

Alignment of Japanese and English Versions of the Rules

Object of Amendment

Guidance for the Audit and Registration of Safety Management Systems
Rules for the Audit and Registration of Ship Security Management Systems
Rules for the Survey and Construction of Steel Ships Parts U, W, M, I and Q
Guidance for the Survey and Construction of Steel Ships Parts U, M and T
Guidance for Cargo Refrigerating Installations
Rules for Automatic and Remote Control Systems
Rules for Integrated Fire Control Systems
Rules/Guidance for the Survey and Construction of Ships of Fibreglass Reinforced Plastics
Rules for Floating Docks

Reason for Amendment

As part of the Society's comprehensive review of its Rules and Guidance, a review was conducted to identify differences between the Japanese and English versions.

Based on the results of this review, relevant requirements are amended for the purpose of achieving alignment of the Japanese and English versions of the Rules.

Outline of Amendment

The main details of this amendment are as follows:

- (1) Align the treatment of Japanese and English versions of the NK Rules and Guidance.
- (2) Revise the wording and expressions used to describe thresholds (e.g. "not exceeding" / "less than") and other matters to be in accordance with IMO instruments (such as resolutions and circulars), IACS documents (such as Unified Requirements), national regulations and inspection guidance, etc.
- (3) Amend relevant requirements as needed to more accurately reflect actual implementation practices.
- (4) Clarify relevant requirements as needed.

Effective Date and Application

Effective date of this amendment is 1 January 2027.

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

ID: DD26-13

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE AUDIT AND REGISTRATION OF SHIP SECURITY MANAGEMENT SYSTEMS Chapter 1 GENERAL PROVISIONS 1.1 General 1.1.3 Definitions* For the purposes of the Rules, the following definitions apply unless otherwise provided for: ((1) and (2) are omitted.) (3) Ship security requirements which are deemed necessary by the Society refer to the following: (a) Regulation 4, 5, <u>6</u> and 8, Chapter XI-2 of <i>SOLAS</i> (b) Section 5 through 13 of the <i>ISPS Code Part A</i> (c) Section 8 through 13 of the <i>ISPS Code Part B</i> (4) “Ship security management system” means a system built up to ensure the effective implementation and maintenance of the ship security plan, <u>including the ship security alert system.</u> ((5) to (12) are omitted.) (13) <u>“Safety Management System” means a structured and documented system which enables the personnel of the Company to implement the safety and environmental protection policy of the Company effectively.</u>	RULES FOR THE AUDIT AND REGISTRATION OF SHIP SECURITY MANAGEMENT SYSTEMS Chapter 1 GENERAL PROVISIONS 1.1 General 1.1.3 Definitions* For the purposes of the Rules, the following definitions apply unless otherwise provided for: ((1) and (2) are omitted.) (3) Ship security requirements which are deemed necessary by the Society refer to the following: (a) Regulation 4, 5 and 8, Chapter XI-2 of <i>SOLAS</i> (b) Section 5 through 13 of the <i>ISPS Code Part A</i> (c) Section 8 through 13 of the <i>ISPS Code Part B</i> (4) “Ship security management system” means a system built up to ensure the effective implementation and maintenance of the ship security plan. ((5) to (12) are omitted.) (Newly added)	(3), (4) Amends the English text to reflect actual handling. (13) Adds the definition of “Safety Management System” to be consistent with the Japanese version of the Rules.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part U INTACT STABILITY Chapter 2 STABILITY REQUIREMENTS 2.1 General 2.1.2 Calculation on Stability* Stability is to be calculated under the following conditions. (1) In preparing stability curves, the position centre of gravity is to be determined on the basis of the data obtained at inclining test required in 2.1.7-8, Part B. (2) Free surface effects of liquid in tanks are to be of what the stability during navigation under all loading condition is most severely affected. (3) Where anti-rolling devices are installed in a ship, the requirements in <u>this Chapter</u> are to be satisfied whether the devices are in operation or not. 2.3 Stability Requirements in Wind and Waves 2.3.1 Stability Curves and Wind-heeling Moment Lever Curves* 1 Stability curves and wind-heeling moment lever curves of	RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part U INTACT STABILITY Chapter 2 STABILITY REQUIREMENTS 2.1 General 2.1.2 Calculation on Stability* Stability is to be calculated under the following conditions. (1) In preparing stability curves, the position centre of gravity is to be determined on the basis of the data obtained at inclining test required in 2.1.7-8, Part B. (2) Free surface effects of liquid in tanks are to be of what the stability during navigation under all loading condition is most severely affected. (3) Where anti-rolling devices are installed in a ship, the requirements in <u>2.2</u> are to be satisfied whether the devices are in operation or not. 2.3 Stability Requirements in Wind and Waves 2.3.1 Stability Curves and Wind-heeling Moment Lever Curves* 1 Stability curves and wind-heeling moment lever curves of	2008 IS Code Part A 2.1.3. Since the requirements apply not only to the general stability requirements in 2.2, Part U but also to the stability requirements in wind and waves in 2.3, amends the reference. 2008 IS Code Part A 2.3.1.2

