnel such as oil mist detection arrangements, overspeed protective devices and any other shut down functions are to be made available and are to be operational. (2) The overspeed protective device is to be set to a value which is not higher than the allowable overspeed value. This set point is to be confirmed by surveyors. (3) The engines are to be run as prescribed by the engine manufacturer. (4) All fluids used for testing purposes (fuel oils, lubrication oils, cooling water, etc., including all fluids used temporarily or repeatedly for testing purposes only) are to be suitable for their intended purposes (i.e., they are to be clean, preheated if necessary and cause no harm to engine parts). *4: Where these tests have been carried out when the ship was anchored or at dockside, some of these tests may be dispensed with at sea trials.	

Rules for the survey and construction of steel ships Part B Chapter 3 Table B3.9

Correction

Table B3.9 Special Requirements for Ships Carrying Liquefied Gases in Bulk

Items	Examinations
1 Cargo containment system	(1) General condition of cargo tanks, secondary barriers and their insulation; and sealing arrangement for cargo tanks or tank covers penetrating decks is to be examined as far as accessible. At the first Annual Survey after delivery, examinations specified in 1(1)(a), (b) and 2 of **Table B5.27** and an examination of the general condition of cargo tank foundations are to be carried out. However, these examinations may be dispensed with in accordance with the provisions specified otherwise by the Society.
2 Ventilating system for hold spaces and cargo containment system	(1) Pressure/Vacuum valves, safety systems and alarms, and their associated flame screens for cargo tanks, interbarrier spaces, and hold spaces, as well as the means for draining the vent pipes are to be examined generally as far as accessible to confirm that they are satisfactory. It is to be confirmed that the pressure relief valves for the cargo tanks are sealed and the relevant certificate for their opening/closing pressure is provided on board.
3 Cargo handling system	(1) The general condition of the equipment shown in (a) to (c) below is to be examined during operation, as far as is practical. Regarding (c), operation tests are also to be carried out. (a) Machinery for cargo handling including cargo heat exchangers, vaporizers, pumps and compressors. (b) Piping and its insulation for cargo handling system as far as accessible (c) ESD (emergency shutdown) systems for stopping cargo flow (performance tests are to be carried by manually activating emergency shutdown systems and confirming that cargo pumps and compressors automatically stop as a result.)
4 Gauging, detecting, safety, and alarming devices	(1) General examinations and performance tests of the following (a) to (i) are to be carried out. Where tests under actual conditions are difficult, simulation tests or other suitable means may be used to confirm functionality. (a) Liquid level gauges, high level alarms and valves associated with shut-off system (b) Liquid level indicators and overflow control for the cargo tanks (c) Temperature indication equipment and associated alarms (d) Pressure gauges, high pressure and, when applicable, low pressure alarms, for the cargo tanks (e) Pressure gauges and associated alarms for cargo tanks, interbarrier spaces and hold spaces (f) Arrangements for the cargo pressure/temperature control including, when fitted, any thermal oxidation systems, any refrigeration systems, and any associated safety measures and alarms (g) Fixed and portable gas detecting instruments and associated alarms (h) Gauging devices for oxygen density (i) Safety devices of the arrangements for the use of cargo as fuel

Present

Note

	5 Environmental control system	(1) General examinations of the following (a) to (d) are to be carried out. (a) Gas free and purging systems for cargo tanks, arrangements for compensate for normal losses and atmosphere monitoring systems. (b) Confirmation that the use of inert gas has not increased beyond that needed to compensate for normal losses by examining records of inert gas usage (c) Confirmation that any air-drying system and any interbarrier and hold space purging inert gas system are satisfactory (d) Pressure control system for associated inert gas system components, means for preventing backflow of gases and monitoring system		
	6 Fire extinguishing arrangement	(1) In addition to the general examinations for arrangements for fire protection and fire extinction specified in **Chapter 11, Part N,** general examinations and operation tests for the following are to be carried out: (a) Proper operation of the remote means of starting one main fire pump is to be confirmed. (b) The fixed fire-fighting systems for enclosed cargo machinery spaces and enclosed cargo motor rooms located within cargo areas are to be examined. (c) The water spray system for cooling, fire protection and crew protection is to be examined. (d) The dry chemical powder fire-extinguishing system for the cargo area is to be examined. (e) The appropriate fire-extinguishing systems for the enclosed cargo machinery spaces for ships that are dedicated to the carriage of a restricted number of cargoes and the internal water spray systems for the turret compartments are to be examined. (f) It is to be confirmed that means of operation for arrangements specified in (b) to (e) are clearly marked. (g) Additional firefighters' outfits provided for flammable cargoes are to be examined. (h) Alarm devices for emergency escapes are to be examined.		
	7 Personnel protection	(1) General examination of the equipment shown in (a) to (d) is to be carried out in addition to performance tests of decontamination shower and eye wash. (a) Protection equipment (b) Safety equipment (c) Stretcher and medical first-aid equipment (d) The following equipment if required by the provisions of **Part N**: i) respiratory protection for emergency escape purpose ii) decontamination showers and an eye wash iii) shelter in emergency		
	8 Stability Instrument	(1) Functional tests are to be carried out on stability instruments fitted in accordance with the requirements of **2.2.3, Part N**.		

	9 Miscellaneous	(1) The general condition of the equipment shown in **(a)** to **(p)** is to be examined. The contents of items **(j)** and **(k)** are to be checked and confirmation that they are kept on board is to be made. Regarding the arrangements for ventilation systems of spaces in the cargo area specified in **(c)**, operation tests are to be carried out. (a) Facilities associated with damage stability requirements such as cross flooding equipment and watertight doors, as far as accessible. Where it is difficult to carry out a general examination of cross flooding equipment, alternative examinations considered appropriate by the Society may be carried out instead. (b) Closing devices of windows, doors and other openings of the wheelhouse, superstructures, and deckhouses that are required to be gas/vapour-tight; and the arrangements for the air locks. (c) Arrangements for ventilation systems, including their spare fans or impellers, of enclosed spaces in the cargo area and spaces in the cargo area normally entered during cargo handling operations. (d) Fixed or portable trays or insulation that protects the deck located beneath the cargo hose connection against cargo leakage. (e) Gas-tight bulkhead penetrations including gas-tight shaft sealings, as far as accessible. (f) Heating arrangements of structural hull steel, as far as accessible. (g) Cargo hoses. (h) Bow and stern loading and unloading arrangements (in particular, the electrical equipment, firefighting arrangements and means of communication between the cargo control room and the shore location) and their related installations, emergency muster station and other equipment required for special cargoes. (i) Electrical installations in hazardous area. (j) Cargo log book, operational records and manuals related to cargo containment system and cargo handling system. (k) The IMO Code for gas carriers or the Rules incorporating the provisions of this Code (l) Cargo control room (m) Gas detection arrangements for cargo control rooms and the measures taken to exclude ignition sources where such spaces are classified as hazardous areas (n) The bilge, ballast and oil fuel arrangements specified in **3.7, Part N** (o) The wheelhouse doors and windows, sidescuttles and windows in superstructure and deckhouse ends in the cargo area (p) Cargo machinery spaces and turret compartments, including their escape routes		Wording correction

Rules for the survey and construction of steel ships Part C Part 1 Chapter 14 14.9.2.1

Correction	Present	Note
14.9.2.1 **1** The freeing port area on each side of the ship for each well on the freeboard and raised quarter decks in **14.9.1.1-1** is not to be less than that obtained from the following formulae. The area for each well on superstructure decks other than the raised quarter deck is not to be less than one-half of that obtained from the formulae. Where ℓ is not more than 20 *m* : $0.7 + 0.035\ell + a$ (m^2) Where ℓ is more than 20 *m* : $0.07\ell + a$ (m^2) ℓ : Length of bulwark (*m*). but need not be taken as greater than 0.7 L_f. a : As obtained from the following formulae. Where h is more than 1.2 *m*: : $0.04\ell(h - 1.2)$ (m^2) Where h is not more than 1.2 *m*, but not less than 0.9 *m* : 0 (m^2) Where h is less than 0.9 *m* : $-0.04\ell(0.9 - h)$ (m^2) h : Average height (*m*) of bulwarks above the deck **2** In ships either without sheer or with less sheer than the standard, the minimum freeing port area obtained from the formulae in **-1** is to be increased by multiplying with the factor obtained from the following formula: $1.5 - \frac{S}{2S_0}$ S : Average of actual sheer (*mm*) S_0 : Average of the standard sheer (*mm*) according to the requirements in **Part V** **3** Where a ship is provided with a trunk or a hatch side	14.9.2.1 **1** The freeing port area on each side of the ship for each well on the freeboard and raised quarter decks in **14.9.1-1** is not to be less than that obtained from the following formulae. The area for each well on superstructure decks other than the raised quarter deck is not to be less than one-half of that obtained from the formulae. Where ℓ is not more than 20 *m* : $0.7 + 0.035\ell + a$ (m^2) Where ℓ is more than 20 *m* : $0.07\ell + a$ (m^2) ℓ : Length of bulwark (*m*). but need not be taken as greater than 0.7 L_f. a : As obtained from the following formulae. Where h is more than 1.2 *m*: : $0.04\ell(h - 1.2)$ (m^2) Where h is not more than 1.2 *m*, but not less than 0.9 *m* : 0 (m^2) Where h is less than 0.9 *m* : $-0.04\ell(0.9 - h)$ (m^2) h : Average height (*m*) of bulwarks above the deck **2** In ships either without sheer or with less sheer than the standard, the minimum freeing port area obtained from the formulae in **-1** is to be increased by multiplying with the factor obtained from the following formula: $1.5 - \frac{S}{2S_0}$ S : Average of actual sheer (*mm*) S_0 : Average of the standard sheer (*mm*) according to the requirements in **Part V** **3** Where a ship is provided with a trunk or a hatch side	Reference correction

