

Rules for the Classification of Steel Ships

(Development Review : For external opinion inquiry)

Part 6 Electrical Equipment and Control Systems

2025. 9.



Machinery Rule Development Team

Effective Date : 1 January 2026

(The contract date for ship construction)

Present	Amendment	Remark
<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 – 15 <same as the present Rules></p> <p style="text-align: center;">Section 16 Electric Propulsion Unit</p> <p>1601. – 1602. <same as the present Rules></p> <p>1603. Rotating machines (2025)</p> <p style="padding-left: 20px;">1. – 7. <same as the present Rules></p> <p style="padding-left: 20px;">8. <newly added></p> <p style="text-align: center;">Section 17 – 18 <same as the present Rules></p>	<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 – 15 <same as the present Rules></p> <p style="text-align: center;">Section 16 Electric Propulsion Unit</p> <p>1601. – 1602. <same as the present Rules></p> <p>1603. Rotating machines (2025)</p> <p style="padding-left: 20px;">1. – 7. <same as the present Rules></p> <p style="padding-left: 20px;">8. <u>Single essential propulsion components and their reliability (UI SC305) (2026)</u></p> <p style="padding-left: 40px;"><u>In accordance with SOLAS Regulation II-1/26.2, single essential propulsion components and their reliability shall comply with the following requirements.</u></p> <p style="padding-left: 40px;">(1) <u>The possibility of failures in electric machines shall be considered. Sufficient propulsion capacity shall be maintained or restored within due time for the following failure modes of electric machines, as a minimum:</u></p> <p style="padding-left: 60px;">(A) <u>winding insulation failures; and</u></p> <p style="padding-left: 60px;">(B) <u>excitation failures.</u></p> <p style="padding-left: 40px;">(2) <u>Single electric propulsion motors (both single and dual winding with a single rotor) for main propulsion shall not be considered to provide the reliability required for a single essential propulsion component. A separate propulsion unit sufficient to give the ship a navigable speed should be required for such arrangements.</u></p> <p style="padding-left: 40px;">(3) <u>Propulsion arrangements with two independent rotors on a single shaft shall be considered to provide the required reliability, provided it is possible to de-excite or de-flux each of the rotors individually and to supply independently the stators.</u></p>	<p>(Amended)</p> <p>– Incorporating IACS UI SC305(New Dec 2024), requirements for single essential propulsion components and their reliability have been newly added.</p>

Present	Amendment	Remark
<p>1604. - 1608. <same as the present Rules></p> <p>Section 17 - 18 <same as the present Rules></p>	<p>1604. - 1608. <same as the present Rules></p> <p>Section 17 - 18 <same as the present Rules></p>	

Effective Date : 1 July 2026

(The contract date for ship construction)

Present	Amendment	Remark
<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 General</p> <p>101. General</p> <p>1. – 3. <same as the present Rules></p> <p>4. Terminology</p> <p>Terms used in this Chapter are as follows:</p> <p>(1) – (15) <same as the present Rules> <Newly added></p> <p>(16) – (18) <same as the present Rules></p> <p>102. – 103. <same as the present Rules></p>	<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 General</p> <p>101. General</p> <p>1. – 3. <same as the present Rules></p> <p>4. Terminology</p> <p>Terms used in this Chapter are as follows:</p> <p>(1) – (15) <same as the present Rules></p> <p><u>(16) Blackout situation means that the main and auxiliary machinery installations, including the main power supply, are out of operation but the services for bringing them into operation (e.g. compressed air, starting current from batteries etc.) are available. (2026)</u></p> <p>(16) – (18) (17) – (19) <same as the present Rules></p> <p>102. – 103. <same as the present Rules></p>	<p>(Newly added)</p> <p>– A definition for blackout situation has been added with reference to IACS UR E17.</p>

