

Guidance for Prevention System of Pollution from Ships

(Development Review : For External opinion inquiry)

2021. 01.



Machinery Rule Development Team

Enter into force on 1 July 2021

(the date of which contracts for construction are signed)

Present	Amendment	Reason
<p data-bbox="129 272 907 347">Pt 1 of Rules for the Classification of Steel Ships</p> <p data-bbox="152 453 884 485">Annex 1-15 Requirements for CLEAN Notation</p> <p data-bbox="141 692 259 718">1. General</p> <p data-bbox="174 735 922 884">(1) This Annex applies to the ships classed with the Society or intended to be registered under the Society, which intended to comply with the environmental protection requirements for design, construction and operation for obtaining the relevant notation.</p> <p data-bbox="174 1075 922 1134">(2) The notation prescribed in (1) are classified into the followings.</p> <p data-bbox="215 1155 922 1214">(A) CLEAN1 notation: Ships complying with requirements of convention specified in Par 3</p> <p data-bbox="215 1219 922 1278">(B) CLEAN2 notation: Ships complying with additional requirements of the Society specified in Par 4</p> <p data-bbox="215 1283 922 1342">(C) CLEAN3 notation: Ships complying with additional requirements in Par 5</p>	<p data-bbox="999 272 1715 347">Guidance for Prevention System of Pollution from Ships</p> <p data-bbox="965 459 1749 534">CHAPTER 1 Environmental Protection System</p> <p data-bbox="1211 608 1503 633">Section 1 General</p> <p data-bbox="954 683 1111 708">101. General</p> <p data-bbox="981 730 1762 879">1. This Guidance applies to the ships classed with the Society or intended to be registered under the Society with the notation, which intended to comply with the environmental protection requirements for design, construction and operation for obtaining the relevant notation.</p> <p data-bbox="981 900 1762 1048">2. <u>This Guidance determines the level of the environmental protection system of ships based on the application in viewpoints of marine pollution prevention, air pollution prevention, preventing destruction of the ecosystem, ship recycling, and safety management systems.</u></p> <p data-bbox="976 1064 1762 1283">3. The notation prescribed in (1) are classified into the followings.</p> <p data-bbox="1016 1102 1762 1161">(1) CLEAN1 notation: Ships complying with requirements in <u>Sec. 2.</u></p> <p data-bbox="1016 1166 1762 1225">(2) CLEAN2 notation: Ships complying with additional requirements of the Society in <u>Sec. 3.</u></p> <p data-bbox="1016 1230 1762 1289">(3) CLEAN3 notation: Ships complying with additional requirements of the Society in <u>Sec. 4.</u></p>	<p data-bbox="1794 699 2051 991">- Part 1 Annex 1-15 (requirements for CLEAN notation) transferred to a separate guideline (Guidance for Prevention System of Pollution from Ships).</p>

Present	Amendment	Reason
<p>2. Survey</p> <p>(1) Classification survey</p> <p>(A) The documents specified in applicable requirements for each notation are to be submitted to the Society.</p> <p>(B) The appropriate installation of all relevant equipment specified in applicable requirements for each notation and the proper provision on board of all relevant documents, procedures and record books are to be confirmed.</p> <p>(2) Periodical survey</p> <p><i>⟨Same as the present⟩</i></p> <p>3. CLEAN1 notation</p> <p><u>For obtaining CLEAN1 notation, the ship is to be in compliance with applicable requirements of MARPOL Annex I, II, IV, V and VI and AFS convention.</u></p>	<p>102. Survey</p> <p>1. Classification survey</p> <p>(1) The documents specified in applicable requirements for each notation are to be submitted to the Society. <u>Certificates are to be issued for ships for conformation to the Convention. In case of ships which is not applied the Convention, statement of compliance from the Society can be provided based on submitted data and documents to confirm compliance with requirements.</u></p> <p>(2) The appropriate installation of all relevant equipment specified in applicable requirements for each notation and the proper provision on board of all relevant documents, procedures and record books are to be confirmed.</p> <p>2. Periodical survey</p> <p><i>⟨Same as the present⟩</i></p> <p style="text-align: center;">Section 2 Environmental Protection System (Phase 1)</p> <p>201. General</p> <p>1. <u>For obtaining CLEAN1 notation, the ship is to be in compliance with applicable requirements of MARPOL Annex I, II, IV, V and VI and AFS, BWM convention or more equivalent to those conventions.</u></p> <p>2. <u>The “CLEAN1” notation can be applied to the ships when it is complied with this section.</u></p> <p>3. <u>The requirements in this section apply to ships for arranging phase 1 of environmental protection system. Ships are to be available the documents of Table 1.2.1 onboard.</u></p>	<p>-The certificate or statement of compliance from the Society required for application of CLEAN2 notation has been revised to be required by CLEAN1. (∴ CLEAN1 shall comply with the convention too.)</p>