coaming which is continuous or substantially continuous between detached superstructures, the area of the freeing port opening is not to be less than that given by **Table 14.9.1-1**. "Where a ship is provided with a trunk or a hatch side coaming which is continuous or substantially continuous between detached superstructures" refers to the case where F_0 is not greater than F_1, and F_0 and F_1 are shown below. F_0 : Free flow area (m^2) through which water runs across the deck given by the following formula $\sum(\ell_i \cdot h_i - a_i)$ ℓ_i : Distance (m) between hatchways, and between hatchways and superstructures and deckhouse (m) h_i : Height (m) of bulwarks a_i : Projected area (m^2) of structures which prevent free flow in $\ell_i \cdot h_i$ (m^2) F_1 : As specified in ~~**14.9.2-1**~~ and **-2** (m^2) **4** Where F_0 is greater than F_1, but not greater than F_2, the freeing port area (F) is to be increased by the following formula. F_0 and F_1 are shown in ~~**(1)**~~**-3** above, and F_2 is shown below. $F = F_1 + F_2 - F_0$ (m^2) F_2 : As specified in ~~**14.9.2-3**~~ (m^2) **5** A flush-decker having an effective deckhouse is to be considered to have two wells afore and abaft the deckhouse, and each of these wells is required to have a freeing port area specified in **-1** and **-2** above. The term "effective deckhouse" means a structure having a breadth not less than 80% of the breadth of ship and the width of passageways at its sides does not exceed 1.5m. **6** Where a divisional bulkhead extending from side to side is provided at the forward end of deckhouse, the ship is to be considered to have two wells afore and abaft the bulkhead, irrespective of the breadth of deckhouse, and each	coaming which is continuous or substantially continuous between detached superstructures, the area of the freeing port opening is not to be less than that given by **Table 14.9.1-1**. "Where a ship is provided with a trunk or a hatch side coaming which is continuous or substantially continuous between detached superstructures" refers to the case where F_0 is not greater than F_1, and F_0 and F_1 are shown below. F_0 : Free flow area (m^2) through which water runs across the deck given by the following formula $\sum(\ell_i \cdot h_i - a_i)$ ℓ_i : Distance (m) between hatchways, and between hatchways and superstructures and deckhouse (m) h_i : Height (m) of bulwarks a_i : Projected area (m^2) of structures which prevent free flow in $\ell_i \cdot h_i$ (m^2) F_1 : As specified in **14.9.2-1** and **-2** (m^2) **4** Where F_0 is greater than F_1, but not greater than F_2, the freeing port area (F) is to be increased by the following formula. F_0 and F_1 are shown in **(1)** above, and F_2 is shown below. $F = F_1 + F_2 - F_0$ (m^2) F_2 : As specified in **14.9.2-3** (m^2) **5** A flush-decker having an effective deckhouse is to be considered to have two wells afore and abaft the deckhouse, and each of these wells is required to have a freeing port area specified in **-1** and **-2** above. The term "effective deckhouse" means a structure having a breadth not less than 80% of the breadth of ship and the width of passageways at its sides does not exceed 1.5m. **6** Where a divisional bulkhead extending from side to side is provided at the forward end of deckhouse, the ship is to be considered to have two wells afore and abaft the bulkhead, irrespective of the breadth of deckhouse, and each	Reference correction Reference correction Reference correction

of these wells is required to have the freeing port area specified in **-1** and **-2** above.	of these wells is required to have the freeing port area specified in **-1** and **-2** above.	
7 Notwithstanding the requirements in **-1** to **-3**, where deemed necessary by the Society in type "*A*" or "*B*-100" ships having trunks on the freeboard deck, guardrails are to be provided instead of bulwarks on the freeboard deck in way of trunks for more than half of the length of the trunk.	**7** Notwithstanding the requirements in **-1** to **-3**, where deemed necessary by the Society in type "*A*" or "*B*-100" ships having trunks on the freeboard deck, guardrails are to be provided instead of bulwarks on the freeboard deck in way of trunks for more than half of the length of the trunk.	
8 In ships complying with the requirements of **14.9.1.1-4**, the guardrails installed on more than half the length of the exposed parts of the freeboard deck may be replaced by freeing ports in the lower parts of the bulwarks, for at least 33% of the total area of bulwarks. In ships complying with the requirements of **~~-6~~7** above, the guardrails installed on half the length of trunks may be replaced by freeing ports in the lower parts of the bulwarks, for at least 33% of the total area of bulwarks.	**8** In ships complying with the requirements of **14.9.1-4**, the guardrails installed on more than half the length of the exposed parts of the freeboard deck may be replaced by freeing ports in the lower parts of the bulwarks, for at least 33% of the total area of bulwarks. In ships complying with the requirements of **-6** above, the guardrails installed on half the length of trunks may be replaced by freeing ports in the lower parts of the bulwarks, for at least 33% of the total area of bulwarks.	Reference correction Reference correction
9 In type "*B* -60" ships, freeing ports in the lower parts of bulwarks are to have an area not less than 25% of the total area of bulwarks.	**9** In type "*B* -60" ships, freeing ports in the lower parts of bulwarks are to have an area not less than 25% of the total area of bulwarks.	
10 Where freeing ports have rails or other fixtures that reduce the area of the opening, the projected area caused by these fixtures is to be deducted from the actual freeing port area during calculations.	**10** Where freeing ports have rails or other fixtures that reduce the area of the opening, the projected area caused by these fixtures is to be deducted from the actual freeing port area during calculations.	
11 Where a recess in the side shell or superstructure of a pure car carrier or similar ship forms a well, adequate freeing ports are to be provided in accordance with the requirements of **~~14.9.2-~~3**.	**11** Where a recess in the side shell or superstructure of a pure car carrier or similar ship forms a well, adequate freeing ports are to be provided in accordance with the requirements of **14.9.2-3**.	Reference correction

Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 8 Table 8.1.1-1

Correction

Table 8.1.1-1 Overview of Chapter 8

Section	Title	Overview
8.1	General	Additional requirements related to the overview and application of this Chapter
8.2	Evaluation Area and Members to be Assessed	Additional requirements related to the evaluation area and members to be assessed
8.3	Structural Models	Additional requirements related to extent of model, members to be modelled, meshing, etc.
8.4	Considerations for Corrosion	Additional requirements related to the net scantling approach
8.5	Boundary Conditions and ~~Loads~~Load Conditions	Additional requirements related to the boundary conditions and ~~loads~~load conditions
8.6	Strength Assessment	Additional requirements for buckling strength assessment

Present

Table 8.1.1-1 Overview of Chapter 8

Section	Title	Overview
8.1	General	Additional requirements related to the overview and application of this Chapter
8.2	Evaluation Area and Members to be Assessed	Additional requirements related to the evaluation area and members to be assessed
8.3	Structural Models	Additional requirements related to extent of model, members to be modelled, meshing, etc.
8.4	Considerations for Corrosion	Additional requirements related to the net scantling approach
8.5	Boundary Conditions and Loads Conditions	Additional requirements related to the boundary conditions and loads conditions
8.6	Strength Assessment	Additional requirements for buckling strength assessment

Note

Wording correction

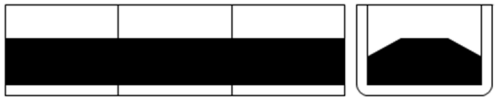
Rules for the survey and construction of steel ships Part C Part 2-1 Chapter 8 8.5

Correction	Present	Note
8.5 Boundary Conditions and ~~Loads~~Load Conditions	**8.5 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-2 Chapter 4 Table 4.5.2-1