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
ships are to comply with the following requirements in Fig. U2.2. (1) Heeling angle caused by steady wind is to be <u>not more</u> than 16° or an angle corresponding to 80% of immersing angle of deck edge, whichever is less. ((2) is omitted.) 2 For ships loaded with timber deck cargo, notwithstanding the provisions of the preceding -1, stability curves may comply with the following requirements in Fig. U2.2 in cases where deemed acceptable by the Society. (1) θ_0 is to be <u>not more</u> than 16°. (2) Stability curves and wind-heeling moment lever curves of ships are to comply with -1(2) above.	ships are to comply with the following requirements in Fig. U2.2. (1) Heeling angle caused by steady wind is to be <u>less</u> than 16° or an angle corresponding to 80% of immersing angle of deck edge, whichever is less. ((2) is omitted.) 2 For ships loaded with timber deck cargo, notwithstanding the provisions of the preceding -1, stability curves may comply with the following requirements in Fig. U2.2 in cases where deemed acceptable by the Society. (1) θ_0 is to be <u>less</u> than 16°. (2) Stability curves and wind-heeling moment lever curves of ships are to comply with -1(2) above.	Revises the wordings to be consistent with the original text. 2008 IS Code Part A 2.3.1.2 Revises the wordings to be consistent with the original text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part W NAVIGATION BRIDGE VISIBILITY Chapter 1 GENERAL 1.1 General 1.1.4 Approval Drawings <u>The</u> following drawings are to be submitted for the approval by the Society. (1) General arrangement of the bridge (showing the conning position, bridge windows, doors, etc.) (2) Drawings showing the horizontal and vertical fields of vision from the conning position when the ship is in the condition deemed worst such as full load condition, light ballast condition, etc. (If the view from the conning position is obstructed by cargo, cargo gear or other obstructions outside of the wheelhouse, those obstructions are to be shown on the drawings)	RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part W NAVIGATION BRIDGE VISIBILITY Chapter 1 GENERAL 1.1 General 1.1.4 Approval Drawings <u>Three copies of the</u> following drawings are to be submitted for the approval by the Society. (1) General arrangement of the bridge (showing the conning position, bridge windows, doors, etc.) (2) Drawings showing the horizontal and vertical fields of vision from the conning position when the ship is in the condition deemed worst such as full load condition, light ballast condition, etc. (If the view from the conning position is obstructed by cargo, cargo gear or other obstructions outside of the wheelhouse, those obstructions are to be shown on the drawings)	Revises the wording to be consistent with the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part M WELDING Chapter 6 WELDING CONSUMABLES 6.1 General <u>6.1.9 Cancellation of approval</u> <u>For the approved welding consumables, when any of the following (1) to (3) is applicable, approval may be canceled by the Society upon notification to the manufacturer.</u> (1) <u>When the quality has substantially deteriorated or become non-uniform compared with that at the time of approval.</u> (2) <u>When the annual inspection is failed.</u> (3) <u>When the approved welding consumable is not subjected to the annual inspection.</u>	RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part M WELDING Chapter 6 WELDING CONSUMABLES 6.1 General (Newly added) (Newly added)	Adds the requirements specified in the Japanese text to the English text in order to clarify that cancellation of approval may be required by the Society regardless of the flag State.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks																																	
6.3 Automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service 6.3.4 General Provisions for Tests	6.3 Automatic Welding Consumables for Mild Steels, High Tensile Steels and Steels for Low Temperature Service 6.3.4 General Provisions for Tests	UR W17 4.3.1 Revises the threshold to be consistent with the original text.																																	
Table M6.16 Grades of Steel Used for Test Assembly																																			
<table><tr><th>Grade of welding consumable</th><th>Grade of steel used for test assembly⁽¹⁾⁽²⁾</th></tr><tr><td><i>KAW1</i></td><td><i>KA</i></td></tr><tr><td><i>KAW2</i></td><td><i>KA, KB or KD</i></td></tr><tr><td><i>KAW3</i></td><td><i>KA, KB, KD or KE</i></td></tr><tr><td><i>KAW51</i></td><td><i>KA32 or KA36</i></td></tr><tr><td><i>KAW52</i></td><td><i>KA32, KA36, KD32 or KD36</i></td></tr><tr><td><i>KAW53</i></td><td><i>KA32, KA36, KD32, KD36, KE32 or KE36</i></td></tr><tr><td><i>KAW54</i></td><td><i>KA32, KA36, KD32, KD36, KE32, KE36, KF32 or KF36</i></td></tr><tr><td><i>KAW52Y40</i></td><td><i>KA40 or KD40</i></td></tr><tr><td><i>KAW53Y40</i></td><td><i>KA40, KD40 or KE40</i></td></tr><tr><td><i>KAW54Y40, KAW55Y40</i></td><td><i>KA40, KD40, KE40 or KF40</i></td></tr><tr><td><i>KAW63Y47</i></td><td><i>KE47</i></td></tr><tr><td><i>KAWL1</i></td><td><i>KE or KL24A</i></td></tr><tr><td><i>KAWL2</i></td><td><i>KE, KL24A, KL24B, KL27 or KL33</i></td></tr><tr><td><i>KAWL3</i></td><td><i>KL27, KL33 or KL37</i></td></tr><tr><td><i>KAWL91</i></td><td><i>KL9N53 or KL9N60</i></td></tr><tr><td><i>KAWL92</i></td><td><i>KL9N53 or KL9N60</i></td></tr></table>			Grade of welding consumable	Grade of steel used for test assembly ⁽¹⁾⁽²⁾	<i>KAW1</i>	<i>KA</i>	<i>KAW2</i>	<i>KA, KB or KD</i>	<i>KAW3</i>	<i>KA, KB, KD or KE</i>	<i>KAW51</i>	<i>KA32 or KA36</i>	<i>KAW52</i>	<i>KA32, KA36, KD32 or KD36</i>	<i>KAW53</i>	<i>KA32, KA36, KD32, KD36, KE32 or KE36</i>	<i>KAW54</i>	<i>KA32, KA36, KD32, KD36, KE32, KE36, KF32 or KF36</i>	<i>KAW52Y40</i>	<i>KA40 or KD40</i>	<i>KAW53Y40</i>	<i>KA40, KD40 or KE40</i>	<i>KAW54Y40, KAW55Y40</i>	<i>KA40, KD40, KE40 or KF40</i>	<i>KAW63Y47</i>	<i>KE47</i>	<i>KAWL1</i>	<i>KE or KL24A</i>	<i>KAWL2</i>	<i>KE, KL24A, KL24B, KL27 or KL33</i>	<i>KAWL3</i>	<i>KL27, KL33 or KL37</i>	<i>KAWL91</i>	<i>KL9N53 or KL9N60</i>	<i>KAWL92</i>
Grade of welding consumable	Grade of steel used for test assembly ⁽¹⁾⁽²⁾																																		
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<i>KAW2</i>	<i>KA, KB or KD</i>																																		
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<i>KAW54</i>	<i>KA32, KA36, KD32, KD36, KE32, KE36, KF32 or KF36</i>																																		
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<i>KAW53Y40</i>	<i>KA40, KD40 or KE40</i>																																		
<i>KAW54Y40, KAW55Y40</i>	<i>KA40, KD40, KE40 or KF40</i>																																		
<i>KAW63Y47</i>	<i>KE47</i>																																		
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<i>KAWL92</i>	<i>KL9N53 or KL9N60</i>																																		
Notes: (1) Notwithstanding the requirements in this Table, mild or high tensile steels may be used for deposited metal test assembly. In this case, appropriate buttering is to be carried out for <i>KAWL91</i> and <i>KAWL92</i> . (2) The tensile strength of high tensile steels <i>KA32, KD32, KE32</i> and <i>KF32</i> used in the butt weld test assemblies is to be <u>greater than 490 N/mm² or greater</u> .																																			