Present	Amendment	Reason																						
<p>⟨New⟩</p>	<p>202. Marine pollution prevention</p> <p>1. <u>All oil tankers of 5,000 tons deadweight or more are to be classed with Emergency Response Service System of the Society or any society which is subject to verification of compliance with QSCS(Quality System Certification Scheme) of IACS.</u></p> <p>203. Air pollution prevention</p> <p>1. <u>The emission of nitrogen oxides from engine is to be complied with MARPOL Annex VI Reg.13.</u></p> <p>2. <u>The sulphur content of fuel oil used or carried for use on board a ship is to be complied with MARPOL Annex VI Reg.14. Alternatively, ratio of emission sulphur dioxide per carbon dioxide (SO₂(ppm)CO₂(% v/v)) is to be complied with IMO Res.MEPC.259(68).</u></p> <p>204. Preventing destruction of the ecosystem</p> <p>1. <u>The ships are to have BWT and/or BWE notation for ballast water management.</u></p> <p>Table 1.2.1 Documentation requirements for CLEAN1 notation</p> <table border="1" data-bbox="497 817 1740 1449"> <thead> <tr> <th></th> <th data-bbox="497 817 1276 873"><u>Items</u></th> <th data-bbox="1276 817 1740 873"><u>Certificate/Statement of Compliance</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="497 873 669 1150" rowspan="4"><u>Marine pollution prevention</u></td> <td data-bbox="669 873 1276 928">Oil (related to MARPOL Annex I)</td> <td data-bbox="1276 873 1740 928">IOPP Certificate</td> </tr> <tr> <td data-bbox="669 928 1276 1011">Noxious Liquid Substances (related to MARPOL Annex II)</td> <td data-bbox="1276 928 1740 1011">NLS Certificate or IBC/BCH Statement of Compliance</td> </tr> <tr> <td data-bbox="669 1011 1276 1094">Sewage (related to MARPOL Annex IV)</td> <td data-bbox="1276 1011 1740 1094">ISPP Certificate or Statement of Compliance</td> </tr> <tr> <td data-bbox="669 1094 1276 1150">Garbage (related to MARPOL Annex V)</td> <td data-bbox="1276 1094 1740 1150"></td> </tr> <tr> <td data-bbox="497 1150 669 1286" rowspan="2"><u>Air pollution prevention</u></td> <td data-bbox="669 1150 1276 1206">Emission to air (related to MARPOL Annex VI)</td> <td data-bbox="1276 1150 1740 1206">IAPP Certificate</td> </tr> <tr> <td data-bbox="669 1206 1276 1286">Energy Efficiency (related to MARPOL Annex VI)</td> <td data-bbox="1276 1206 1740 1286">IEE Certificate/ Statement of Compliance</td> </tr> <tr> <td data-bbox="497 1286 669 1449" rowspan="2"><u>Preventing destruction of ecosystem</u></td> <td data-bbox="669 1286 1276 1369">Anti-Fouling Systems (related to AFS Convention)</td> <td data-bbox="1276 1286 1740 1369">IAFS Certificate/ Statement of Compliance</td> </tr> <tr> <td data-bbox="669 1369 1276 1449">Ballast water management (related to BWM Convention)</td> <td data-bbox="1276 1369 1740 1449">IBWM Certificate/ Statement of Compliance</td> </tr> </tbody> </table>		<u>Items</u>	<u>Certificate/Statement of Compliance</u>	<u>Marine pollution prevention</u>	Oil (related to MARPOL Annex I)	IOPP Certificate	Noxious Liquid Substances (related to MARPOL Annex II)	NLS Certificate or IBC/BCH Statement of Compliance	Sewage (related to MARPOL Annex IV)	ISPP Certificate or Statement of Compliance	Garbage (related to MARPOL Annex V)		<u>Air pollution prevention</u>	Emission to air (related to MARPOL Annex VI)	IAPP Certificate	Energy Efficiency (related to MARPOL Annex VI)	IEE Certificate/ Statement of Compliance	<u>Preventing destruction of ecosystem</u>	Anti-Fouling Systems (related to AFS Convention)	IAFS Certificate/ Statement of Compliance	Ballast water management (related to BWM Convention)	IBWM Certificate/ Statement of Compliance	<p>- Requirement for CLEAN2 notation in Table 3 moved to CLEAN1</p> <p>- Adding requirement to apply BWT and/or BWE notation with respect to ballast water management convention.</p>
	<u>Items</u>	<u>Certificate/Statement of Compliance</u>																						
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Present	Amendment	Reason
<p>4. CLEAN2 notation</p> <p>For obtaining CLEAN2 notation, the ship is to be in compliance with documents requirements of Table 1 and applicable requirements of Table 3 for applicable convention in addition to Par 3.</p> <p>Table 3 Requirements for CLEAN2 notation</p> <p>(in 'Requirements' cell)</p> <p>1. For machinery spaces, the following requirements are to be complied with:</p> <p><i><Same as the present></i></p> <p>3. <u>Ships are to be classed with Emergency Response Service System of the Society or any society which is subject to verification of compliance with QSCS(Quality System Certification Scheme) of IACS.</u></p>	<p align="center">Section 3 Environmental Protection System (Phase 2)</p> <p>301. General</p> <p>1. For applying phase 2 of environmental protection system, in addition to those in Sec.2, it shall be complied with requirements in this section. <u>In addition, it shall be complied with the requirements of the relevant agreement with respect to ship recycling, and the ship shall be managed in accordance with the international safety management code.</u></p> <p>2. <u>The "CLEAN2" notation can be applied to the ships when it is complied with this section.</u></p> <p>3. Ships applied CLEAN2 notation are to be available the documents of Table 1.3.1 onboard.</p> <p>302. Marine pollution prevention</p> <p>1. For machinery spaces, the following requirements are to be complied with:</p> <p><i><Same as the present></i></p> <p>3. <u>All oil tankers of 5,000 tons deadweight or more are to have ERS notation.</u></p>	<p>- To state difference between CLEAN2 and CLEAN1</p> <p>- Transferring to text rather than Table 3</p> <p>- Moving Current requirement to CLEAN1, and then requesting ERS notation for CLEAN2</p>