Present	Amendment	Remark
<p style="text-align: center;">Section 2 System Design</p> <p>201. <same as the present Rules></p> <p>202. Main source of electrical power (2019)</p> <p>1. <same as the present Rules></p> <p>2. Transformers and Converters</p> <p>(1) Capacity and number of transformer 【See Guidance】</p> <p>Where essential services are supplied, the number and ratings of <u>transformers</u> are to be sufficient to ensure the operation of essential services even when <u>one transformer</u> is out of service.</p> <p>(2) <same as the present Rules></p> <p>203. – 205. <same as the present Rules></p> <p style="text-align: center;">Section 3 – 10 <same as the present Rules></p>	<p style="text-align: center;">Section 2 System Design</p> <p>201. <same as the present Rules></p> <p>202. Main source of electrical power (2019)</p> <p>1. <same as the present Rules></p> <p>2. Transformers and Converters</p> <p>(1) <u>Capacity and number of transformer and converters (2026)</u> 【See Guidance】</p> <p>Where essential services are supplied, the number and ratings of <u>transformers and/or converters</u> are to be sufficient to ensure the operation of essential services even when <u>one transformer of the transformers or converters</u> is out of service.</p> <p>(2) <same as the present Rules></p> <p>203. – 205. <same as the present Rules></p> <p style="text-align: center;">Section 3 – 10 <same as the present Rules></p>	<p>(Newly added)</p> <p>– Power converters used for essential services shall meet the same requirement as transformers.</p>

Present	Amendment	Remark
<p style="text-align: center;">Section 11 Internal Communications</p> <p>1101. – 1105. <same as the present Rules></p> <p>1106. Public address system [See Guidance]</p> <p>1. <u>It is to be loudspeaker installation enabling the broadcast of messages into all spaces where crew members or passengers, or both, are normally present, and to muster stations.</u></p> <p>2. <same as the present Rules></p> <p>3. <u>It is to allow for the broadcast of messages from the navigation bridge and such at least one other places (cargo control station, fire control station, engine control station, etc) on board the ship as the Society deems necessary.</u></p> <p>4. – 7. <same as the present Rules></p> <p style="text-align: center;">Section 12 – 14 <same as the present Rules></p>	<p style="text-align: center;">Section 11 Internal Communications</p> <p>1101. – 1105. <same as the present Rules></p> <p>1106. Public address system <i>(2026)</i> [See Guidance]</p> <p>1. It is to be loudspeaker installation enabling the broadcast of messages into all spaces where crew members or passengers, or both, are normally present, and to muster stations. Public address systems shall allow for the broadcast of messages from the navigation bridge and at least one additional onboard location such as cargo control station, fire control station, or engine control station, as deemed necessary by the Society, and the broadcast shall be delivered via loudspeaker installations to all spaces where crew members or passengers, or both, are normally present, and to muster stations.</p> <p>2. <same as the present Rules></p> <p>3. It is to allow for the broadcast of messages from the navigation bridge and such at least one other places (cargo control station, fire control station, engine control station, etc) on board the ship as the Society deems necessary.</p> <p>4. – 7. <u>3. – 6.</u> <same as the present Rules></p> <p style="text-align: center;">Section 12 – 14 <same as the present Rules></p>	<p>(Amended)</p> <p>- The requirements have been clearly amended and combine both 1106.1 and 1106.3.</p> <p>(Sequential renumbering) : 4. – 7. ⇒ 3. – 6.</p>