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
Chapter 9 Advanced Non-Destructive Testing 9.2 Application 9.2.4 Timing 2 The timing of <i>ANDT</i> is to be in accordance with 8.1.4 when it is applied to the welds of hull structures using high tensile steels for which the minimum yield stress is 420 N/mm^2 <u>or greater</u>. 9.8 <i>ANDT</i> Requirements 9.8.3 Time of Flight Diffraction (<i>TOFD</i>) 9 Where <i>TOFD</i> is not appropriately performed in dead zones, additional scans <u>and/or</u> supplementary <i>NDT</i> is to be performed to ensure that full coverage of the locations to be tested is achieved (Generally, either surfaces, back walls, or both may be dead zones).	Chapter 9 Advanced Non-Destructive Testing 9.2 Application 9.2.4 Timing 2 The timing of <i>ANDT</i> is to be in accordance with 8.1.4 when it is applied to the welds of hull structures using high tensile steels for which the minimum yield stress is <u>more than</u> 420 N/mm^2. 9.8 <i>ANDT</i> Requirements 9.8.3 Time of Flight Diffraction (<i>TOFD</i>) 9 Where <i>TOFD</i> is not appropriately performed in dead zones, additional scans or supplementary <i>NDT</i> is to be performed to ensure that full coverage of the locations to be tested is achieved (Generally, either surfaces, back walls, or both may be dead zones).	UR W33 Revises the wording to be consistent with the original text. UR W34 Revises the wording to be consistent with the original text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part I SHIPS OPERATING IN POLAR WATERS, POLAR CLASS SHIPS AND ICE CLASS SHIPS Chapter 8 ICE CLASS SHIPS 8.3 Hull Structures and Equipment 8.3.1 Shell Plating 1 The vertical extension of the ice belt is to be as given in Table 18.6 according to the ice class and is to comply with the following requirements. (1) Fore foot For <i>IA Super</i> ice class ships with the shell plating below the ice belt from the stem to a position five main frame spaces abaft the point where the bow profile departs from the keel line is to be <u>not less than the value obtained by applying the formula in -2 used for the ice belt in the bow region.</u> However, for the frame spaces and the yield stress of the material, the values at the relevant positions are to be used. (2) Upper bow ice belt For <i>IA Super</i> and <i>IA</i> ice class ships with an open water service speed equal to or exceeding 18 <i>knots</i>, the shell plate from the upper limit of the ice belt to 2<i>m</i> above it and from the stem to a position at least 0.2<i>L</i> abaft the forward	RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part I SHIPS OPERATING IN POLAR WATERS, POLAR CLASS SHIPS AND ICE CLASS SHIPS Chapter 8 ICE CLASS SHIPS 8.3 Hull Structures and Equipment 8.3.1 Shell Plating 1 The vertical extension of the ice belt is to be as given in Table 18.6 according to the ice class and is to comply with the following requirements. (1) Fore foot For <i>IA Super</i> ice class ships with the shell plating below the ice belt from the stem to a position five main frame spaces abaft the point where the bow profile departs from the keel line is to be <u>ice-strengthened in the same way as the bow region.</u> (2) Upper bow ice belt For <i>IA Super</i> and <i>IA</i> ice class ships with an open water service speed equal to or exceeding 18 <i>knots</i>, the shell plate from the upper limit of the ice belt to 2<i>m</i> above it and from the stem to a position at least 0.2<i>L</i> abaft the forward	FSICR(2017) 4.3.1 Revises the wording to be consistent with the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
perpendicular, is to be <u>not less than the value obtained by applying the formula in -2 used for the ice belt in the midbody region. However, for the frame spaces and the yield stress of the material, the values at the relevant positions are to be used.</u> A similar strengthening of the bow region is to apply to a ship with lower service speed, when it is, <i>e.g.</i> on the basis of the model tests, evident that the ship will have a high bow wave. (3) Side scuttles are not to be situated in the ice belt. (4) If the weather deck in any part of the ship is situated below the upper limit of the ice belt, the bulwark and the construction of the freeing ports are to be given at least the same strength as is required for the shell in the ice belt.	perpendicular, is to be <u>ice-strengthened in the same way as the midbody region.</u> A similar strengthening of the bow region is to apply to a ship with lower service speed, when it is, <i>e.g.</i> on the basis of the model tests, evident that the ship will have a high bow wave. (3) Side scuttles are not to be situated in the ice belt. (4) If the weather deck in any part of the ship is situated below the upper limit of the ice belt, the bulwark and the construction of the freeing ports are to be given at least the same strength as is required for the shell in the ice belt.	

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part Q STEEL BARGES Chapter 6 PEAK CONSTRUCTION 6.3 Arrangements of Construction abaft After Peak Bulkhead 6.3.3 Other Construction Members Where the requirements of the constructions in the after peak are in accordance with the requirements of the fore peak in 6.2, the scantlings of transverses, stringers, longitudinal frames, struts and diagonals are to be <u>0.7</u> times the values specified in 6.2. Chapter 8 PILLARS AND TRUSSES 8.2 Scantlings of Pillars 8.2.1 Sectional Area of Pillars The sectional area of pillars is not to be less than obtained from the following formula: $\frac{0.223w}{\{2.72 - (l/k)\}} (cm^2)$ <i>l</i>: Length of the pillars (<i>m</i>)(See Fig.Q8.1).	RULES FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part Q STEEL BARGES Chapter 6 PEAK CONSTRUCTION 6.3 Arrangements of Construction abaft After Peak Bulkhead 6.3.3 Other Construction Members Where the requirements of the constructions in the after peak are in accordance with the requirements of the fore peak in 6.2, the scantlings of transverses, stringers, longitudinal frames, struts and diagonals are to be <u>0.67</u> times the values specified in 6.2. Chapter 8 PILLARS AND TRUSSES 8.2 Scantlings of Pillars 8.2.1 Sectional Area of Pillars The sectional area of pillars is not to be less than obtained from the following formula: $\frac{0.233w}{\{2.72 - (l/k)\}} (cm^2)$ <i>l</i>: Length of the pillars (<i>m</i>)(See Fig.Q8.1).	Revises the wording to be consistent with the requirements of Japanese version of Part Q. Revises the formula to be consistent with 11.2.1 of Part CS and the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
$k: \sqrt{I/A}$ I: The least moment of inertia of the pillar (cm^4). A: Sectional area of the pillar (cm^2). w: Deck load supported by pillars as specified in 8.2.2 (kN). Chapter 11 DEEP TANKS 11.2 Deep Tank Bulkheads 11.2.1 Bulkhead Plates The thickness of deep tank bulkhead plating is not to be less than obtained from the following formula: $3.6S\sqrt{h} + 3.5 \text{ (mm)}$ S: Spacing of stiffeners (m). h: The larger distance (m) of the following (1) and (2) (1) Vertical distance measured from the lower edge of plate to the mid-point of the distance between the top of tanks and the top of overflow pipes. <u>However, for bulkhead of large tanks, additional water pressure is to be appropriately considered.</u> (2) 0.7 times the vertical distance measured from the lower edge of plate to the point of 2.0 <u>m</u> above the top of overflow pipes 11.2.2 Bulkhead Stiffeners The section modulus of bulkhead stiffeners is not to be less than obtained from the following formula: $7CS h l^2 \text{ (cm}^3\text{)}$	$k: \sqrt{I/A}$ I: The least moment of inertia of the pillar (cm^4). A: Sectional area of the pillar (cm^2). w: Deck load supported by pillars as specified in 8.2.2 (kN). Chapter 11 DEEP TANKS 11.2 Deep Tank Bulkheads 11.2.1 Bulkhead Plates The thickness of deep tank bulkhead plating is not to be less than obtained from the following formula: $3.6S\sqrt{h} + 3.5 \text{ (mm)}$ S: Spacing of stiffeners (m). h: Vertical distance measured from the lower edge of plate to the mid-point of the distance between the top of tanks and the top of overflow pipes (m), <u>or 0.7 times the vertical distance measured from the lower edge of plate to the point of 2.0 metres above the top of overflow pipes (m), whichever is greater.</u> 11.2.2 Bulkhead Stiffeners The section modulus of bulkhead stiffeners is not to be less than obtained from the following formula: $7CS h l^2 \text{ (cm}^3\text{)}$	Clarifies that appropriate additional water pressure is to be considered for large tanks to be consistent with 14.2.3 of Part CS and the Japanese text. Clarifies that appropriate additional water pressure is to be considered for large

