

# Amendments of the Guidance Relating to the Rules for the Classification of Steel Ships

(Development Review : For external opinion inquiry)

## Part 6 Electrical Equipment and Control Systems



2024. 1.

Machinery Rule Development Team

Effective Date : 1 July 2024

(The contract date for ship construction)

Present	Amendment	Note
<p style="text-align: center;"><b>CHAPTER 1 ELECTRICAL EQUIPMENT</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p><b>101. General</b></p> <p><b>1. Application</b></p> <p>(1) – (4) &lt;same as the present Rules&gt;</p> <p>(5) Electrical equipment on board the ships specified in (4) above are to be in accordance with (1) through (3) above, and the following:</p> <p>(A) Ships specified in (4) (A) above</p> <p>(a) – (g) &lt;same as the present Rules&gt;</p> <p>(h) In application to <b>202.</b> and <b>1601. 3</b> of the Rules, a <u>generator</u> may be provided with 1 set, except ships having class notation UMA and ships with coastal and the farther service. <i>(2019)</i></p> <p>(i) &lt;same as the present Rules&gt;</p> <p>(j) The requirements in <b>203.</b> of the Rules do not apply. However emergency source of electrical power capable of supplying simultaneously the following services at least for 3 hours (for a period of 30 minutes with continuous operation for the below (iv) &amp; (v) system), is to be provided. <u>Notwithstanding these requirements, ships subject to Korean Ship Safety Act are to comply with the relevant requirements of the Korean Ship Safety Act. (2018)</u></p> <p>(i) All communication equipment required in an emergency</p> <p>(ii) Navigation lights and signal lights (not under command lights, anchor lights)</p> <p>(iii) Emergency lights installed in the following station</p> <p>① Embarkation station of life boats, life rafts, etc. and over the sides</p> <p>② Accommodation alleyways, stairways and exits</p> <p>③ Machinery spaces and spaces installed emergency source of electrical power</p> <p>④ Control stations for main engine</p>	<p style="text-align: center;"><b>CHAPTER 1 ELECTRICAL EQUIPMENT</b></p> <p style="text-align: center;"><b>Section 1 General</b></p> <p><b>101. General</b></p> <p><b>1. Application</b></p> <p>(1) – (4) &lt;same as the present Rules&gt;</p> <p>(5) Electrical equipment on board the ships specified in (4) above are to be in accordance with (1) through (3) above, and the following:</p> <p>(A) Ships specified in (4) (A) above</p> <p>(a) – (g) &lt;same as the present Rules&gt;</p> <p>(h) In application to <b>202.</b> and <b>1601. 3</b> of the Rules, a <u>generator, transformer and converter</u> may be provided with 1 set, except ships having class notation UMA and ships with coastal and the farther service. <i>(2024)</i></p> <p>(i) &lt;same as the present Rules&gt;</p> <p>(j) The requirements in <b>203.</b> of the Rules do not apply. However emergency source of electrical power capable of supplying simultaneously the following services at least for 6 hours (for a period of 30 minutes with continuous operation for the below (iv) &amp; (v) system), is to be provided. <del>Notwithstanding these requirements, ships subject to Korean Ship Safety Act are to comply with the relevant requirements of the Korean Ship Safety Act. (2024)</del></p> <p>(i) All communication equipment required in an emergency</p> <p>(ii) Navigation lights and signal lights (not under command lights, anchor lights)</p> <p>(iii) Emergency lights installed in the following station</p> <p>① Embarkation station of life boats, life rafts, etc. and over the sides</p> <p>② Accommodation alleyways, stairways and exits</p> <p>③ Machinery spaces and spaces installed emergency source of electrical power</p> <p>④ Control stations for main engine</p>	<p>(Amended)</p> <p>– It has been amended to expand the scope to transformers and converters for main source,</p> <p>(Deleted)</p> <p>– It has been deleted for electrical equipment of the Rules to comply with Korean Ships Safety Act</p> <p>(Refer to No.73 of the Korean Ships Safety Act and No.4/94 of the Enforcement rule of Korean Ships Safety Act</p>