Present	Amendment	Remark																								
<p style="text-align: center;">Section 15 High Voltage Electrical Installations</p> <p>1501. – 1503. <same as the present Rules></p> <p>1504. Power Transformers</p> <p>1. <same as the present Rules></p> <p>2. Test voltage of High voltage test is given in Table 6.1.32.</p> <p>Table 6.1.32 High Voltage Test of Power Transformers</p> <table border="1" data-bbox="190 675 972 1002"> <thead> <tr> <th data-bbox="190 675 555 778">System nominal voltage(kV)</th> <th data-bbox="555 675 972 778">a.c. Test voltage of High voltage(kV), 1min. commercial frequency(50Hz or 60Hz)</th> </tr> </thead> <tbody> <tr> <td data-bbox="190 778 555 826">≤ 1.1</td> <td data-bbox="555 778 972 826">3</td> </tr> <tr> <td data-bbox="190 826 555 866">3.6</td> <td data-bbox="555 826 972 866">10</td> </tr> <tr> <td data-bbox="190 866 555 914">7.2</td> <td data-bbox="555 866 972 914">20</td> </tr> <tr> <td data-bbox="190 914 555 962">12</td> <td data-bbox="555 914 972 962">28</td> </tr> <tr> <td data-bbox="190 962 555 1002">15</td> <td data-bbox="555 962 972 1002">38</td> </tr> </tbody> </table> <p>1505. – 1507. <same as the present Rules></p> <p style="text-align: center;">Section 17 – 18 <same as the present Rules></p>	System nominal voltage(kV)	a.c. Test voltage of High voltage(kV), 1min. commercial frequency(50Hz or 60Hz)	≤ 1.1	3	3.6	10	7.2	20	12	28	15	38	<p style="text-align: center;">Section 15 High Voltage Electrical Installations</p> <p>1501. – 1503. <same as the present Rules></p> <p>1504. Power Transformers</p> <p>1. <same as the present Rules></p> <p>2. Test voltage of High voltage test is given in Table 6.1.32.</p> <p>Table 6.1.32 High Voltage Test of Power Transformers <i>(2026)</i></p> <table border="1" data-bbox="1037 675 1818 1002"> <thead> <tr> <th data-bbox="1037 675 1402 778">System nominal voltage Highest voltage for equipment(kV)</th> <th data-bbox="1402 675 1818 778">a.c. Test voltage of High voltage(kV), 1min. commercial frequency(50Hz or 60Hz)</th> </tr> </thead> <tbody> <tr> <td data-bbox="1037 778 1402 826">≤ 1.1</td> <td data-bbox="1402 778 1818 826">3</td> </tr> <tr> <td data-bbox="1037 826 1402 866">3.6</td> <td data-bbox="1402 826 1818 866">10</td> </tr> <tr> <td data-bbox="1037 866 1402 914">7.2</td> <td data-bbox="1402 866 1818 914">20</td> </tr> <tr> <td data-bbox="1037 914 1402 962">12</td> <td data-bbox="1402 914 1818 962">28</td> </tr> <tr> <td data-bbox="1037 962 1402 1002">15</td> <td data-bbox="1402 962 1818 1002">38</td> </tr> </tbody> </table> <p>1505. – 1507. <same as the present Rules></p> <p style="text-align: center;">Section 17 – 18 <same as the present Rules></p>	System nominal voltage Highest voltage for equipment(kV)	a.c. Test voltage of High voltage(kV), 1min. commercial frequency(50Hz or 60Hz)	≤ 1.1	3	3.6	10	7.2	20	12	28	15	38	<p>(Amended)</p> <p>- The terminology for high voltage test of power transformers has been clarified.</p>
System nominal voltage(kV)	a.c. Test voltage of High voltage(kV), 1min. commercial frequency(50Hz or 60Hz)																									
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Rules for the Classification of Steel Ships

(Development Review : For external opinion inquiry)

Part 6 Electrical Equipment and Control Systems

2025. 9.



Machinery Rule Development Team

Effective Date : 1 July 2026

(The contract date for ship construction)