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
<i>S</i> and <i>l</i>: As specified in 10.2.3. <i>h</i>: The larger distance (<i>m</i>) of the following (1) and (2); the lower end being regarded as the mid-point of <i>l</i> for vertical stiffeners, and as the mid-point of the distance between the adjacent stiffeners for horizontal stiffeners. (1) Vertical distance measured from the lower end to the mid-point of the distance between the top of tanks and the top of overflow pipes. However, for bulkhead of large tanks, additional water pressure is to be appropriately considered. (2) 0.7 times the vertical distance measured from the lower end to the point of 2.0 <i>m</i> above the top of overflow pipes. <i>C</i>: Coefficient given in Table Q11.1, according to the type of end connections. Chapter 13 SHELL PLATINGS 13.1 General 13.1.3 Stems The thickness of steel plate stem at the load waterline is not to be less than obtained from the following formula. Above and below the load waterline, the thickness may be gradually tapered toward the stem head and the keel. <u>At the upper end of stem it may be equal to the thickness of the side shell plating (at the fore end part) of the ship, and at the lower end of stem, it is to be equal to the thickness of the plate keel.</u> $0.1L + 4.0 \text{ (mm)}$	<i>S</i> and <i>l</i>: As specified in 10.2.3. <i>h</i>: Vertical distance measured from the lower end to the mid-point of the distance between the top of tanks and the top of overflow pipes (<i>m</i>), or 0.7 times the vertical distance measured from the lower end to the point of 2.0 <i>metres</i> above the top of overflow pipes (<i>m</i>), whichever is greater; the lower end being regarded as the mid-point of <i>l</i> for vertical stiffeners, and as the mid-point of the distance between the adjacent stiffeners for horizontal stiffeners. <i>C</i>: Coefficient given in Table Q11.1, according to the type of end connections. Chapter 13 SHELL PLATINGS 13.1 General 13.1.3 Stems The thickness of steel plate stem at the load waterline is not to be less than obtained from the following formula. Above and below the load waterline, the thickness may be gradually tapered toward the stem head and the keel. $0.1L + 4.0 \text{ (mm)}$	tanks to be consistent with 14.2.3 of Part CS and the japanese text. Clarifies that the thickness of the plate stem may be gradually tapered in the vertical direction to be consistent with 2.1.1-1 of old Part C and the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
Chapter 17 HATCHWAYS AND OTHER DECK OPENINGS 17.2 Hatchways 17.2.1 Hatchway Coamings 2 The thickness of hatchway coamings is not to be less than obtained from the following formula, but need not exceed 11 mm. $0.05L + 6.0$ (mm) 17.2.2 Hatch Covers 1 The thickness of steel hatch covers is not to be less than <u>1 % of the spacing of the stiffeners or 6 mm, whichever is greater.</u> Chapter 20 MACHINERY 20.10 Distribution 20.10.1 Shore Connections 2 The connection box is to contain terminals of suitable size and a circuit-breaker or an isolating switch with fuses. Means are to be provided for checking the phase sequence for three-phase alternating current system or checking the polarity for direct current system. <u>However, this does not apply in cases where the load is limited to lighting only.</u>	Chapter 17 HATCHWAYS AND OTHER DECK OPENINGS 17.2 Hatchways 17.2.1 Hatchway Coamings 2 The thickness of hatchway coamings is not to be less than obtained from the following formula, but need not exceed 11 mm. $0.055L + 6.0$ (mm) 17.2.2 Hatch Covers 1 The thickness of steel hatch covers is not to be less than <u>obtained from the following formula, however, in no case is it to be less than 6 mm:</u> $\frac{10S}{\sqrt{t}}$ t: Spacing of stiffeners (mm). Chapter 20 MACHINERY 20.10 Distribution 20.10.1 Shore Connections 2 The connection box is to contain terminals of suitable size and a circuit-breaker or an isolating switch with fuses. Means are to be provided for checking the phase sequence for three-phase alternating current system or checking the polarity for direct current system.	Revises the formula to be consistent with the Japanese text. Revises the expression to be consistent with the Japanese text. Clarifies the exemption where the load consists only of lighting loads to be consistent with Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks																		
RULES FOR AUTOMATIC AND REMOTE CONTROL SYSTEMS Chapter 3 CENTRALIZED MONITORING AND CONTROL SYSTEMS FOR MACHINERY 3.3 Additional Requirements for Safety Measures 3.3.7 Other Machinery	RULES FOR AUTOMATIC AND REMOTE CONTROL SYSTEMS Chapter 3 CENTRALIZED MONITORING AND CONTROL SYSTEMS FOR MACHINERY 3.3 Additional Requirements for Safety Measures 3.3.7 Other Machinery																			
Table 3.1 Reciprocating Internal Combustion Engines used as Main Propulsion Machinery (and Gearing) <table><tr><th colspan="2">Monitored Variables</th><th>Alarms</th><th>Remarks</th></tr><tr><td>Temperature</td><td>(Omitted)</td><td>(Omitted)</td><td>(Omitted)</td></tr><tr><td rowspan="2">Pressure</td><td>L.O. turbocharger inlets</td><td>L</td><td rowspan="2">in the case of crosshead engines with separate L.O. systems</td></tr><tr><td>L.O. reduction gear inlets</td><td>L</td></tr><tr><td>Others</td><td>(Omitted)</td><td>(Omitted)</td><td>(Omitted)</td></tr></table> Note : “H” and “L” mean high and low. “○” means abnormal condition occurred. Same meaning is applied to Table 3.1 to 3.9.			Monitored Variables		Alarms	Remarks	Temperature	(Omitted)	(Omitted)	(Omitted)	Pressure	L.O. turbocharger inlets	L	in the case of crosshead engines with separate L.O. systems	L.O. reduction gear inlets	L	Others	(Omitted)	(Omitted)	(Omitted)
Monitored Variables		Alarms	Remarks																	
Temperature	(Omitted)	(Omitted)	(Omitted)																	
Pressure	L.O. turbocharger inlets	L	in the case of crosshead engines with separate L.O. systems																	
	L.O. reduction gear inlets	L																		
Others	(Omitted)	(Omitted)	(Omitted)																	
		The requirements for turbochargers are specified in accordance with UR M35. As reduction gears do not depend on whether the engine is of crosshead or trunk piston type, the term “crosshead” has been deleted to align with the wording used for turbochargers.																		