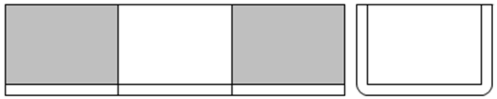
Correction

Table 4.5.2-1 Loading Conditions to be Considered in Maximum Load Condition

Loading condition	Loading pattern		Draught	Vertical still water bending moment M_{SV}	Equivalent design wave
Full load condition (homogeneously loaded)	*S*1		T_{SC}	$0.5M_{SV\_min}$ (7)	*HM*-1 *FM*-1 *BP*-1*P*/*S* *BR*-1*P*/*S*
	*S*2		T_{SC}	$0.5M_{SV\_min}$ (7)	*HM*-1 *FM*-1 *BP*-1*P*/*S* *BR*-1*P*/*S*
Full load condition (alternate loading, block loading)	*S*3		T_{SC}	M_{SV_max}	*HM*-2 *FM*-2 *BP*-1*P*/*S* *BR*-1*P*/*S*
	*S*4(2)		T_{SC}	M_{SV_max}	*HM*-2 *FM*-2 *BP*-1*P*/*S* *BR*-1*P*/*S*
	*S*5		T_{SC}	0	*HM*-1 *FM*-1
	*S*6		T_{SC}	M_{SV_max} (8)	*HM*-2 *FM*-2

Present

Note

					M_{SV_min}[9]	*HM*-1 *FM*-1	
Ballast condition	*S*7			T_{BAL}	M_{SV_max}[8]	*HM*-2 *FM*-2 *BP*-1*P*/*S* *BR*-1*P*/*S*	
	*S*8[3]			T_{BAL-H}	M_{SV_min}[9]	*HM*-1 *FM*-1 *BP*-1*P*/*S* *BR*-1*P*/*S*	
Condition loaded/unloaded in multiple ports[1]	*S*9			T_{m1_min}[5]	M_{SV_min}[8~~2~~]	*HM*-1 *FM*-1 *BP*-1*P*/*S* *BR*-1*P*/*S*	Reference correction
	*S*10[4]			T_{m2_max}[6]	M_{SV_max}[9~~8~~]	*HM*-2 *FM*-2 *BP*-1*P*/*S* *BR*-1*P*/*S*	Reference correction

: Dry bulk cargo (mass in homogeneous full load condition:/the other conditions: M_{Full}, mass of alternate loading condition: M_{HD})
: Cargo with high density cargo (mass of homogeneous full load condition:/other condition: M_H, mass of alternate loading: M_{HD})
: Ballast water

(1) The radius of gyration (m) around the X-axis is taken to be $0.38B$. However, the value calculated based on the weight distribution according to the loading condition to be considered can be used.
(2) When conducting a strength assessment while taking the loading condition *S*3 into consideration, *BR*-1*P*/*S* and *BP*-1*P*/*S* wave conditions may be omitted.
(3) Limited to strength assessment of ballast cargo hold.
(4) When conducting a strength assessment while taking the loading condition *S*3 into consideration, this loading condition may be omitted.
(5) The minimum draught designed (m) for loading conditions corresponding to the loading condition *S*9 of the multi-port

	loading/unloading described in the loading manual. (6) The maximum draught designed (m) for loading conditions corresponding to the loading condition $S10$ of the multi-port loading/unloading described in the loading manual. (7) If the vertical still water bending moment is less than $0.5M_{SV\_min}$ in loading conditions $S1$ and $S2$, said moment is to be taken into consideration. (8) In the loading condition to be considered, instead of M_{SV_max}, the maximum vertical still water bending moment that occurs after considering all possible physical combinations, such as fully loaded or empty consumable tank, can be used. (9) In the loading condition to be considered, instead of M_{SV_min}, the minimum vertical still water bending moment that occurs after considering all possible physical combinations, such as fully loaded or empty consumable tank, can be used.		

Rules for the survey and construction of steel ships Part C Part 2-2 Chapter 8 Table 8.1.1-1

Correction

Table 8.1.1-1 Overview of Chapter 8

Section	Title	Overview
8.1	General	Additional requirements related to the overview and application of this Chapter
8.2	Evaluation Area and Members to be Assessed	Additional requirements related to the evaluation area and the members to be assessed
8.3	Structural Models	Additional requirements related to the structural model
8.4	Boundary Conditions and ~~Loads~~Load Conditions	Additional requirements related to the boundary conditions and ~~loads~~load conditions
8.5	Strength Assessment	Additional requirements for buckling strength assessment

Present

Table 8.1.1-1 Overview of Chapter 8

Section	Title	Overview
8.1	General	Additional requirements related to the overview and application of this Chapter
8.2	Evaluation Area and Members to be Assessed	Additional requirements related to the evaluation area and the members to be assessed
8.3	Structural Models	Additional requirements related to the structural model
8.4	Boundary Conditions and Loads Conditions	Additional requirements related to the boundary conditions and loads conditions
8.5	Strength Assessment	Additional requirements for buckling strength assessment

Note: Wording correction

Rules for the survey and construction of steel ships Part C Part 2-2 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-3 Chapter 8 Table 8.1.1-1

<table>
<tr><th>Correction</th><th>Present</th><th>Note</th></tr>
<tr><td colspan="2">Table 8.1.1-1 Overview of Chapter 8
<table>
<tr><th>Section</th><th>Title</th><th>Overview</th></tr>
<tr><td>8.1</td><td>General</td><td>Additional requirements related to the overview and application of this Chapter</td></tr>
<tr><td>8.2</td><td>Evaluation Area and Members to be Assessed</td><td>Additional requirements related to the evaluation areas and members to be assessed</td></tr>
<tr><td>8.3</td><td>Structural Models</td><td>Additional requirements related to extent of model, members to be modelled, meshing, etc.</td></tr>
<tr><td>8.4</td><td>Boundary Conditions and ~~Loads~~Load Conditions</td><td>Additional requirements related to the boundary conditions and ~~loads~~load conditions</td></tr>
<tr><td>8.5</td><td>Strength Assessment</td><td>Additional requirements for buckling strength assessment</td></tr>
</table></td><td>Wording correction</td></tr>
</table>

Rules for the survey and construction of steel ships Part C Part 2-3 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-3 Chapter 8 8.4.2

Correction	Present	Note
8.4.2 ~~Loads Condition~~Load Conditions	**8.4.2 Loads Condition**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-4 Chapter 8 Table 8.1.1-1

<table>
<tr><th>Correction</th><th>Present</th><th>Note</th></tr>
<tr><td colspan="2">Table 8.1.1-1 Overview of Chapter 8
<table>
<tr><th>Section</th><th>Title</th><th>Overview</th></tr>
<tr><td>8.1</td><td>General</td><td>Additional requirements related to the overview and application of this Chapter</td></tr>
<tr><td>8.2</td><td>Evaluation Area and Members to be Assessed</td><td>Additional requirements related to the evaluation area and members to be assessed</td></tr>
<tr><td>8.3</td><td>Structural Models</td><td>Additional requirements related to the modelling range, modelling members, meshing, etc.</td></tr>
<tr><td>8.4</td><td>Boundary Conditions and ~~Loads~~Load Conditions</td><td>Additional requirements related to the boundary conditions and load conditions</td></tr>
<tr><td>8.5</td><td>Strength Assessment</td><td>Additional requirements for buckling strength assessment</td></tr>
</table></td><td>Wording correction</td></tr>
</table>

Rules for the survey and construction of steel ships Part C Part 2-4 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-4 Chapter 8 8.4.2

Correction	Present	Note
8.4.2 ~~Loads Condition~~Load Conditions	**8.4.2 Loads Condition**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-6 Chapter 8 8.4.2

Correction	Present	Note
8.4.2 Boundary Conditions and ~~Loads~~Load Conditions	**8.4.2 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-6 Chapter 8 8.4.2.3