Present	Amendment	Remark
<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 – 12 <same as the present Rules></p> <p style="text-align: center;">Section 13 Accumulator Batteries</p> <p>1301. – 1305. <same as the present Rules></p> <p>1306. Ventilation [See Guidance]</p> <p style="padding-left: 20px;">1. – 6. <same as the present Rules></p> <p style="padding-left: 20px;">7. <newly added></p> <p>1307. <same as the present Rules></p> <p>1308. Maintenance record of battery</p> <p style="padding-left: 20px;">(1) – (2) <same as the present Rules></p> <p style="padding-left: 20px;">(3) <u>Where vented type batteries replace valve-regulated sealed types, it is to be ensured that there is adequate ventilation and that the Society's requirements relevant to the location and installation of vented types batteries are complied with.</u></p> <p style="padding-left: 20px;">(4) <same as the present Rules></p> <p style="text-align: center;">Section 14 – 18 <same as the present Rules></p>	<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 – 12 <same as the present Rules></p> <p style="text-align: center;">Section 13 Accumulator Batteries</p> <p>1301. – 1305. <same as the present Rules></p> <p>1306. Ventilation [See Guidance]</p> <p style="padding-left: 20px;">1. – 6. <same as the present Rules></p> <p style="padding-left: 20px;">7. <u>Where vented type batteries and/or valve-regulated sealed type batteries are installed, it is to be ensured that there is adequate ventilation. For vented type batteries, the Society's requirements relevant to the location and installation are complied with.</u></p> <p>1307. <same as the present Rules></p> <p>1308. Maintenance record of battery</p> <p style="padding-left: 20px;">(1) — (2) 1. – 2. <same as the present Rules></p> <p style="padding-left: 20px;">(3) Where vented type batteries replace valve-regulated sealed types, it is to be ensured that there is adequate ventilation and that the Society's requirements relevant to the location and installation of vented types batteries are complied with.</p> <p style="padding-left: 20px;">(4) 3. <same as the present Rules></p> <p style="text-align: center;">Section 14 – 18 <same as the present Rules></p> <p style="text-align: center;">- 3 -</p>	<p>(Newly added)</p> <p>– Reflecting UR E18(Rev.2), and the requirement 1308. (3) has been relocated.</p> <p>(Amended)</p> <p>– Renumbering</p> <p>(Deleted)</p> <p>– Since sub-clause (3) concerns ventilation requirement, it has been relocated to 1306.</p>

Guidance Relating to the Rules for the Classification of Steel Ships

(Development Review : For external opinion inquiry)

Part 6 Electrical Equipment

2025. 09.



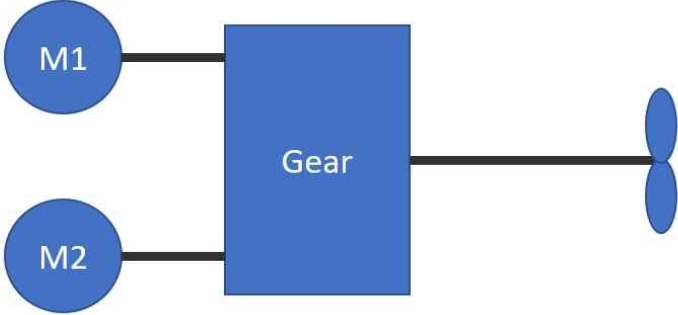
Machinery Rule Development Team

Effective Date : 1 January 2026

(The contract date for ship construction)

Present	Amendment	Note
<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 - 4 <same as the present Rules></p> <p style="text-align: center;">Section 5 Cables (2025)</p> <p>501. - 503. <same as the present Rules></p> <p>504. Installation of cables [See Rule]</p> <p>1. Precaution against fire protection</p> <p>(1) - (2) <same as the present Rules></p> <p>(3) In application to 504. 3 (3) of the Rules, the followings are to be complied with.</p> <p>(A) <same as the present Rules></p> <p>(B) In application to 504. 3 (3) of the Rules, the followings are to be complied with.</p> <p>(a) Cables being of a fire resistant type complying with IEC 60331-1:2018 for cables of greater than 20 mm overall diameter, <u>otherwise IEC 60331-21:1999+AMD1:2009 or IEC 60331-2:2018 for cables with an overall diameter not exceeding 20 mm, are installed and run continuous to keep the fire integrity within the high fire risk area. (see Fig 6.1.7 of the Guidance) (2022)</u></p> <p>(b) <same as the present Rules></p> <p><u>Systems that are self monitoring, fail safe or duplicated with cable runs as widely separated as is practicable may be exempted.</u></p>	<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 - 4 <same as the present Rules></p> <p style="text-align: center;">Section 5 Cables (2025)</p> <p>501. - 503. <same as the present Rules></p> <p>504. Installation of cables [See Rule]</p> <p>1. Precaution against fire protection</p> <p>(1) - (2) <same as the present Rules></p> <p>(3) In application to 504. 3 (3) of the Rules, the followings are to be complied with.</p> <p>(A) <same as the present Rules></p> <p>(B) In application to 504. 3 (3) of the Rules, the followings are to be complied with: Compliance with the requirements for cables and cable installation used for the purpose of (A) may be achieved by either of the following measures: (2026)</p> <p>(a) Cables being of a fire resistant type complying with IEC 60331-1:2018 for cables of greater than 20 mm overall diameter, otherwise IEC 60331-21:1999+AMD1:2009 or and IEC 60331-2:2018 for cables with an overall diameter not exceeding 20 mm, are installed and run continuous to keep the fire integrity within the high fire risk area. (see Fig 6.1.7 of the Guidance) (2022)</p> <p>(b) <same as the present Rules></p> <p>Systems that are self monitoring, fail safe or duplicated with cable runs as widely separated as is practicable may be exempted.</p> <p>(c) Systems that are self monitoring, fail safe or duplicated with cable runs as widely separated as is practicable may be exempted.</p>	<p>(Amended)</p> <p>- Requirements for cables and cable installation for electrical services required to be operable under fire conditions have been amended to reflect IACS UR E15 (Rev.5).</p>