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended		Original		Remarks
Table 3.4 Electric Generating Sets				The English text is revised to be consistent with the Japanese text, in line with the actual handling.
Monitored Variables		Alarms	Remarks	
Reciprocating internal combustion engines driving generators				
Temperature	(Omitted)	(Omitted)	(Omitted)	
Pressure	(Omitted)	(Omitted)	(Omitted)	
	Starting air	L	not required when starting air piping for propulsion engines is commonly used	
Others	(Omitted)	(Omitted)	(Omitted)	
Steam turbines driving generators				
Temperature	(Omitted)	(Omitted)	(Omitted)	
Pressure	(Omitted)	(Omitted)	(Omitted)	
Main generator				
Electricity	(Omitted)	(Omitted)	(Omitted)	
Propulsion generator				
Electricity	(Omitted)	(Omitted)	(Omitted)	
Temperature	(Omitted)	(Omitted)	(Omitted)	
Pressure	(Omitted)	(Omitted)	(Omitted)	

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR INTEGRATED FIRE CONTROL SYSTEMS Chapter 2 SURVEYS 2.2 Registration Surveys 2.2.2 Tests and Examinations During Registration Surveys, systems or apparatuses forming integrated fire control systems, in cases where equipped, are to be tested and examined in accordance with the following (1) to (18) and all results are to be satisfactory. ((1) to (11) are omitted.) (12) Fixed local fire-extinguishing systems (a) Operation tests performed by remote control from integrated fire control stations. (b) Verification that those items specified in Table 3.9 are being monitored at the integrated fire control stations. ((12) to (16) are omitted.) (17) (Omitted) (a) Operation tests of water supply pumps performed by	RULES FOR INTEGRATED FIRE CONTROL SYSTEMS Chapter 2 SURVEYS 2.2 Registration Surveys 2.2.2 Tests and Examinations During Registration Surveys, systems or apparatuses forming integrated fire control systems, in cases where equipped, are to be tested and examined in accordance with the following (1) to (18) and all results are to be satisfactory. ((1) to (11) are omitted.) (12) Fixed local fire-extinguishing systems (a) <u>Pressure tests of pressurized parts. Test pressures are to be 1.5 times working pressures.</u> (b) <u>Draught tests of piping. (Air may be used.)</u> (c) Operation tests performed by remote control from integrated fire control stations. (d) Verification that those items specified in Table 3.9 are being monitored at the integrated fire control stations. ((12) to (16) are omitted.) (17) (Omitted) (a) <u>Pressure tests of pressurized parts. Test pressures are to be 1.5 times working pressures.</u> (b) <u>Operation tests of water supply pumps, etc. by activating one detector of a system.</u> (c) Operation tests of water supply pumps performed by	Delete as it duplicates Item 16 of Table B2.9 in Part B of the Rules for the Survey and Construction of Steel Ships. Delete as it duplicates Item 13 of Table B2.9 in Part B of the Rules for the Survey and Construction of Steel Ships.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
remote control from integrated fire control stations. <u>(b)</u> Verification that those items specified in Table 3.14 are being monitored at integrated fire control stations. (18) (Omitted) 2.3.1 Special Surveys During Special Surveys, systems or apparatuses forming integrated fire control systems, in cases where equipped, are to be tested and examined in accordance with the following (1) to (18) and all results are to be satisfactory. ((1) to (11) are omitted.) (12) Fixed local fire-extinguishing systems <u>(a)</u> Operation tests performed by remote control from integrated fire control stations. <u>(b)</u> Verification that those items specified in Table 3.9 are being monitored at integrated fire control stations. ((13) to (18) are omitted.)	remote control from integrated fire control stations. <u>(d)</u> Verification that those items specified in Table 3.14 are being monitored at integrated fire control stations. (18) (Omitted) 2.3.1 Special Surveys During Special Surveys, systems or apparatuses forming integrated fire control systems, in cases where equipped, are to be tested and examined in accordance with the following (1) to (18) and all results are to be satisfactory. ((1) to (11) are omitted.) (12) Fixed local fire-extinguishing systems <u>(a)</u> Draught tests of piping. (Air may be used.) <u>(b)</u> Operation tests performed by remote control from integrated fire control stations. <u>(c)</u> Verification that those items specified in Table 3.9 are being monitored at integrated fire control stations. ((13) to (18) are omitted.)	Delete as it duplicates Item 16 of Table B2.9 in Part B of the Rules for the Survey and Construction of Steel Ships.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR THE SURVEY AND CONSTRUCTION OF SHIPS OF FIBREGLASS REINFORCED PLASTICS Chapter 1 GENERAL 1.1 General 1.1.1 Application* (Deleted) 1.3 General Rules for Hull Construction and Equipment 1.3.6 Sandwich Construction* 2 The ratio of the thicknesses of outer and inner layers of <i>FRP</i> is <u>generally</u> not to be less than 0.8.	RULES FOR THE SURVEY AND CONSTRUCTION OF SHIPS OF FIBREGLASS REINFORCED PLASTICS Chapter 1 GENERAL 1.1 General 1.1.1 Application* <u>6</u> Notwithstanding preceding -1 through -5 <i>FRP</i> ships flying Japanese are to comply with the requirements in other Rules of NIPPON KAIJI KYOKAI (hereinafter referred to as “the Society”). 1.3 General Rules for Hull Construction and Equipment 1.3.6 Sandwich Construction* 2 The ratio of the thicknesses of outer and inner layers of <i>FRP</i> is not to be less than 0.8. <u>In case where the ratio of the thicknesses of outer and inner layers is less than 0.8, the construction will be specially considered by the Society.</u>	Deletes the requirements related to Japanese-flag ships since the English text is intended for foreign-flag ships. Clarifies that the thickness of the inner FRP layer of sandwich construction panels is, in principle, to be not less than 0.8 times the thickness of the outer layer to be consistent with Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
Chapter 14 DEEP TANKS	Chapter 14 DEEP TANKS	
14.1 General	14.1 General	
14.1.3 Application	14.1.3 Application	
1 The construction of all watertight division walls, aft peak tanks and all deep tanks in holds and between decks excluding deep oil tanks for carriage of oils having a flashpoint <u>not exceeding</u> 60°C is to be in accordance with the requirements in this chapter. The part concurrently serving as a watertight bulkhead is to be in accordance with the requirements for watertight bulkheads. 2 The construction of deep oil tanks for carriage of oils having a flashpoint <u>not exceeding</u> 60°C is to be in accordance with the discretion of the Society.	1 The construction of all watertight division walls, aft peak tanks and all deep tanks in holds and between decks excluding deep oil tanks for carriage of oils having a flashpoint <u>below</u> 60°C is to be in accordance with the requirements in this chapter. The part concurrently serving as a watertight bulkhead is to be in accordance with the requirements for watertight bulkheads. 2 The construction of deep oil tanks for carriage of oils having a flashpoint <u>below</u> 60°C is to be in accordance with the discretion of the Society.	With respect to the flashpoint used as the criterion for tank construction requirements when carrying flammable liquid cargoes, the threshold is aligned to “not exceeding 60 °C” and “exceeding 60 °C,” with reference to 1.2.4-1 of Part A and SOLAS Chapter II-2 Regulation 1.6.1. With respect to the flashpoint used as the criterion for tank construction requirements when carrying flammable liquid cargoes, the threshold is aligned to “not exceeding 60 °C” and “exceeding 60 °C,” with reference to 1.2.4-1 of Part A and SOLAS Chapter II-2 Regulation 1.6.1.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