Correction	Present	Note
8.4.2.3 ~~Loads~~Load Conditions **1** Loads based on **4.4** are to be considered. When analysing the lateral load applied, the external pressure, internal pressure, weight of hull structure, etc. specified in **4.4.2.3**, **4.4.2.4** and **4.4.2.5** are to be considered. When analysing the vertical bending moment applied, the vertical bending moment specified in **4.4.2.6** is to be considered. **2** For external pressure, and internal pressure due to liquid, a constant pressure calculated at the element's centroid is to be applied to the shell element of the loaded surface (e.g. outer shell for external pressure and tank or cargo hold boundaries for internal pressure). **3** The weight of the cargo loaded onto the car deck is to be assumed to be evenly distributed across the deck and given as the distributed load for the car deck. **4** When cargo is loaded onto a movable deck, the dead weight of the movable car deck and the cargo weight shared across each panel are to be given as the nodal load at the movable deck support point. **5** When a movable deck is stored, the weight of the movable car deck is to be given as the nodal load to the panel storage point. **6** When analysing the vertical bending moment applied, the method applying unit moments is to be used as standard. The stresses corresponding to the moments specified in **4.4.2.6**	**8.4.2.3 Loads Conditions** **1** Loads based on **4.4** are to be considered. When analysing the lateral load applied, the external pressure, internal pressure, weight of hull structure, etc. specified in **4.4.2.3**, **4.4.2.4** and **4.4.2.5** are to be considered. When analysing the vertical bending moment applied, the vertical bending moment specified in **4.4.2.6** is to be considered. **2** For external pressure, and internal pressure due to liquid, a constant pressure calculated at the element's centroid is to be applied to the shell element of the loaded surface (e.g. outer shell for external pressure and tank or cargo hold boundaries for internal pressure). **3** The weight of the cargo loaded onto the car deck is to be assumed to be evenly distributed across the deck and given as the distributed load for the car deck. **4** When cargo is loaded onto a movable deck, the dead weight of the movable car deck and the cargo weight shared across each panel are to be given as the nodal load at the movable deck support point. **5** When a movable deck is stored, the weight of the movable car deck is to be given as the nodal load to the panel storage point. **6** When analysing the vertical bending moment applied, the method applying unit moments is to be used as standard. The stresses corresponding to the moments specified in **4.4.2.6**	Wording correction

are to be calculated based on the stresses obtained through structural analysis with unit moments applied. **7** When analysing the vertical bending moment applied, the weight of the hull structure and other factors are not to be considered.	are to be calculated based on the stresses obtained through structural analysis with unit moments applied. **7** When analysing the vertical bending moment applied, the weight of the hull structure and other factors are not to be considered.	

Rules for the survey and construction of steel ships Part C Part 2-6 Chapter 8 8.5.2

Correction	Present	Note
8.5.2 Boundary Conditions and ~~Loads~~Load Conditions	**8.5.2 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-6 Chapter 8 8.5.2.2

Correction	Present	Note
8.5.2.2 ~~Loads~~Load Conditions **1** Loads specified in **4.5** are to be considered. **2** For external pressure, and internal pressure due to liquid, a constant pressure calculated at the element's centroid is to be applied to the shell element of the loaded surface (e.g. outer shell for external pressure and tank or cargo hold boundaries for internal pressure). **3** The weight of the cargo loaded onto the car deck is to be assumed to be evenly distributed across the deck and given as the distributed load for the car deck. **4** When cargo is loaded onto a movable deck, the weight of the movable car deck and the cargo weight shared across each panel are to be given as the nodal load at the movable deck support point. **5** When a movable deck is stored, the weight of the movable car deck is to be given as the nodal load to the panel storage point.	**8.5.2.2 Loads Conditions** **1** Loads specified in **4.5** are to be considered. **2** For external pressure, and internal pressure due to liquid, a constant pressure calculated at the element's centroid is to be applied to the shell element of the loaded surface (e.g. outer shell for external pressure and tank or cargo hold boundaries for internal pressure). **3** The weight of the cargo loaded onto the car deck is to be assumed to be evenly distributed across the deck and given as the distributed load for the car deck. **4** When cargo is loaded onto a movable deck, the weight of the movable car deck and the cargo weight shared across each panel are to be given as the nodal load at the movable deck support point. **5** When a movable deck is stored, the weight of the movable car deck is to be given as the nodal load to the panel storage point.	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-7 Chapter 8 Table 8.1.1-1

<table>
<tr><th>Correction</th><th>Present</th><th>Note</th></tr>
<tr><td colspan="2">Table 8.1.1-1 Overview of Chapter 8
<table>
<tr><th>Section</th><th>Title</th><th>Overview</th></tr>
<tr><td>8.1</td><td>General</td><td>Additional requirements related to the overview and application of this Chapter</td></tr>
<tr><td>8.2</td><td>Evaluation Area and Members to be Assessed</td><td>Additional requirements related to evaluation area and members to be assessed</td></tr>
<tr><td>8.3</td><td>Structural Models</td><td>Additional requirements related to extent of model, members to be modelled, meshing, etc.</td></tr>
<tr><td>8.4</td><td>Boundary Conditions and ~~Loads~~Load Conditions</td><td>Additional requirements related to boundary conditions and ~~loads~~load conditions</td></tr>
<tr><td>8.5</td><td>Strength Assessments</td><td>Additional requirements related to yield strength assessments</td></tr>
</table></td><td>Wording correction</td></tr>
</table>

Rules for the survey and construction of steel ships Part C Part 2-7 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-7 Chapter 8 8.4.2

Correction	Present	Note
8.4.2 ~~Loads~~Load Conditions	**8.4.2 Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-8 Chapter 8 Table 8.1.1-1

<table>
<tr><th>Correction</th><th>Present</th><th>Note</th></tr>
<tr><td colspan="2">Table 8.1.1-1 Overview of Chapter 8
<table>
<tr><th>Section</th><th>Title</th><th>Overview</th></tr>
<tr><td>8.1</td><td>General</td><td>Additional requirements related to the overview and application of this Chapter</td></tr>
<tr><td>8.2</td><td>Evaluation Area and Members to be Assessed</td><td>Additional requirements related to evaluation area and members to be assessed</td></tr>
<tr><td>8.3</td><td>Structural Models</td><td>Additional requirements related to extent of model, members to be modelled, meshing, etc.</td></tr>
<tr><td>8.4</td><td>Boundary Conditions and ~~Loads~~Load Conditions</td><td>Additional requirements related to the boundary conditions and ~~loads~~load conditions</td></tr>
</table></td><td>Wording correction</td></tr>
</table>

Rules for the survey and construction of steel ships Part C Part 2-8 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-8 Chapter 8 8.4.2

Correction	Present	Note
8.4.2 ~~Loads Condition~~Load Conditions	**8.4.2 Loads Condition**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-8 Chapter 8 8.4.2

Correction	Present	Note
8.4.2.2 Method of Applying ~~Loads~~Moments to the Structural Model **1** In applying **8.5.2, Part 1**, the vertical bending moment and horizontal bending moment act on the target hold are to be adjusted in accordance with the following **(1)** to **(3)** based upon the boundary conditions specified in **8.4.1.1** and the	8.4.2.2 Method of Applying Loads to the Structural Model **1** In applying **8.5.2, Part 1**, the vertical bending moment and horizontal bending moment act on the target hold are to be adjusted in accordance with the following **(1)** to **(3)** based upon the boundary conditions specified in **8.4.1.1** and the	Wording correction

value of the moment for each analysis case. (1) The maximum and minimum values of the vertical bending moment and horizontal bending moment act on the target hold due to local loads are to be calculated by the following formulae. External pressure, internal pressure and weight of the hull structure, etc., are considered as the local loads $M_{V-Max} = \max\left(M_{V-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ $M_{V-Min} = \min\left(M_{V-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ $M_{H-Max} = \max\left(M_{H-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ $M_{H-Min} = \min\left(M_{H-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ Where: x_{th-a}, x_{th-f}: X coordinate (m) of the aft and fore ends of the target hold $M_{V-FEM}(x)$: Vertical bending moment (kN-m) due to local loads at any position x, to be taken as follows: $M_{V-FEM}(x) = -\left(x - x_{aft}\right)R_{V-aft} - \sum_{x_i<x} (x - x_i)f_{vi}$ $M_{H-FEM}(x) = \left(x - x_{aft}\right)R_{H-aft} + \sum_{i} (x - x_i)f_{hi}$ x: X coordinate (m) of position x x_{aft}, x_{fore}: X coordinate (m) of the aft and fore ends of the structural model R_{V-fore}, R_{V-aft}, R_{H-fore}, R_{H-aft}: Vertical and horizontal reaction forces (kN) at the support points at the fore and aft ends of	value of the moment for each analysis case. (1) The maximum and minimum values of the vertical bending moment and horizontal bending moment act on the target hold due to local loads are to be calculated by the following formulae. External pressure, internal pressure and weight of the hull structure, etc., are considered as the local loads $M_{V-Max} = \max\left(M_{V-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ $M_{V-Min} = \min\left(M_{V-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ $M_{H-Max} = \max\left(M_{H-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ $M_{H-Min} = \min\left(M_{H-FEM}(x) \middle| x_{th-a} \le x \le x_{th-f}\right)$ Where: x_{th-a}, x_{th-f}: X coordinate (m) of the aft and fore ends of the target hold $M_{V-FEM}(x)$: Vertical bending moment (kN-m) due to local loads at any position x, to be taken as follows: $M_{V-FEM}(x) = -\left(x - x_{aft}\right)R_{V-aft} - \sum_{x_i<x} (x - x_i)f_{vi}$ $M_{H-FEM}(x) = \left(x - x_{aft}\right)R_{H-aft} + \sum_{i} (x - x_i)f_{hi}$ x: X coordinate (m) of position x x_{aft}, x_{fore}: X coordinate (m) of the aft and fore ends of the structural model R_{V-fore}, R_{V-aft}, R_{H-fore}, R_{H-aft}: Vertical and horizontal reaction forces (kN) at the support points at the fore and aft ends of	