Present	Amendment	Note
<p>(C) <same as the present Rules></p> <p>(D) The definition for “high fire risk areas” is the following:</p> <p>(a) Machinery spaces as defined by Pt 8, Ch 1, 103. 30 of the Rules, except spaces having little or no fire risk as defined by Pt 8, Ch 7, 102. 3 (2) (B) ⑩ of the Rules.</p> <p>(b) Spaces containing fuel treatment equipment and other highly flammable substances</p> <p>(c) Galley and Pantries containing cooking appliances</p> <p>(d) Laundry containing drying equipment</p> <p>(e) Spaces as defined by Pt 8, Ch 7, 102. 3 (2) (B) ⑧, ⑫, ⑭ of the Rules for ships carrying more than 36 passengers</p> <p><newly added></p> <p>(E) – (F) <same as the present Rules></p> <p>(4) <same as the present Rules></p> <p>2. – 5. <same as the present Rules></p> <p>506. – 511. <same as the present Rules></p>	<p>(C) <same as the present Rules></p> <p>(D) The definition for of “high fire risk areas” is, at a minimum, to be considered as follows: the following:</p> <p>(a) Machinery spaces as defined by Pt 8, Ch 1, 103. 30 of the Rules, except spaces having little or no fire risk as defined by Pt 8, Ch 7, 102. 3 (2) (B) ⑩ of the Rules. (Including the interpretations for tables 9.3, 9.4, 9.5, 9.6, 9.7 and 9.8 given in MSC/Circ.1120 as amended by MSC.1/Circ.1436 and MSC.1/Circ.1510)</p> <p>(b) Spaces containing fuel treatment equipment and other highly flammable substances</p> <p>(c) Galley and Pantries containing cooking appliances</p> <p>(d) Laundry containing drying equipment</p> <p>(e) Spaces as defined by Pt 8, Ch 7, 102. 3 (2) (B) ⑧, ⑫, ⑭ of the Rules for ships carrying more than 36 passengers <u>Cargo spaces except cargo tanks for liquids with flashpoint above 60°C and except cargo spaces exempted in accordance with SOLAS regulations II-2/10.7.1.2 or II-2/10.7.1.4; and</u></p> <p>(f) <u>Vehicle, ro-ro and special category spaces.</u></p> <p>(E) <u>In application to 504. 3 (2) of the Rules, the following spaces are to be as a minimum considered as “other high fire risk areas”:</u></p> <p>(a) <u>Cargo spaces except cargo tanks for liquids with flashpoint above 60°C and except cargo spaces exempted in accordance with SOLAS regulations II-2/10.7.1.2 or II-2/10.7.1.4;</u></p> <p>(b) <u>Vehicle, ro-ro and special category spaces;</u></p> <p>(c) <u>Spaces containing flammable liquids; and</u></p> <p>(d) <u>Pantries containing cooking appliances.</u></p> <p>(E) — (F) (F) – (G) <same as the present Rules></p> <p>(4) <same as the present Rules></p> <p>2. – 5. <same as the present Rules></p> <p>506. – 511. <same as the present Rules></p>	<p>(Amended)</p> <p>- The requirements for spaces that are to be considered as high fire risk areas have been amended to reflect IACS UR E15 (Rev.5).</p> <p>(Amended)</p> <p>- Requirements for spaces regarded as “other high fire risk areas” have been added to reflect IACS UI SC11 (Rev.2).</p>