RULES FOR FLOATING DOCKS Chapter 2 CLASSIFICATION SURVEYS 2.4 Preparation for Surveys and Others 2.4.1 Preparation for Surveys and Others 1 All such preparations as required for the survey to be carried out as well as those which may be required by the Surveyor as necessary in accordance with the requirements in the Rules are to be made by the applicant of the survey. The preparations are to include provisions of an easy and safe access, necessary facilities, <u>certificates and records for the execution of the survey, open-up of equipment, removal of obstructions and cleaning.</u> 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 (<i>e.g.</i> 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 dock and used in examination of equipment on board a dock (<i>e.g.</i> pressure, temperature or rpm gauges and meters) based either on calibration records or comparison of readings with multiple instruments.	RULES FOR FLOATING DOCKS Chapter 2 CLASSIFICATION SURVEYS 2.4 Preparation for Surveys and Others 2.4.1 Preparation for Surveys and Others 1 All such preparations as required for the survey to be carried out as well as those which may be required by the Surveyor as necessary in accordance with the requirements in the Rules are to be made by the applicant of the survey. The preparations are to include provisions of an easy and safe access, necessary facilities and <u>necessary</u> records for the execution of the survey. 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 (<i>e.g.</i> 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 dock and used in examination of equipment on board a dock (<i>e.g.</i> pressure, temperature or rpm gauges and meters) based either on calibration records or comparison of readings with multiple instruments.	Revises the wordings to be consistent with Part B and the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
Chapter 5 HULL STRUCTURE 5.3 Transverse Strength 5.3.3 Approximate Formula Where the maximum lifting capacity of the dock does not exceed 40,000 <i>tons</i>, calculations of the transverse strength <u>specified in 5.3.1 and 5.3.2</u> may be omitted if the thickness of the top and bottom plates of the pontoon is not less than that given below: (1) Caisson type; obtained from the following formula. $0.0047B^2 (mm)$ (2) Sectional pontoon type; given by the above or obtained from the following formula, whichever is greater; $0.033 \frac{Ql_P}{Ld_P} (mm)$ where : Q : the maximum lifting capacity in <i>tons</i> l_P : length of the sectional pontoon measured alongside the centre line of the dock in <i>metres</i> d_P : depth of the pontoon at the centre in <i>metres</i>	Chapter 5 HULL STRUCTURE 5.3 Transverse Strength 5.3.3 Approximate Formula Where the maximum lifting capacity of the dock does not exceed 40,000 <i>tons</i>, calculations of the transverse strength may be omitted if the thickness of the top and bottom plates of the pontoon is not less than that given below: (1) Caisson type; obtained from the following formula. $0.0047B^2 (mm)$ (2) Sectional pontoon type; given by the above or obtained from the following formula, whichever is greater; $0.033 \frac{Ql_P}{Ld_P} (mm)$ where : Q : the maximum lifting capacity in <i>tons</i> l_P : length of the sectional pontoon measured alongside the centre line of the dock in <i>metres</i> d_P : depth of the pontoon at the centre in <i>metres</i>	Clarifies the references to be consistent with the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
GUIDANCE FOR THE AUDIT AND REGISTRATION OF SAFETY MANAGEMENT SYSTEMS Chapter 3 AUDIT OF SAFETY MANAGEMENT SYSTEMS 3.3 Conduct of Audits and Timing 3.3.6 Additional Audit When an Additional Audit is carried out in order to change the Interim DOC into a DOC as specified in 3.3.6(2) of the Rules with respect to an increase in the type(s) of ships under management of the Company, the audit is to take the form specified in the requirements of 4.1 of the Rules. A DOC indicating the additional ship type under management is to be issued upon completion of the audit. However, the period of validity of the DOC is to be the same as that of the old DOC. (Deleted)	GUIDANCE FOR THE AUDIT AND REGISTRATION OF SAFETY MANAGEMENT SYSTEMS Chapter 3 AUDIT OF SAFETY MANAGEMENT SYSTEMS 3.3 Conduct of Audits and Timing 3.3.6 Additional Audit 1 When an Additional Audit is carried out in order to change the Interim DOC into a DOC as specified in 3.3.6(2) of the Rules with respect to an increase in the type(s) of ships under management of the Company, the audit is to take the form specified in the requirements of 4.1 of the Rules. A DOC indicating the additional ship type under management is to be issued upon completion of the audit. However, the period of validity of the DOC is to be the same as that of the old DOC. 2 The cases “when the Society deems such an audit to be <u>necessary</u>” as stipulated in 3.3.6(3) of the Rules are those cases when the Society finds any evidence of major non-conformities or the like.	Deletes the interpretation of cases where an Additional Audit is deemed necessary by the Society to be consistent with the Japanese version of the Rules and to avoid limiting the applicability of the requirement.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part U INTACT STABILITY Annex U1.2.1 GUIDANCE FOR STABILITY INFORMATION FOR MASTER 1.3 The Details of Each Content 1.3.10 General Data 3 Effect of free surface For cargo holds and tanks which are partly filled with liquid and are also deep tanks, side tanks, peak tanks or other tanks with unusual shape where the change of liquid level or ullage has a large effect on capacity or center of capacity, holding more than 0.1% of the ship's summer displacement, the effect given by the free surface on the stability is to be given as the function of the volume or the liquid level. Intervals of the liquid level or ullage are to be not more than 0.1m. For tanks with a width of 0.6B or more, to indicate corrections to the righting lever in (2)(b), the angle of heel (θ) is to be in the range from 10° to 80°<u>at intervals of</u> 10°. ((1) is omitted.) (2) Free surface moment ((a) is omitted.) (b) Correction to righting lever; i) The righting lever is reduced by the amount	GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part U INTACT STABILITY Annex U1.2.1 GUIDANCE FOR STABILITY INFORMATION FOR MASTER 1.3 The Details of Each Content 1.3.10 General Data 3 Effect of free surface For cargo holds and tanks which are partly filled with liquid and are also deep tanks, side tanks, peak tanks or other tanks with unusual shape where the change of liquid level or ullage has a large effect on capacity or center of capacity, holding more than 0.1% of the ship's summer displacement, the effect given by the free surface on the stability is to be given as the function of the volume or the liquid level. Intervals of the liquid level or ullage are to be not more than 0.1m. For tanks with a width of 0.6B or more, to indicate corrections to the righting lever in (2)(b), the angle of heel (θ) is to be in the range from 10° to 80° <u>and in intervals not more than</u> 10°. ((1) is omitted.) (2) Free surface moment ((a) is omitted.) (b) Correction to righting lever; i) The righting lever is reduced by the amount	MSC/Circ.920 Revises the wordings to be consistent with the original text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
obtained from the following formula: $\Delta GZ = \frac{\Sigma M_{fs}}{W}$ $M_{fs} = \gamma v b K \sqrt{\delta}$ Since above-mentioned formula for M_{fs} is prepared for the case where liquid is half filled in a compartment of approximately rectangular section, direct calculation is required separately for each compartment if the above condition is not met. For the cases where deemed necessary by the Society, however, other suitable methods may be applied. $\delta = \frac{v}{b \ell h}$ v: Total volume of tanks (m^3) b, ℓ, h: Maximum <u>breadth</u> (m), maximum <u>length</u> (m), and maximum depth (m) of the tank, respectively K: Value determined by following formulae according to $\cot \theta$ and b/h; In case of $\cot \theta \geq b/h$: $K = \frac{\sin \theta}{12} \left(1 + \frac{\tan^2 \theta}{2} \right) \frac{b}{h}$ In case of $\cot \theta < b/h$: $K = \frac{\cos \theta}{8} \left(1 + \frac{\tan \theta}{b/h} \right) - \frac{\cot \theta}{12(b/h)^2} \left(1 + \frac{\cot^2 \theta}{2} \right)$	obtained from the following formula: $\Delta GZ = \frac{\Sigma M_{fs}}{W}$ $M_{fs} = \gamma v b K \sqrt{\delta}$ Since above-mentioned formula for M_{fs} is prepared for the case where liquid is half filled in a compartment of approximately rectangular section, direct calculation is required separately for each compartment if the above condition is not met. For the cases where deemed necessary by the Society, however, other suitable methods may be applied. $\delta = \frac{v}{b \ell h}$ v: Total volume of tanks (m^3) b, ℓ, h: Maximum <u>length</u> (m), maximum <u>breadth</u> (m), and maximum depth (m) of the tank, respectively K: Value determined by following formulae according to $\cot \theta$ and b/h; In case of $\cot \theta \geq b/h$: $K = \frac{\sin \theta}{12} \left(1 + \frac{\tan^2 \theta}{2} \right) \frac{b}{h}$ In case of $\cot \theta < b/h$: $K = \frac{\cos \theta}{8} \left(1 + \frac{\tan \theta}{b/h} \right) - \frac{\cot \theta}{12(b/h)^2} \left(1 + \frac{\cot^2 \theta}{2} \right)$	