Present	Amendment	Reason
<p>5. CLEAN3 notation</p> <p><u>For obtaining CLEAN3 notation, the ship is to be in compliance with additional documents requirements of Table 2 and additional requirements of Table 4 in addition to Par 4.</u></p> <p>Table 4 Additional requirements for CLEAN3 notation</p> <p>(in 'Requirements' cell)</p> <ol style="list-style-type: none"> 1. Oil filtering equipment is to be provided with automatic stopping arrangements are to be provided for any discharge of oily mixtures when the oil content in the effluent exceeds 5 ppm. 2. Lubricating oil tanks and hydraulic oil tanks are to comply with the requirements of MARPOL Annex I/12A. <p><i><Same as the present></i></p>	<p>Section 4 Environmental Protection System (Phase 3)</p> <p>401. General</p> <ol style="list-style-type: none"> 1. <u>For applying phase 3 of environmental protection system, in addition to those in Sec.3, it shall be complied with requirements in this section.</u> 2. The "CLEAN3" notation can be applied to the ships when it is complied with this section. 3. Ships applied CLEAN3 notation are to be available the documents of Table 1.4.1 onboard. <p>402. Marine pollution prevention</p> <ol style="list-style-type: none"> 1. Oil filtering equipment is to be provided with automatic stopping arrangements are to be provided for any discharge of oily mixtures when the oil content in the effluent exceeds 5. 2. Lubricating oil tanks and hydraulic oil tanks are to comply with the requirements of MARPOL Annex I/12A. <p><i><Same as the present></i></p>	<p>- Transferring to text rather than Table 4</p>