Present	Amendment	Remark
<p style="text-align: center;">Section 6 - 15 <same as the present Rules> Section 16 Electric Propulsion Unit</p> <p>1603. <newly added></p>	<p style="text-align: center;">Section 6 - 15 <same as the present Rules> Section 16 Electric Propulsion Unit</p> <p>1603. Rotating Machines (2026)</p> <p><u>1. In application to 1603. 8 of the Rules, examples of acceptable arrangements for rotating machines are illustrated in Figures 6.1.8 to 6.1.10.</u></p> <div style="text-align: center;">  <p>The diagram shows a central blue rectangular block labeled 'Gear'. To its left, two blue circles labeled 'M1' and 'M2' are connected to the gear by horizontal lines. To the right of the gear, a horizontal line connects it to a blue propeller-like shape consisting of two curved blades.</p> </div> <p><u>Fig 6.2.8 Asynchronous machines or machines that can be de-excited</u></p>	<p>(Newly added)</p> <ul style="list-style-type: none"> - Incorporating IACS UI SC305(New Dec 2024) to Pt 6, Ch 1, 1603. 8, examples in the technical background of UI SC305 has been added to 1603. 1 of the Guidance.

Present	Amendment	Remark
<p>1604. <same as the present Rules></p> <p>Section 17 - 18 <same as the present Rules></p>	<div data-bbox="1160 268 1702 529" data-label="Diagram"> </div> <p data-bbox="1115 582 1736 614"><u>Fig 6.1.9 Permanent magnet machines with clutches</u></p> <div data-bbox="1196 695 1621 801" data-label="Diagram"> </div> <p data-bbox="1081 831 1780 890"><u>Fig 6.1.9 Asynchronous machines or machines that can be de-excited</u></p> <p>1604. <same as the present Rules></p> <p>Section 17 - 18 <same as the present Rules></p>	

Effective Date : 1 July 2026

(The contract date for ship construction)

Present	Amendment	Remark
<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 <same as the present Rules></p> <p style="text-align: center;">Section 2 System design</p> <p>201. General</p> <p>1. <same as the present Rules></p> <p>2. Earthing of electrical equipment [See Rule]</p> <p>(1) – (2) <same as the present Rules></p> <p>(3) In a power distribution system where one line of the system is earthen and normally of non-current carrying line, the earthing connection is to be as specified in (2) above. However, the upper limit value <u>64</u>mm² of the cross-sectional area of the earthing conductor given in <u>Table 6.1.7</u> of the Guidance does not apply.</p> <p>(4) – (5) <same as the present Rules></p> <p>3. – 4. <same as the present Rules></p> <p>202. <same as the present Rules></p>	<p style="text-align: center;">CHAPTER 1 ELECTRICAL EQUIPMENT</p> <p style="text-align: center;">Section 1 <same as the present Rules></p> <p style="text-align: center;">Section 2 System design</p> <p>201. General</p> <p>1. <same as the present Rules></p> <p>2. Earthing of electrical equipment [See Rule]</p> <p>(1) – (2) <same as the present Rules></p> <p>(3) In a power distribution system where one line of the system is earthen and normally of non-current carrying line, the earthing connection is to be as specified in (2) above. However, the upper limit value 64 <u>70</u>mm² of the cross-sectional area of the earthing conductor given in <u>Table 6.1.7</u> of the Guidance does not apply. <i>(2026)</i></p> <p style="text-align: center;"><u>Table 6.1.7 <see the next page></u></p> <p>(4) – (5) <same as the present Rules></p> <p>3. – 4. <same as the present Rules></p> <p>202. <same as the present Rules></p>	<p>(Amended)</p> <p>– According to IEC 60092-352:2005 Table 2, cross-sectional area or the earthing conductor has been amended.</p>