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
θ: Angle of heel (°) γ, W: As given in above (a) ii) In the case of tanks, of which M_{fs} specified in above i) complies with following at when angle of heel (θ) is 30°, the correction to righting lever may be omitted. $M_{fs} < 0.01W_{min}$ where: W_{min}: Displacement (t) in light condition, in general. 4 Hydrostatic values Hydrostatic values in the range of light draught to 115% of the maximum draught in intervals not more than 5cm are to be presented on the basis of mean draught above underside of keel in the designed trim condition. Stability information is to show the influence of various trims on hydrostatic values for a suitable range of trim in cases where the operational trim range exceeds +/- 1.0% of L_s specified in 2.3.1.2(6), Part 1, Part C of the Rules. The following items are to be included: (1) Mould displacement and displacement including shell platings, etc. (Specific gravity of sea water is to be 1.025(t/m^3). Lower specific gravity may be adopted subject to the approval by the Administration.) (2) TPC, MTC (3) TKM (LKM to be included, if necessary) (4) ℓ_{cb}, l_{cf} (KB to be included, if necessary) (5) C_b (6) Thickness of keel plates 5 Cross curves Cross curves showing the relationship between righting lever,	θ: Angle of heel (°) γ, W: As given in above (a) ii) In the case of tanks, of which M_{fs} specified in above i) complies with following at when angle of heel (θ) is 30°, the correction to righting lever may be omitted. $M_{fs} < 0.01W_{min}$ where: W_{min}: Displacement (t) in light condition, in general. 4 Hydrostatic values Hydrostatic values in the range of light draught to 115% of the maximum draught in intervals not more than 5cm are to be presented on the basis of mean draught above underside of keel in the designed trim condition. Stability information is to show the influence of various trims on hydrostatic values for a suitable range of trim in cases where the operational trim range exceeds +/- 0.5% of L_s specified in 2.3.1.2(6), Part 1, Part C of the Rules. The following items are to be included: (1) Mould displacement and displacement including shell platings, etc. (Specific gravity of sea water is to be 1.025(t/m^3). Lower specific gravity may be adopted subject to the approval by the Administration.) (2) TPC, MTC (3) TKM (LKM to be included, if necessary) (4) ℓ_{cb}, l_{cf} (KB to be included, if necessary) (5) C_b (6) Thickness of keel plates 5 Cross curves Cross curves showing the relationship between righting lever,	MSC/Circ.920 Revises the wordings to be consistent with the original text. MSC/Circ.920 Revises the wordings to be