Present	Amendment	Reason
<p><New></p>	<p style="text-align: center;">CHAPTER 2 Nitrogen oxides Emission Abatement System</p> <p style="text-align: center;"><u>Section 1 General</u></p> <p>101. General</p> <p>1. <u>This Chapter applies to nitrogen oxide emission abatement system to control of emitted amount of nitrogen oxides (NOx) to the atmosphere through engines installed on ships.</u></p> <p>2. <u>Amount of emitted nitrogen oxides via nitrogen oxide emission abatement system is to be complied with Reg.13 of MARPOL Annex VI, taking into account operating environment of in-stalled ship.</u></p> <p>3. <u>Nitrogen oxide emission abatement system can comply with the designed amount of emission in accordance with above 2 by passing selective catalytic reduction device, exhaust gas recirculation system, or adjusting combustion condition.</u></p> <p>102. Notation</p> <p>1. <u>Ships equipped with the nitrogen oxides emission abatement system specified in 101. 3 shall be applied the “CEmN” notation.</u></p> <p>2. <u>Additional notation is to be applied in accordance with mechanism of nitrogen oxides emission abatement system as follow:</u></p> <ul style="list-style-type: none"> - <u>CEmN-SCR : Ships equipped with selective catalytic reduction system conformed to Sec. 2</u> - <u>CEmN-EGR : Ships equipped with exhaust gas recirculation system conformed to Sec. 3</u> - <u>CEmN-E&F : Ships reducing emission of nitrogen oxides by adjusting combustion environment and/or fuel used in engines without a separate nitrogen oxides emission abatement</u> 	<p>- The content in Guidance for Exhaust gas Emission abatement system is rearranged to Nitrogen oxides Emission Abatement System and Sulphur oxides Emission Abatement System</p> <p>- Changing the notation EEAS, to “CEmN” and “CEmS” for distinguishing each other (CEm:Control of Emission / Texts invented by referreing MARPOL convention.)</p>

Present	Amendment	Reason
<p><i><New></i></p>	<p>3. <u>When multiple nitrogen oxides emission abatement system are applied, the additional notation in 102. 2 is to be added.</u></p> <p><u>For example, notation "CEmN-E&F, EGR" is applied, if ship is complied with the Reg.13.4(Tier II) of MARPOL Annex VI by adjusting combustion environment and/or fuel used in engines and the Reg.13.5(Tier III) of MARPOL Annex VI is complied by using exhaust gas recirculation system.</u></p>	<p>- Adding description for the case of satisfying Tier II using LNG fuel.</p>

Present	Amendment	Reason
<p style="text-align: center;">Guidance for Exhaust gas Emission Abatement System</p> <p style="text-align: center;"><u>Section 1 Selective Catalytic Reduction system Using Ureaor Ammonia Solutions as the Reductant Agents(SCR)</u></p> <p>101. General</p> <p>1. Application</p> <p><i><Same as the present></i></p> <p>(4) Where a ship designed for the reduction of NOx emissions by the use of Selective Catalytic Reduction system is designed, is to be constructed and tested in accordance with this Guidance, the <u>EEAS-SCR</u> notation is to be assigned.</p>	<p style="text-align: center;">Guidance for Prevention System of Pollution from Ships</p> <p style="text-align: center;"><u>Section 2 Selective Catalytic Reduction system Using Ureaor Ammonia Solutions as the Reductant Agents(SCR)</u></p> <p>201. General</p> <p>1. Application</p> <p><i><Same as the present></i></p> <p>(4) Where a ship designed for the reduction of NOx emissions by the use of Selective Catalytic Reduction system is designed, is to be constructed and tested in accordance with this Guidance, the <u>EEASCEmN-SCR</u> notation is to be assigned.</p> <p><i>(hereinafter, revision of "EEAS-SCR → "CEmN-SCR")</i></p>	<p>- Simplifying the title</p>

Present	Amendment	Reason
<p><i><Same as the present></i></p> <p>104. System design</p> <p>1. General</p> <p><i><Omitted></i></p> <p>2. SCR system</p> <p>(1) SCR chamber</p> <p>(A) SCR chamber is to be arranged so that the back pressure of the exhaust pipes connecting exhaust pipe end of the stack to the engine does not exceed the allowable back pressure recommended by the engine manufacturer.</p> <p>(B) Changeable device of exhaust gas piping</p> <p>(a) In cases where exhaust gas piping system of the engines can be changed over from ordinary exhaust gas piping to piping connected to the SCR system, <u>the branch pipe is to be provided with the changeable damper.</u></p>	<p><i><Same as the present></i></p> <p>204. System design</p> <p>1. General</p> <p><i><Omitted></i></p> <p>2. SCR system</p> <p>(1) SCR chamber</p> <p>(A) SCR chamber is to be arranged so that the back pressure of the exhaust pipes connecting exhaust pipe end of the stack to the engine does not exceed the allowable back pressure recommended by the engine manufacturer.</p> <p>(B) Changeable device of exhaust gas piping</p> <p>(a) In cases where exhaust gas piping system of the engines can be changed over from ordinary exhaust gas piping to piping connected to the SCR system, <u>dampers are to be provided for each pipesbranch pipe is to be provided with the changeable damper.</u></p>	<p>- branch pipes are not defined and generally dampers are provided on each pipes.</p>