⟨Present⟩

Table 6.1.7 Sizes of Earthing Conductor

Kind of earthing conductor	Conductor's sectional area of current-carrying parts	Minimum sectional area of copper earthing conductor
1. - 2. ⟨same as the present Rules⟩		
3. Single earthing conductor	(a) $\geq 3\text{mm}^2$ or less	1(b) Over $3\text{mm}^2 \sim 125\text{mm}^2$
	(b) Over $3\text{mm}^2 \sim 125\text{mm}^2$	50% of conductor's sectional area of current-carrying parts, but minimum 3mm^2
	(c) over 125mm^2	64mm^2

⟨Amendments⟩

Table 6.1.7 Sizes of Earthing Conductor (2026)

Kind of earthing conductor	Conductor's sectional area of current-carrying parts	Minimum sectional area of copper earthing conductor
1. - 2. ⟨same as the present Rules⟩		
3. Single earthing conductor	(a) $\geq 2.5\text{mm}^2$ or less	100% of conductor's sectional area of current-carrying parts, but minimum 1.5mm^2 in case of lead wire, and minimum $\geq 2.5\text{mm}^2$ in case of the others
	(b) Over $\geq 2.5\text{mm}^2 \sim 125$ 120mm^2	50% of conductor's sectional area of current-carrying parts, but minimum $\geq 4\text{mm}^2$
	(c) over 125 120 mm^2	64 70mm^2

Present	Amendment	Remark
<p>203. Emergency source of electrical power</p> <p>1. <same as the present Rules></p> <p>2. Capacity of emergency source of power [See Rule]</p> <p>(1) <same as the present Rules></p> <p>(2) In application to 203. 2 (2) (E) (a) of the Rules, "Internal communication equipment" means the following:</p> <p>(A) <u>Engine telegraph</u></p> <p>(B) <u>Communication equipment between the navigation bridge and the main engine control stations other than main control station</u></p> <p>(C) <u>Engineers' alarm</u></p> <p>(D) <u>Communication other than general telephone between the navigation bridge and the steering gear compartment</u></p> <p>(E) <u>Other internal communication equipment as deemed necessary by the Society</u></p> <p>(a) <u>In case of passenger ships, the following requirements are to be complied with.</u></p> <p>(i) <u>The means of communication which is provided between the officer of the watch and the person responsible for closing any watertight door which is not capable of being closed from a central control station.</u></p> <p>(ii) <u>The public address system or other effective means of communication which is provided throughout the accommodation, public and service spaces.</u></p> <p>(iii) <u>The means of communication which is provided between the navigating bridge and the main fire control station.</u></p>	<p>203. Emergency source of electrical power</p> <p>1. <same as the present Rules></p> <p>2. Capacity of emergency source of power [See Rule]</p> <p>(1) <same as the present Rules></p> <p>(2) In application to 203. 2 (2) (E) (a) of the Rules, "Internal communication equipment" means the following: <i>(2026)</i></p> <p>(A) Engine telegraph</p> <p>(B) Communication equipment between the navigation bridge and the main engine control stations other than main control station</p> <p>(C) Engineers' alarm</p> <p>(D) Communication other than general telephone between the navigation bridge and the steering gear compartment</p> <p>(E) Other internal communication equipment as deemed necessary by the Society</p> <p>(a) In case of passenger ships, the following requirements are to be complied with.</p> <p>(i) The means of communication which is provided between the officer of the watch and the person responsible for closing any watertight door which is not capable of being closed from a central control station.</p> <p>(ii) The public address system or other effective means of communication which is provided throughout the accommodation, public and service spaces.</p> <p>(iii) The means of communication which is provided between the navigating bridge and the main fire control station.</p>	<p>(Newly added)</p> <p>- Reflecting IACS Rec. 187 (New May 2025), the requirements for internal communication equipment that should be considered as required in an emergency have been amended.</p>