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
angle of heel and displacement or draft is to be presented considering trim. When structures and cargoes on the upper deck accepted as reserve buoyancy are included in calculations, data showing their particulars are to be added. The cross curves, <u>which may be presented in tabular form</u>, are to cover the following range; (1) Full range of displacement or draft extending from light draft to 115% of the maximum draught in intervals not more than 5cm. (2) The range of the angle of heel extending from 10° to 80° <u>at</u> intervals <u>of</u> 10°. (However, closer spacing may be required according to the ship form and proportions.) Annex U1.2.2 GUIDANCE FOR STABILITY COMPUTER 1.2 Software for Stability Calculation 1.2.4 Approval of Software The Society may approve software as a stability calculation program which does not depend on data of a particular ship. In this case, the Society examines such software in accordance with the procedures specified in the following (1) to (4) and then, may issue a certificate of approval after success in the examination. ((1) to (3) are omitted.) (4) For the approval of software, any applicant is to submit the following documents in addition to the software.	angle of heel and displacement or draft is to be presented considering trim. When structures and cargoes on the upper deck accepted as reserve buoyancy are included in calculations, data showing their particulars are to be added. The cross curves are to cover the following range; (1) Full range of displacement or draft extending from light draft to 115% of the maximum draught in intervals not more than 5cm. (2) The range of the angle of heel extending from 10° to 80° <u>in</u> intervals <u>not more than</u> 10°. (However, closer spacing may be required according to the ship form and proportions.) Annex U1.2.2 GUIDANCE FOR STABILITY COMPUTER 1.2 Software for Stability Calculation 1.2.4 Approval of Software The Society may approve software as a stability calculation program which does not depend on data of a particular ship. In this case, the Society examines such software in accordance with the procedures specified in the following (1) to (4) and then, may issue a certificate of approval after success in the examination. ((1) to (3) are omitted.) (4) For the approval of software, any applicant is to submit the following documents in addition to the software.	consistent with the original text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
(a) Application form (including applicable type of ship, where it is limited) (Form-SCPsoftware) (b) General information of the software (including information regarding its version) (c) Operation manual (d) Necessary data regarding displacement, compartmentation, centre of gravity, loaded cargoes and loading conditions of the ships used for the verification of the computational accuracy (lines, hydrostatic curves, tank capacity plan, etc.) 1.4 Operation Manual 1.4.1 Contents of Operation Manual Operation manual for the stability computers is to contain at least the following descriptions and instructions. (1) General instruction (2) Instructions for function keys (3) Instructions for menu displays (4) Instructions for input and output data (5) Descriptions regarding required minimum hardware to operate the software, where the software is supplied separate from hardware (6) Instructions for use of the test loading conditions (<u>including loading condition data and results used for the accuracy check</u>) (7) Descriptions regarding computer-guided dialogue steps (8) List of warnings in operation	(a) Application form (including applicable type of ship, where it is limited) (Form-SCPsoftware) (b) General information of the software (including information regarding its version) (c) Operation manual (d) Necessary data regarding displacement, compartmentation, <u>weight</u>, centre of gravity, loaded cargoes and loading conditions of the ships used for the verification of the computational accuracy (lines, hydrostatic curves, tank capacity plan, etc.) 1.4 Operation Manual 1.4.1 Contents of Operation Manual Operation manual for the stability computers is to contain at least the following descriptions and instructions. (1) General instruction (2) Instructions for function keys (3) Instructions for menu displays (4) Instructions for input and output data (5) Descriptions regarding required minimum hardware to operate the software, where the software is supplied separate from hardware (6) Instructions for use of the test loading conditions (7) Descriptions regarding computer-guided dialogue steps (8) List of warnings in operation	Clarifies that the data regarding the center of gravity are necessary to be consistent with the Japanese text. Adds the detailed explanation to be consistent with the Japanese text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part M WELDING M6 WELDING CONSUMABLES M6.2Electrodes for Manual Arc Welding for Mild and High Tensile Steels and Steels for Low Temperature Service M6.2.11 Hydrogen Test 2 Where the mean value of hydrogen by mercury method or gas chromatography method specified in 6.2.11-2, Table M6.9 Note (1), Part M of the Rules, is <u>not more</u> than $0.05 \text{ cm}^3/\text{g}$ the mark “H5” may be added after the grades mark by manufacturer recommends. (Example: <i>KMW53H5</i>)	GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part M WELDING M6 WELDING CONSUMABLES M6.2Electrodes for Manual Arc Welding for Mild and High Tensile Steels and Steels for Low Temperature Service M6.2.11 Hydrogen Test 2 Where the mean value of hydrogen by mercury method or gas chromatography method specified in 6.2.11-2, Table M6.9 Note (1), Part M of the Rules, is <u>less</u> than $0.05 \text{ cm}^3/\text{g}$ the mark “H5” may be added after the grades mark by manufacturer recommends. (Example: <i>KMW53H5</i>)	UR W17 4.5.3 Revises the threshold to be consistent with the original text.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part T SUBMERSIBLES T3 HULL CONSTRUCTION T3.3 Pressure Hulls and Pressure Enclosures T3.3.2 Construction and Strength of Pressure Hulls and Pressure Enclosures The “construction and strength considered appropriate by the Society” in 3.3.2-9, Part T of the Rules are those to comply with the requirements specified in <i>ASME PVHO-1 2023</i> by accounting the design pressure and the design temperature as follows. (1) Design pressure The design pressure is to be a pressure corresponding to the design diving depth or more. (2) Design temperature For submersibles operated in designated service areas, the design temperature is not to be less than 25°C.	GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF STEEL SHIPS Part T SUBMERSIBLES T3 HULL CONSTRUCTION T3.3 Pressure Hulls and Pressure Enclosures T3.3.2 Construction and Strength of Pressure Hulls and Pressure Enclosures The “construction and strength considered appropriate by the Society” in 3.3.2-9, Part T of the Rules are those to comply with the requirements specified in <i>ASME PVHO-1 1987</i> by accounting the design pressure and the design temperature as follows. (1) Design pressure The design pressure is to be a pressure corresponding to the design diving depth or more. (2) Design temperature For submersibles operated in designated service areas, the design temperature is not to be less than 25°C.	Updates the referred standard to the latest version.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
GUIDANCE FOR CARGO REFRIGERATING INSTALLATIONS Annex 1.1.1-2 GUIDANCE FOR CONTROLLED ATMOSPHERE SYSTEMS 1.5 Control, Alarm and Monitoring Systems 1.5.3 CA Zones 2 Alarm Devices Each CA zone is to be provided with alarm devices which will operate in the event of the following abnormal conditions. (1) High <u>and</u> low level oxygen content (2) High level carbon dioxide content (3) Abnormal high pressure	GUIDANCE FOR CARGO REFRIGERATING INSTALLATIONS Annex 1.1.1-2 GUIDANCE FOR CONTROLLED ATMOSPHERE SYSTEMS 1.5 Control, Alarm and Monitoring Systems 1.5.3 CA Zones 2 Alarm Devices Each CA zone is to be provided with alarm devices which will operate in the event of the following abnormal conditions. (1) High <u>or</u> low level oxygen content (2) High level carbon dioxide content (3) Abnormal high pressure	The wording is revised to be consistent with the Japanese text, in line with the actual handling whereby the oxygen concentration is maintained within specified upper and lower limits.

Amended-Original Requirements Comparison Table (Alignment of Japanese and English Versions of the Rules)

Amended	Original	Remarks
GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF SHIPS OF FIBREGLASS REINFORCED PLASTICS Chapter 4 MATERIALS FOR HULL 4.1 General 4.1.2 Raw Materials for Primary Structures 4 Testing procedures for fibreglass reinforcements (1) Shape and selection of test specimens ((a) is omitted.) (b) The manufacturing methods of laminated sheet used for tests (excluding rovings for spray-up laminating) are to be in accordance with the following i) through v). i) The laminated sheet used for tests is to have a sufficient size to arrange all the required laminated test specimens by itself after trimming away a 30 <i>mm</i> <u>or more</u> breadth of its edges. (ii) to v) are omitted.) ((c) is omitted.) ((2) and (3) are omitted.)	GUIDANCE FOR THE SURVEY AND CONSTRUCTION OF SHIPS OF FIBREGLASS REINFORCED PLASTICS Chapter 4 MATERIALS FOR HULL 4.1 General 4.1.2 Raw Materials for Primary Structures 4 Testing procedures for fibreglass reinforcements (1) Shape and selection of test specimens ((a) is omitted.) (b) The manufacturing methods of laminated sheet used for tests (excluding rovings for spray-up laminating) are to be in accordance with the following i) through v). i) The laminated sheet used for tests is to have a sufficient size to arrange all the required laminated test specimens by itself after trimming away a 30 <i>mm</i> breadth of its edges. (ii) to v) are omitted.) ((c) is omitted.) ((2) and (3) are omitted.)	Clarifies that a value of 30 mm or more is required to be consistent with the Japanese text.
EFFECTIVE DATE AND APPLICATION		
1. The effective date of the amendments is 1 January 2027.		