the model, to be taken as follows: $R_{V-fore} = -\frac{\sum_i (x_i - x_{aft}) f_{vi}}{x_{fore} - x_{aft}}$ $R_{V-aft} = -\sum_i f_{vi} - R_{V-fore}$ $R_{H-fore} = -\frac{\sum_i (x_i - x_{aft}) f_{hi}}{x_{fore} - x_{aft}}$ $R_{H-aft} = -\sum_i f_{hi} - R_{H-fore}$ f_{vi}, f_{hi}: Vertical and horizontal components of the local loads at x_i (*kN*) x_i: *X* coordinate (*m*) of the considered longitudinal station x_i. (2) The adjustment vertical bending moment M_{V-end} and adjustment horizontal bending moment M_{H-end} (*kN-m*) are obtained by the following formulae: $M_{V-end} = M_{V-targ} - M_{V-max}$, for $M_{V-targ} \geq 0$ $M_{V-end} = M_{V-targ} - M_{V-min}$, for $M_{V-targ} < 0$ $M_{H-end} = M_{H-targ} - M_{H-max}$, for $M_{H-targ} \geq 0$ $M_{H-end} = M_{H-targ} - M_{H-min}$, for $M_{H-targ} < 0$ M_{V-targ}, M_{H-targ}: The maximum or minimum value in the target hold of the vertical bending moment and horizontal bending moment (*kN-m*) specified in **Table 8.4.2-1** (3) The adjustment moments M_{V-end} and M_{H-end} obtained from **(2)** above are to be applied to the independent points at the fore and aft ends of the model.	the model, to be taken as follows: $R_{V-fore} = -\frac{\sum_i (x_i - x_{aft}) f_{vi}}{x_{fore} - x_{aft}}$ $R_{V-aft} = -\sum_i f_{vi} - R_{V-fore}$ $R_{H-fore} = -\frac{\sum_i (x_i - x_{aft}) f_{hi}}{x_{fore} - x_{aft}}$ $R_{H-aft} = -\sum_i f_{hi} - R_{H-fore}$ f_{vi}, f_{hi}: Vertical and horizontal components of the local loads at x_i (*kN*) x_i: *X* coordinate (*m*) of the considered longitudinal station x_i. (2) The adjustment vertical bending moment M_{V-end} and adjustment horizontal bending moment M_{H-end} (*kN-m*) are obtained by the following formulae: $M_{V-end} = M_{V-targ} - M_{V-max}$, for $M_{V-targ} \geq 0$ $M_{V-end} = M_{V-targ} - M_{V-min}$, for $M_{V-targ} < 0$ $M_{H-end} = M_{H-targ} - M_{H-max}$, for $M_{H-targ} \geq 0$ $M_{H-end} = M_{H-targ} - M_{H-min}$, for $M_{H-targ} < 0$ M_{V-targ}, M_{H-targ}: The maximum or minimum value in the target hold of the vertical bending moment and horizontal bending moment (*kN-m*) specified in **Table 8.4.2-1** (3) The adjustment moments M_{V-end} and M_{H-end} obtained from **(2)** above are to be applied to the independent points at the fore and aft ends of the model.	

Rules for the survey and construction of steel ships Part C Part 2-9 Chapter 8 Table 8.1.1-1

Correction

Table 8.1.1-1 Overview of Chapter 8

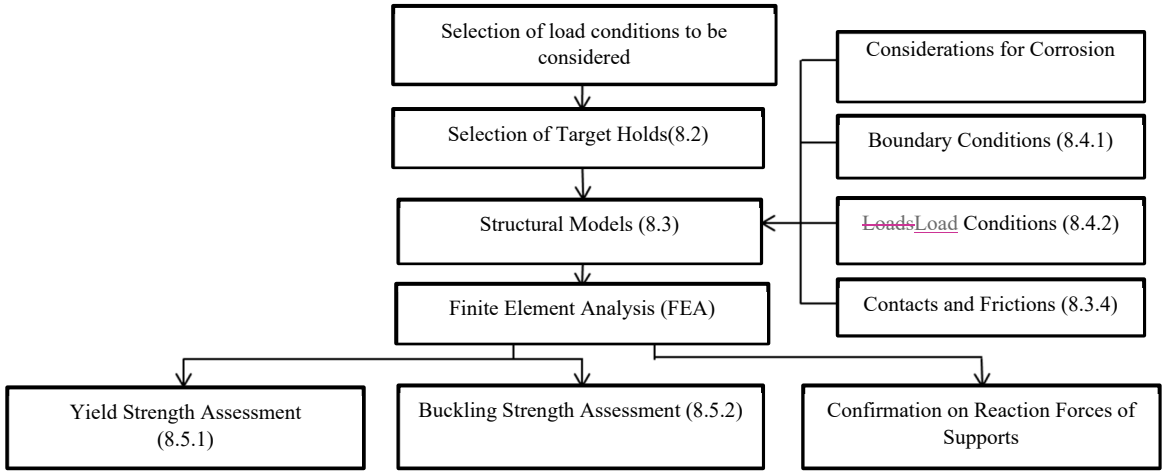
Section	Title	Overview
8.1	General	Additional requirements related to the overview and application of this Chapter
8.2	Evaluation Area and Members to be Assessed	Additional requirements related to evaluation area and members to be assessed
8.3	Structural Models	Additional requirements related to extent of model, members to be modelled, meshing, etc.
8.4	Boundary Conditions and Load Conditions	Additional requirements related to the boundary conditions and ~~loads~~load conditions
8.5	Strength Assessment	Strength assessment criteria for the primary supporting structures of the hull and cargo tank structures
8.6	Strength Assessment by Local Structural Analysis	The strength assessment method and criteria for the supporting structure and others

Present

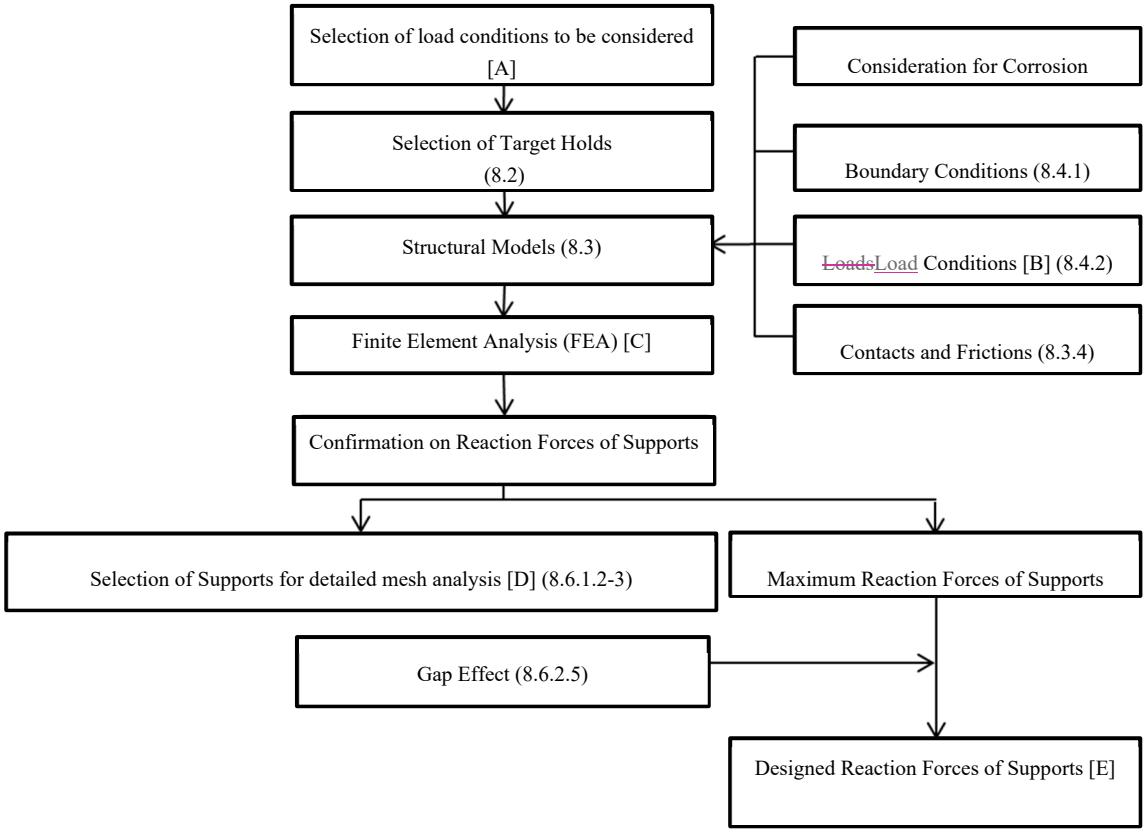
Note

Wording correction

Rules for the survey and construction of steel ships Part C Part 2-9 Chapter 8 Table 8.1.1-1