Present	Amendment	Note
<p>(iv) Intermittent operation of the daylight signalling lamp, the ship's whistle, and all internal signals that are required in an emergency.</p> <p>(v) The fire detection system and manually operated call point.</p> <p>(k) – (q) &lt;same as the present Rules&gt;</p> <p>(B) – (D) &lt;same as the present Rules&gt;</p> <p>(6) – (10) &lt;same as the present Rules&gt;</p> <p><b>2. – 3. &lt;same as the present Rules&gt;</b></p> <p><b>102. – 103. &lt;same as the present Rules&gt;</b></p> <p style="text-align: center;"><b>Section 2 System design</b></p> <p><b>201. General</b></p> <p><b>1. Construction and installation</b></p> <p>(1) &lt;same as the present Rules&gt;</p> <p>(2) Installation and protective enclosure</p> <p>(A) In a case where the characteristic letter IP showing the protection type of enclosures in accordance with the IEC 60529 is used for the protective enclosures of electrical equipment, the following requirements are to be complied with.</p> <p>(a) – (b) &lt;same as the present Rules&gt;</p> <p>(c) Application of degree of protection</p> <p>As a guide for the selection of degree of protection for the electrical equipment on the basis of the circumstances of the place of installation, the requirements given in <b>Table 6.1.6</b> of the Guidance are to be taken into consideration.</p> <p>(3) &lt;same as the present Rules&gt;</p> <p><b>2. – 4. &lt;same as the present Rules&gt;</b></p> <p><b>202. – 205. &lt;same as the present Rules&gt;</b></p> <p><b>Section 3 – 18 &lt;same as the previous Rules&gt;</b></p>	<p>(iv) Intermittent operation of the daylight signalling lamp, the ship's whistle, and all internal signals that are required in an emergency.</p> <p>(v) The fire detection system and manually operated call point.</p> <p>(k) – (q) &lt;same as the present Rules&gt;</p> <p>(B) – (D) &lt;same as the present Rules&gt;</p> <p>(6) – (10) &lt;same as the present Rules&gt;</p> <p><b>2. – 3. &lt;same as the present Rules&gt;</b></p> <p><b>102. – 103. &lt;same as the present Rules&gt;</b></p> <p style="text-align: center;"><b>Section 2 System design</b></p> <p><b>201. General</b></p> <p><b>1. Construction and installation</b></p> <p>(1) &lt;same as the present Rules&gt;</p> <p>(2) Installation and protective enclosure</p> <p>(A) In a case where the characteristic letter IP showing the protection type of enclosures in accordance with the IEC 60529 is used for the protective enclosures of electrical equipment, the following requirements are to be complied with.</p> <p>(a) – (b) &lt;same as the present Rules&gt;</p> <p>(c) Application of degree of protection</p> <p>As a guide for the selection of degree of protection for the electrical equipment on the basis of the circumstances of the place of installation, the requirements given in <b>Table 6.1.6</b> of the Guidance are to be taken into consideration.</p> <p><b>Table 6.1.6 &lt;see the next page&gt;</b></p> <p>(3) &lt;same as the present Rules&gt;</p> <p><b>2. – 4. &lt;same as the present Rules&gt;</b></p> <p><b>202. – 205. &lt;same as the present Rules&gt;</b></p> <p><b>Section 3 – 18 &lt;same as the previous Rules&gt;</b></p>	<p>(Amended)</p> <p>– It has been amended for the selection of the degree for the electrical equipment installed the area to comply with the Pt 8 of the Guidance which has been applied to UR 20.</p>

## 〈Present〉

Table 6.1.6 Application of Degree of Protection (2020)

Example of location	Condition of location	Switchboard, etc <sup>(1)</sup>	Generators	Motors	Transformers <sup>(7)</sup> , Converters	Lighting fixtures	Heating appliances	Accessories <sup>(2)</sup>
〈same as the present Rules〉								
Engine rooms and boiler rooms above floor plates <sup>(5)</sup>	Danger of dripping water and(or) moderate mechanical damage	IP 22	IP 22	IP 22	IP 22	IP 22	IP 22	IP 44
〈same as the present Rules〉								
(NOTES) (1) - (4) 〈same as the present Rules〉 (5) Where the equipment is located within areas protected by local fixed pressure water spraying or water-mist fire extinguishing system and its adjacent areas. (6) - (7) 〈same as the present Rules〉								

## 〈Amendments〉

Table 6.1.6 Application of Degree of Protection (2024)

Example of location	Condition of location	Switchboard, etc <sup>(1)</sup>	Generators	Motors	Transformers <sup>(7)</sup> , Converters	Lighting fixtures	Heating appliances	Accessories <sup>(2)</sup>
〈same as the present Rules〉								
Engine rooms and boiler rooms above floor plates <sup>(5)</sup>	Danger of dripping water and(or) moderate mechanical damage	IP 22	IP 22	IP 22	IP 22	IP 22	IP 22	IP 44
〈same as the present Rules〉								
(NOTES) (1) - (4) 〈same as the present Rules〉 (5) Where the equipment is located within areas protected by local fixed pressure water spraying or water-mist fire extinguishing system and its adjacent areas. <u>it is to be complied with Pt 8 Ch 8 406. 3 of the Guidance.</u> (6) - (7) 〈same as the present Rules〉								