Present	Amendment	Reason
<p>108. Periodical Surveys</p> <p>1. General</p> <p><i><Omitted></i></p> <p>2. Annual Survey</p> <p>Annual surveys are to be included.</p> <ol style="list-style-type: none"> (1) External examination of all components, including SCR reaction chamber, injectors, chemical store/supply, heating, tanks, pumps, valves, piping, etc.. (2) Performance test of the instrumentation, control, monitoring, and safety equipment including indicators and alarms. (3) Performance test of Changeover devices of exhaust gas pipes and the corresponding indicator (4) Operation test of Remote shut-off devices for reductant agent storage tank valves (5) General examinations of safety and protective equipment (6) Performance test of Safety showers Eyewash (7) Instruction and operation manual, the location of the applicable warning notices 	<p>208. Periodical Surveys</p> <p>1. General</p> <p><i><Omitted></i></p> <p>2. Annual Survey</p> <p>Annual surveys are to be included.</p> <ol style="list-style-type: none"> (1) External examination of all components, including SCR reaction chamber, injectors, chemical store/supply, heating, tanks, pumps, valves, piping, etc.. (2) Performance test of the instrumentation, control, monitoring, and safety equipment including indicators and alarms. (3) Performance test of Changeover devices of exhaust gas pipes and the corresponding indicator (4) Operation test of Remote shut-off devices for reductant agent storage tank valves (5) General examinations of safety and protective equipment (6) Performance test of Safety showers–Eyewash (7) Instruction and operation manual, the location of the applicable warning notices 	<p>- Requirement for shower was deleted at Circular 2020-5-E by revision of UR M77</p>

Present	Amendment	Reason
<p style="text-align: center;">Guidance for Exhaust Gas Emission Abatement System</p> <p>Section 2 Exhaust Gas Recirculation system(EGR)</p> <p>201. General</p> <p><i>⟨Same as the present⟩</i></p> <p>3. Where a ship designed for the reduction of NO_x emissions by the use of Exhaust Gas Recirculation system is designed, constructed and tested in accordance with this Guidance, the EEAS-EGR notation of Table 1 is to be assigned. In addition to EEAS-EGR, EEAS-EGR(R) and/or (S) may be additionally assigned if the relevant requirements are met. Where a ship provided EGR systems that incorporate engine systems that are designed for the purposes of removing the sulfur by-products from the exhaust gases that originate from the fuel and incorporate, for example, water scrubbing and water cleaning systems, the EEAS-EGR is to be assigned. Where a water treatment system is incorporated in the EGR system, the washwater discharge criteria is to meet the requirements of IMO Res. MEPC.259(68). (2020)</p>	<p style="text-align: center;">Guidance for Prevention System of Pollution from Ships</p> <p>Section 3 Exhaust Gas Recirculation system(EGR)</p> <p>301. General</p> <p><i>⟨Omitted⟩</i></p> <p>302. Notation</p> <p>1. Where a ship designed for the reduction of NO_x emissions by the use of Exhaust Gas Recirculation system is designed, constructed and tested in accordance with this Guidance, the EEASCEmN-EGR notation of Table 3.1.1 is to be assigned.</p> <p>2. In addition to EEASCEmN-EGR, EEASCEmN-EGR(R) and/or (S) may be additionally assigned if the relevant requirements are met.</p> <p>(1) Where a ship provided EGR systems that incorporate engine systems that are designed for the purposes of removing the sulfur by-products from the exhaust gases that originate from the fuel and incorporate, for example, water scrubbing and water cleaning systems, the EEASCEmN-EGR is to be assigned. Where a water treatment system is incorporated in the EGR system, the washwater discharge criteria is to meet the requirements of IMO Res. MEPC.259(68). (2020)</p> <p><i>(hereinafter, revision of "EEAS-EGR → "CEmN-EGR")</i></p>	<p>- Update the notation</p>

Present	Amendment	Reason
<p>207. Control, Alarm, and Monitoring System</p> <p>1. <i><Omitted></i></p> <p>2. Control and Monitoring System</p> <p><i><Omitted></i></p> <p>(D) The computer-based control systems are to comply with the applicable requirements of <u>Pt 6, Ch 2, 201. 7</u> of the Rules as a Category II system.</p>	<p>308. Control, Alarm, and Monitoring System</p> <p>1. <i><Omitted></i></p> <p>2. Control and Monitoring System</p> <p><i><Omitted></i></p> <p>(D) The computer-based control systems are to comply with the applicable requirements of <u>Pt 6, Ch 2, 201.7 Sec.4</u> of the Rules as a Category II system.</p>	<p>- Updated the revision Pt.6 of the Rule in 2017.</p>