Present	Amendment	Remark
	<p>(A) <u>For both passenger and cargo ships</u></p> <p>(a) <u>The means of communication which is provided between the navigating bridge and the steering gear compartment.</u></p> <p>(b) <u>The means of communication which is provided between the navigating bridge and the position in the machinery space and control room from which the engines are normally controlled(including Engine telegraph).</u></p> <p>(c) <u>The means of communication which is provided between the bridge and the radio telegraph or radio telephone stations, where separately arranged outside the bridge.</u></p> <p>(d) <u>The general emergency alarm system as required by SOLAS III/6.4.2</u></p> <p>(e) <u>The public address system required by SOLAS III/6.4.2 for cargo ships and the public address system required by SOLAS III/6.5.4 for passenger ships.</u></p> <p>(B) <u>Additionally for passenger ships only</u></p> <p>(a) <u>The means of communication which is provided between the officer of the watch and the person responsible for closing any watertight door which is not capable of being closed from a central control station as defined in SOLAS II-2/3.9.</u></p> <p>(b) <u>The means of communication which is provided between the navigating bridge and the fire control station.</u></p> <p>(c) <u>The means of communication which is provided between the safety centre, the central control station, the navigation bridge, the engine control room, the storage room(s) for fire extinguishing system(s) and fire equipment lockers, as required by SOLAS II-2/23.5.</u></p> <p>(d) <u>Internal communications in support of fire-fighting as required for passenger and crew notification and evacuation, as required by SOLAS II-2/22.3.1.2.</u></p>	<p>(Newly added)</p> <p>- Reflecting IACS Rec. 187 (New May 2025), the requirements for internal communication equipment that should be considered as required in an emergency have been amended.</p>

Present	Amendment	Remark
<p>(3) - (4) <same as the present Rules> 3. - 5. <same as the present Rules></p> <p>204. - 205. <same as the present Rules></p> <p style="text-align: center;">Section 3 - 12 <same as the present Rules></p> <p style="text-align: center;">Section 13 Accumulator Batteries</p> <p>1301. - 1305. <same as the present Rules></p> <p>1306. Ventilation 【See Rule】</p> <p>1. <u>The capacity of exhaust ventilation of a battery compartment with vented type batteries is to be of the value obtained by the following formula or more. However, the ventilation rate for compartments containing valve-regulated sealed batteries may be reduced to 25% of that given by the following formula. (2018)</u></p> <p>(1) <newly added> $Q = 110 \times I \times n$ (l/h)</p> <p>Q : Exhaust capacity I (A) : Maximum current delivered by the charging equipment during gas formation, but not less than 25% of the maximum obtainable charging current in amperes n : Number of cells in series</p>	<p>(3) - (4) <same as the present Rules> 3. - 5. <same as the present Rules></p> <p>204. - 205. <same as the present Rules></p> <p style="text-align: center;">Section 3 - 12 <same as the present Rules></p> <p style="text-align: center;">Section 13 Accumulator Batteries</p> <p>1301. - 1305. <same as the present Rules></p> <p>1306. Ventilation 【See Rule】</p> <p>1. <u>The capacity of exhaust ventilation of a battery compartment with vented type batteries is to be of the value obtained by the following formula or more. However, the ventilation rate for compartments containing valve-regulated sealed batteries may be reduced to 25% of that given by the following formula. (2018) The ventilation arrangements for installation of batteries which have charging power higher than 2 kW are to be such that the quantity of air expelled is at least equal to: (2026)</u></p> <p>(1) Vented type batteries $Q = 110 \times I \times n$ (l/h)</p> <p>Q : Exhaust capacity I (A) : Maximum current delivered by the charging equipment during gas formation, but not less than 25% of the maximum obtainable charging current in amperes n : Number of cells in series</p>	

Present	Amendment	Remark
<p>(2) - (3) <newly added></p> <p>2. - 3. <same as the present Rules></p> <p>Section 14 - 18 <same as the present Rules></p>	<p>(2) <u>Valve-regulated sealed type batteries</u> <u>The ventilation rate for compartments containing valve-regulated sealed type batteries may be reduced to 25 per cent of that given above.</u></p> <p>(3) <u>As an alternative to (1), other industrial standards may be utilized to calculate ventilation rate, for example, section 7.2 and 7.3 of IEC 62485-2:2010, or section CC.2 of Annex CC to IEC 62040-1:2017, as appropriate.</u></p> <p>2. - 3. <same as the present Rules></p> <p>Section 14 - 18 <same as the present Rules></p>	<p>(Newly added)</p> <p>- Incorporation of UR E18(Rev,2)</p>