Correction	Present	Note
Fig. 8.1.1-1 Strength Assessment Flowchart of Primary Supporting Structures of Hull and Cargo Tank Structures  Note: Numbers in parentheses indicate section numbers in Part 2-9. See also Chapter 8, Part 1 (Fig. 8.1.1-1).		Wording correction

Rules for the survey and construction of steel ships Part C Part 2-9 Chapter 8 Table 8.1.1-2

Correction	Present	Note
Fig. 8.1.1-2 Strength Assessment Flowchart of Supporting Structures of Tanks  Note: Numbers parentheses indicate section number in Part 2-9. The symbols in [ ] correspond to the symbols shown in the Fig. 8.6.1-1. See also Chapter 8, Part 1 (Fig. 8.1.1-1).		Wording correction

Rules for the survey and construction of steel ships Part C Part 2-9 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-9 Chapter 8 8.6.4

Correction	Present	Note
8.6.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.6.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-9 Chapter 8 8.6.4.2

Correction	Present	Note
8.6.4.2 ~~Loads~~Load Conditions **1** Loading conditions and wave conditions specified in **4.3** are to be taken into consideration. When performing an analysis using only a local model, the loads (external pressure and internal pressure) acting on the structure reproduced in the model are to be appropriately applied. **2** The load on the contact surface of a support is to be in accordance with the requirements of **8.6.2.5**. **3** In various supports and their peripheral structures, analysis corresponding to the following Case A or B is to be carried out for each loading condition in accordance with **Table 8.6.4-1**. However, regarding the state and combination of the reaction force and friction force of a support, a detailed study can be conducted in consideration of the support arrangement and the symmetry of the supporting structure, and where deemed appropriate by the Society, part or all of Case B may be omitted. Case A: An integrated model consisting of a hull structure and a cargo tank structure in an analysis case that considers the magnitude	**8.6.4.2 Loads Conditions** **1** Loading conditions and wave conditions specified in **4.3** are to be taken into consideration. When performing an analysis using only a local model, the loads (external pressure and internal pressure) acting on the structure reproduced in the model are to be appropriately applied. **2** The load on the contact surface of a support is to be in accordance with the requirements of **8.6.2.5**. **3** In various supports and their peripheral structures, analysis corresponding to the following Case A or B is to be carried out for each loading condition in accordance with **Table 8.6.4-1**. However, regarding the state and combination of the reaction force and friction force of a support, a detailed study can be conducted in consideration of the support arrangement and the symmetry of the supporting structure, and where deemed appropriate by the Society, part or all of Case B may be omitted. Case A: An integrated model consisting of a hull structure and a cargo tank structure in an analysis case that considers the magnitude	Wording correction

(with distribution) of the reaction force generated on the contact surface and the magnitude (with distribution) and orientation of the friction force in each loading condition (*See* **Fig. 8.6.4-1**) are to be used. For the loads of various supports in this case, refer to **Table 8.6.4-2**. Case B: Models of hull structure and cargo tank structure (*See* **Fig. 8.6.4-2**) are used in the analysis case considering the reaction force (equal distribution) generated on the contact surface and the friction force (equal distribution) in a specified direction. For the loads of various supports in this case, refer to **Table 8.6.4-3**.	(with distribution) of the reaction force generated on the contact surface and the magnitude (with distribution) and orientation of the friction force in each loading condition (*See* **Fig. 8.6.4-1**) are to be used. For the loads of various supports in this case, refer to **Table 8.6.4-2**. Case B: Models of hull structure and cargo tank structure (*See* **Fig. 8.6.4-2**) are used in the analysis case considering the reaction force (equal distribution) generated on the contact surface and the friction force (equal distribution) in a specified direction. For the loads of various supports in this case, refer to **Table 8.6.4-3**.	

Rules for the survey and construction of steel ships Part C Part 2-10 Chapter 8 Table 8.1.1-1

Correction

Table 8.1.1-1 Overview of Chapter 8

Section	Titles	Abstracts
8.1	General	Requirements related to the overview and application of this chapter
8.2	Evaluation Areas and Members to be Assessed	Additional requirements related to evaluation area and members to be assessed
8.3	Structural Models	Additional requirements related to structural models
8.4	Boundary Conditions and ~~Loads~~Load Conditions	Additional requirements related to the boundary conditions and ~~loads~~load conditions
8.5	Strength Assessment	Additional requirements related to strength criteria

Present

Table 8.1.1-1 Overview of Chapter 8

Section	Titles	Abstracts
8.1	General	Requirements related to the overview and application of this chapter
8.2	Evaluation Areas and Members to be Assessed	Additional requirements related to evaluation area and members to be assessed
8.3	Structural Models	Additional requirements related to structural models
8.4	Boundary Conditions and Loads Conditions	Additional requirements related to the boundary conditions and loads conditions
8.5	Strength Assessment	Additional requirements related to strength criteria

Note

Wording correction

Rules for the survey and construction of steel ships Part C Part 2-11 Chapter 8 Table 8.1.1-1

<table>
<tr><th>Correction</th><th>Present</th><th>Note</th></tr>
<tr>
<td>Table 8.1.1-1 Overview of Chapter 8
<table>
<tr><th>Section</th><th>Title</th><th>Overview</th></tr>
<tr><td>8.1</td><td>General</td><td>Additional requirements related to the overview and application of this Chapter</td></tr>
<tr><td>8.2</td><td>Evaluation Areas and Members to be Assessed</td><td>Additional requirements related to evaluation area and members to be assessed</td></tr>
<tr><td>8.3</td><td>Structural Models</td><td>Additional requirements related to extent of model, members to be modelled, meshing, etc.</td></tr>
<tr><td>8.4</td><td>Boundary Conditions and ~~Loads~~Load Conditions</td><td>Additional requirements related to the boundary conditions and ~~loads~~load conditions</td></tr>
<tr><td>8.5</td><td>Strength Assessment</td><td>Additional requirements related to strength assessment</td></tr>
</table>
</td>
<td>Table 8.1.1-1 Overview of Chapter 8
<table>
<tr><th>Section</th><th>Title</th><th>Overview</th></tr>
<tr><td>8.1</td><td>General</td><td>Additional requirements related to the overview and application of this Chapter</td></tr>
<tr><td>8.2</td><td>Evaluation Areas and Members to be Assessed</td><td>Additional requirements related to evaluation area and members to be assessed</td></tr>
<tr><td>8.3</td><td>Structural Models</td><td>Additional requirements related to extent of model, members to be modelled, meshing, etc.</td></tr>
<tr><td>8.4</td><td>Boundary Conditions and Loads Conditions</td><td>Additional requirements related to the boundary conditions and loads conditions</td></tr>
<tr><td>8.5</td><td>Strength Assessment</td><td>Additional requirements related to strength assessment</td></tr>
</table>
</td>
<td>Wording correction</td>
</tr>
</table>

Rules for the survey and construction of steel ships Part C Part 2-11 Chapter 8 8.4

Correction	Present	Note
8.4 Boundary Conditions and ~~Loads~~Load Conditions	**8.4 Boundary Conditions and Loads Conditions**	Wording correction

Rules for the survey and construction of steel ships Part C Part 2-11 Chapter 8 8.4.2

Correction	Present	Notedg9k.
8.4.2 ~~Loads Condition~~Load Conditions	**8.4.2 Loads Condition**	Wording correction

Rules for the survey and construction of steel ships Part D Chapter 9 Table D9.2

Correction

Table D9.2 Value of Allowable Stress

Kind of material (grade)	Allowable stress (f) N/mm^2											
	250℃ or below	300 ℃	350 ℃	375 ℃	400 ℃	425 ℃	450 ℃	475 ℃	500 ℃	525 ℃	550 ℃	575 ℃
Rolled steel plate for boilers												
*KP*42	110	104	103	96	88	76	57	39	-	-	-	-
*KP*46	122	117	113	106	95	80	58	39	-	-	-	-
*KP*49	124	122	121	114	102	84	58	39	-	-	-	-
*KPA*46	122	117	113	113	113	108	101	90	69	48	-	-
*KPA*49	124	122	121	121	121	117	106	91	69	48	-	-
Steel headers												
*KBH*1	105	104	103	97	88	76	57	39	-	-	-	-
*KBH*2	117	115	113	106	95	80	58	39	-	-	-	-
*KBH*3	102	99	96	96	96	93	91	87	67	-	-	-
*KBH*4	106	104	103	103	103	102	98	92	74	-	-	-
*KBH*5	106	104	103	103	103	102	98	92	81	64	-	-
*KBH*6	106	104	103	103	103	102	98	92	81	64	-	-
Steel tubes for boilers												
*KSTB*33	86	84	81	78	74	~~66~~ -	-	-	-	-	-	-
*KSTB*35	88	87	86	82	76	~~76~~66	53	-				
*KSTB*42	113	104	103	97	88	~~94~~76	57	-	-	-	-	-
*KSTB*12	102	99	96	96	96	~~102~~94	91	87	69	-	-	-
*KSTB*22	106	104	103	103	103	102	98	92	81	64	44	-
*KSTB*23	106	104	103	103	103	102	98	92	81	64	47	34
*KSTB*24	106	104	103	103	103	102	98	92	81	64	48	36
Forged steel (*see* **Part K**)	1/4 of the specified tensile strength of the material (where used at 350℃ or below)											
Cast steel (*see* **Part K**)	1/5 of the specified tensile strength of the material (where used at 350℃ or below)											

Note:

In cases where the material temperature is between those given in the Table, the value of allowable stress is to be determined by interpolation.

Present

Note

Wording correction

Rules for the survey and construction of steel ships Part D Chapter 12 Table D12.2

Correction

Table D12.2　Service Limitations for Pipes according to Application

Pipe Application (Note 1)	Material		
	Copper	Copper alloy	Cast iron
Fuel oil pipes Lubricating oil pipes in machinery spaces Hydraulic oil pipes in machinery spaces Thermal oil pipes in machinery spaces Cargo oil pipes Air pipes Sounding pipes outside of sounding areas	× (Note 2)	× (Note 2)	× (Note 3)
Overflow pipes Bilge pipes Ballast pipes Drain pipes opening outboard and sanitary pipes ~~Pipes~~ below the freeboard deck Pipes used for fire fighting aboard ship Pipes in danger of rupturing leading to flooding during a fire Boiler water blow off pipes	×	×	×
Control oil pipes in machinery spaces	○	× (Note 2)	×
Compressed air pipes for the remote closing of tank suction stop valves Compressed air pipes for the remote control of auxiliaries, valves, etc. used during a fire	○	×	×

Notes:

1. Pipes used for measurements, drain pipes and vent pipes fitted to strainers and pumps, etc. are not included.
2. The portion of pipes which is inside a tank is usable.
3. Including those outside machinery spaces.

Remarks:

1○: Usable

2×: Use prohibited

Present

Note

Wording correction

Rules for Ship Recycling Part 3 Chapter 6 6.3

Correction	Present	Note
At ~~Additional~~Final Surveys, the following inspections are to be carried out: (1) Confirmation that the Part *I* of the IHM is being appropriately maintained and updated to reflect changes in ship structure and equipment. (2) Confirmation that the Parts *II* and *III* of the IHM identifies the Hazardous Materials contained in the ship structure and equipment, their location and approximate quantities. (3) Confirmation that the Ship Recycling Plan properly reflects the information contained in the IHM and contains information concerning the establishment, maintenance and monitoring of safe-for-entry and safe-for-hot-work conditions. (4) Confirmation that the Ship Recycling Facility where the ship is to be recycled holds a valid *DASR*. (5) When equipment, systems or areas previously classed as "*PHCM*" are deleted form Part *I* of the IHM, confirmation that the decision to deletion is clearly based on the belief that the equipment, system and/or area in question contain no Hazardous Materials. (6) Other inspections deemed necessary by the Society.	At Additional Surveys, the following inspections are to be carried out: (1) Confirmation that the Part *I* of the IHM is being appropriately maintained and updated to reflect changes in ship structure and equipment. (2) Confirmation that the Parts *II* and *III* of the IHM identifies the Hazardous Materials contained in the ship structure and equipment, their location and approximate quantities. (3) Confirmation that the Ship Recycling Plan properly reflects the information contained in the IHM and contains information concerning the establishment, maintenance and monitoring of safe-for-entry and safe-for-hot-work conditions. (4) Confirmation that the Ship Recycling Facility where the ship is to be recycled holds a valid *DASR*. (5) When equipment, systems or areas previously classed as "*PHCM*" are deleted form Part *I* of the IHM, confirmation that the decision to deletion is clearly based on the belief that the equipment, system and/or area in question contain no Hazardous Materials. (6) Other inspections deemed necessary by the Society.	Wording correction

Guidance for the survey and construction of steel ships Part C Part 1 Appendix C2 1.1.1(2)

Correction	Present	Note
Appendix C2 DETAIL GUIDE FOR PREPARATION OF LOADING MANUAL **1.1 Method of Calculation of Longitudinal Strength for Loading Conditions Different from Standard Loading Conditions** **1.1.1 Check Items for Longitudinal Strength** (2) Ships with one ~~or~~to four rows of longitudinal bulkhead (a) Vertical still water bending moment M_{SV} (b) Vertical still water shear force Q_{SV} (c) Vertical shear force of longitudinal bulkhead Q_{SV_L} (shear force acting on the longitudinal bulkhead taking into account the local load)	**Appendix C2 DETAIL GUIDE FOR PREPARATION OF LOADING MANUAL** **1.1 Method of Calculation of Longitudinal Strength for Loading Conditions Different from Standard Loading Conditions** **1.1.1 Check Items for Longitudinal Strength** (2) Ships with one or four rows of longitudinal bulkhead (a) Vertical still water bending moment M_{SV} (b) Vertical still water shear force Q_{SV} (c) Vertical shear force of longitudinal bulkhead Q_{SV_L} (shear force acting on the longitudinal bulkhead taking into account the local load)	Wording correction

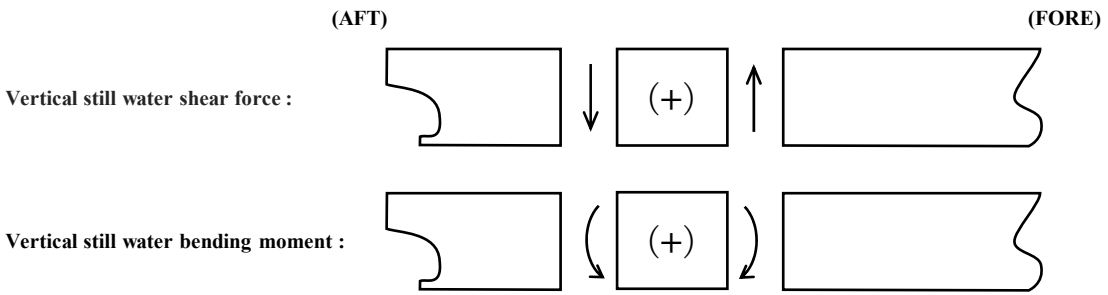
Guidance for the survey and construction of steel ships Part C Part 1 Appendix C2 1.1.5-3

Correction	Present	Note
1.1.5 Method of Calculation **3** Calculation of vertical still water shear force on longitudinal bulkheads Q_{SV_L} Calculations of vertical still water shear force to be shared by the longitudinal bulkhead for ships with one ~~or~~to four rows of longitudinal bulkheads are to be made according to the method given in **1.10**.	**1.1.5 Method of Calculation** **3** Calculation of vertical still water shear force on longitudinal bulkheads Q_{SV_L} Calculations of vertical still water shear force to be shared by the longitudinal bulkhead for ships with one or four rows of longitudinal bulkheads are to be made according to the method given in **1.10**.	Wording correction

Guidance for the survey and construction of steel ships Part C Part 1 Appendix C2 1.3

Correction	Present	Note
1.3 Descriptive Example 2 of Allowable Values for Vertical Still Water Bending Moment and Vertical Still Water Shear Force (Ships with One ~~or~~to Four Rows of Longitudinal Bulkheads)	**1.3 Descriptive Example 2 of Allowable Values for Vertical Still Water Bending Moment and Vertical Still Water Shear Force (Ships with One or Four Rows of Longitudinal Bulkheads)**	Wording correction

Guidance for the survey and construction of steel ships Part C Part 1 Appendix C2 Fig. 3

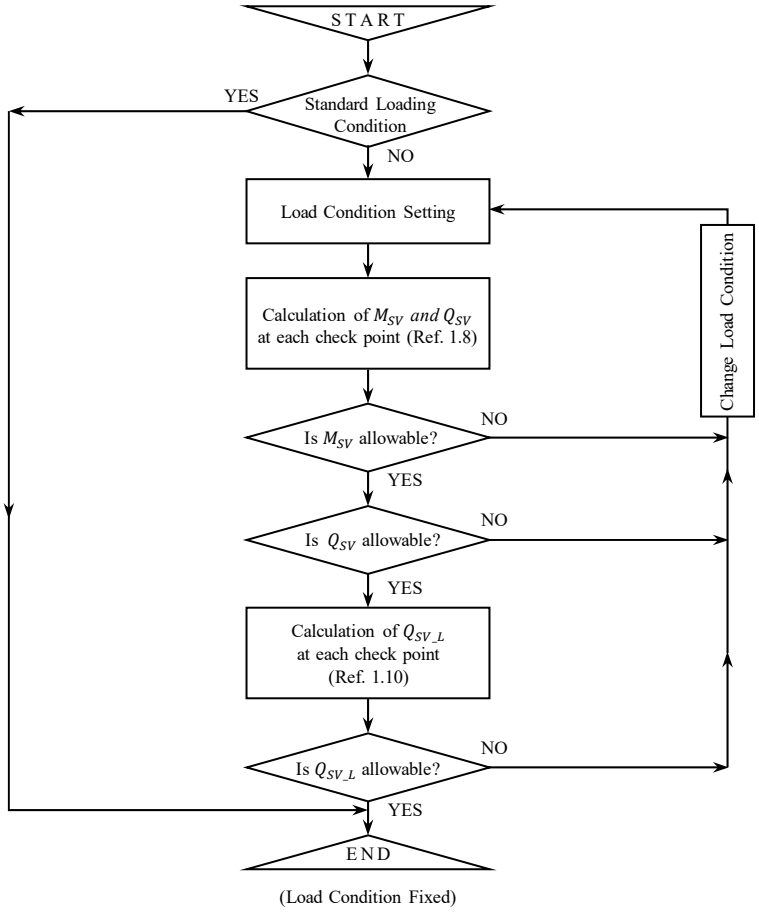
Correction	Present	Note
Fig. 3 Descriptive Example 1 of Allowable Values for Vertical Still Water Bending Moment and Vertical Still Water Shear Force (Ships with One ~~or~~to Four Rows of Longitudinal Bulkheads)  		Wording correction

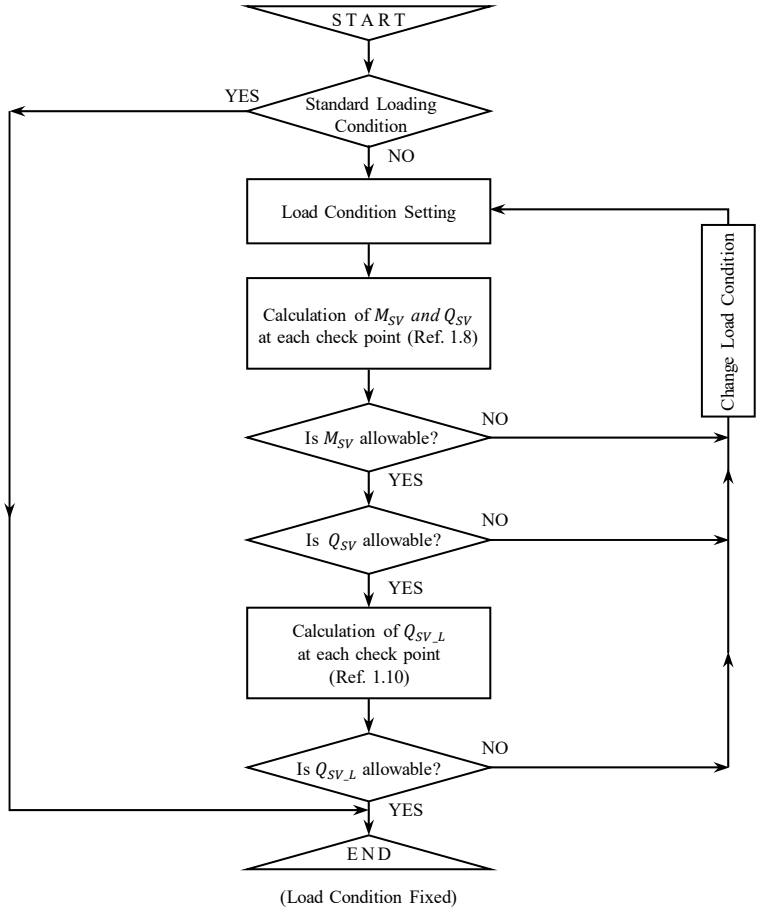
Guidance for the survey and construction of steel ships Part C Part 1 Appendix C2 1.7

Correction	Present	Note
1.7 Descriptive Example 2 on the Procedure of Calculation of Vertical Still Water Bending Moment and Vertical Still Water Shear Force (Ships with One ~~or~~to Four Rows of Longitudinal Bulkheads)	**1.7 Descriptive Example 2 on the Procedure of Calculation of Vertical Still Water Bending Moment and Vertical Still Water Shear Force (Ships with One or Four Rows of Longitudinal Bulkheads)**	Wording correction

Guidance for the survey and construction of steel ships Part C Part 1 Appendix C2 Fig. 6

Correction	Present	Note
Fig. 6 Flow Chart for Checking Longitudinal Strength (Ships with One ~~or~~to Four Rows of Longitudinal Bulkheads)	Fig. 6 Flow Chart for Checking Longitudinal Strength (Ships with One or Four Rows of Longitudinal Bulkheads)	Wording correction





Guidance for Marine Pollution Prevention Systems Part 3 Chapter 1 1.1.2-2

Correction	Present	Note
2 "Slop tanks" may be used to carry cargo oil if they are not used as ~~shop~~slop tanks.	**2** "Slop tanks" may be used to carry cargo oil if they are not used as shop tanks.	Wording correction

Guidance for Marine Pollution Prevention Systems Part 8 Chapter 2 2.1.3-3

Correction	Present	Note
3 The wording "Other information considered necessary by the Society" includes, but is not limited to, the following types of information: (1) If the engine has more than one mode of operation, details of the control guidelines for selecting the different modes of operation and recording the modes of operation, along with the method used for switching between modes. (2) Auxiliary control device (if applicable). (3) For engines fitted with selective catalytic reduction systems, the information specified in paragraph 3.2 of the Annex of *IMO* resolution *MEPC*.~~291(71~~399(83), as amended.	**3** The wording "Other information considered necessary by the Society" includes, but is not limited to, the following types of information: (1) If the engine has more than one mode of operation, details of the control guidelines for selecting the different modes of operation and recording the modes of operation, along with the method used for switching between modes. (2) Auxiliary control device (if applicable). (3) For engines fitted with selective catalytic reduction systems, the information specified in paragraph 3.2 of the Annex of *IMO* resolution *MEPC*.291(71), as amended.	Wording correction

Guidance for the Survey and Construction of Passenger Ships Annex7-1 Table 7-1-B1

<table>
<tr><th>Correction</th><th>Present</th><th>Note</th></tr>
<tr><td colspan="2">
Table 7-1-B1 Interpretations of FSS Code
<table>
<tr><td colspan="3">(Omitted)</td></tr>
<tr><td>FSS
9.2.4.2.1</td><td>Detectors shall be located <u>for optimum performance</u>*. Positions near beams and ventilation ducts, or other positions where patterns of air flow could adversely affect performance, and positions where impact or physical damage is likely, shall be avoided. Detectors shall be located on the overhead at a minimum distance of 0.5m away from bulkheads, except in corridors, lockers and stairways.</td><td>*: Installation of detectors is to be in accordance with the requirements in <s>5</s><u>29</u>.2.<s>134</s><u></u>-2, Part R of the Rules for the Survey and Construction of the Steel Ships.</td></tr>
<tr><td colspan="3">(Omitted)</td></tr>
</table>
</td><td>Wording correction</td></tr>
</table>

Guidance for Marine Engine Emission Verification Chapter 2 2.1.1-5

Correction	Present	Note
5 The wording "other information considered necessary by the Society" in **2.1.1-6(11) of the Rules** include, but are not limited to, such information as the following: (1) If the engine has more than one mode of operation (e.g., one mode to comply with the Tier II and another mode to comply with Tier III), details of the control guidelines for the selection of the different modes of operation and the recording of the modes of operation along with the method of changing between the modes. (2) The auxiliary control device (if applicable) specified in *Regulation* 2.4 of *Annex* VI (3) For engines fitted with selective catalytic reduction systems, the information specified in paragraph 3.2 of the Annex of *IMO* resolution *MEPC*.~~291(71~~399(83), as amended.	**5** The wording "other information considered necessary by the Society" in **2.1.1-6(11) of the Rules** include, but are not limited to, such information as the following: (1) If the engine has more than one mode of operation (e.g., one mode to comply with the Tier II and another mode to comply with Tier III), details of the control guidelines for the selection of the different modes of operation and the recording of the modes of operation along with the method of changing between the modes. (2) The auxiliary control device (if applicable) specified in *Regulation* 2.4 of *Annex* VI (3) For engines fitted with selective catalytic reduction systems, the information specified in paragraph 3.2 of the Annex of *IMO* resolution *MEPC*.291(71), as amended.	Wording correction

Guidance for the Approval of Materials and Equipment for Marine Use Part 8 Chapter 1 1.5.3

Correction	Present	Note
The term of validity is five *years* from the date of approval. In cases when the renewal of approval is carried out in accordance with **1.45.4**, the valid term will be 5 *years* from the next day after the expiry date of the previous validity.	The term of validity is five *years* from the date of approval. In cases when the renewal of approval is carried out in accordance with **1.4.4**, the valid term will be 5 *years* from the next day after the expiry date of the previous validity.	Wording correction

End of Document.