Present	Amendment	Reason
<p>208. Survey and Test</p> <p>1. General</p> <p>(1) These requirements apply to shop test and onboard test of EGR systems and associated systems. Following tests may be incorporated with the tests required by Pt 5, Ch 2, 211. of the Rules.</p> <p>(2) <u>The components of the EGR are to be tested and inspected in accordance with Table 3 below in accordance with the applicable class notation in Table 1.</u></p>	<p>309. Survey and Test</p> <p>1. General</p> <p>(1) These requirements apply to shop test and onboard test of EGR systems and associated systems. Following tests may be incorporated with the tests required by Pt 5, Ch 2, 211. of the Rules.</p> <p>(2) The components of the EGR are to be tested and inspected in accordance with Table 2.3.3 below in accordance with the applicable class notation in Table 1.</p> <p>Table 2.3.3 Test and Survey for components of EGR</p> <div data-bbox="965 715 1765 887" style="border: 1px solid black; padding: 5px;"> <p>Note</p> <p><i><Omitted></i></p> <p>(5) For the applicable class notation 'CEmN-EGR(S)' in Table 2.3.1</p> </div>	<p>- Clarifying meaning of requirement by adding footnote (5) on Table 2.3.3</p>

Present	Amendment	Reason
<p>⟨New⟩</p>	<p style="text-align: center;">CHAPTER 3 Sulphur oxides Emission Abatement System</p> <p style="text-align: center;"><u>Section 1 General</u></p> <p>101. General</p> <p><u>1. This Chapter applies to sulphur oxide emission abatement system to use fuel oil containing small sulphur content or to control ratio of emission sulphur dioxide per carbon dioxide (SO₂(ppm)/CO₂(% v/v)) to the atmosphere through engines installed on ships.</u></p> <p><u>2. The containing sulphur content of fuel oil in paragraph 1 is to be complied with the Reg.14 of MARPOL Annex VI.</u></p> <p><u>3. Amount of emission ratio via sulphur oxide emission abatement system in paragraph 1 is to be complied with IMO Res.MEPC.259(68), taking into account operating environment of installed ship.</u></p> <p>102. Notation</p> <p><u>1. Ships equipped with the nitrogen oxides emission abatement system specified in 101. 1 shall be applied the “CEmS” notation.</u></p> <p><u>2. Additional notation is to be applied in accordance with mechanism of sulphur oxides emission abatement system as follow:</u></p> <ul style="list-style-type: none"> - <u>CEmS-EGC : Ships equipped with exhaust gas cleaning system conformed to Sec. 2</u> - <u>CEmS-LSF : Ships using low sulphur fuel complied with Sec.4 without exhaust gas cleaning system</u> 	<p>- The content in Guidance for Exhaust gas Emission abatement system is rearranged to Nitrogen oxides Emission Abatement System and Sulphur oxides Emission Abatement System</p>

Present	Amendment	Reason
<p data-bbox="188 379 266 408">⟨New⟩</p>	<p data-bbox="987 384 1778 448"><u>3. When multiple sulphur oxides emission abatement system are applied, the additional notation in 102. 2 is to be added.</u></p> <p data-bbox="1021 496 1778 635"><u>For example, notation “CEmS-EGC (R)-O, LSF” is applied, if the wet open type exhaust gas cleaning system complying with the redundancy requirements in Sec. 2 and using low-sulfur fuel complied with Reg.14.4 of MARPOL Annex VI.</u></p> <p data-bbox="987 683 1778 746"><u>4. For ships with ready for exhaust gas cleaning system, notation is applied in accordance with Sec.3.</u></p>	

Present	Amendment	Reason
<p style="text-align: center;">Section 3 Exhaust Gas Cleaning system(EGC)</p> <p>301. General</p> <p><i><Omitted></i></p> <p>3. Table 1 shows the Class Notation of EGC, and the EGC installed for the purpose as above provisions of 301. 1 is basically given <u>EEAS-EGC</u> notation of Table 1. In addition to <u>EEAS-EGC</u>, <u>EEAS-EGC(R)</u> and/or (S) may be additionally assigned if the relevant requirements are met.</p>	<p style="text-align: center;">Section 2 Exhaust Gas Cleaning system(EGC)</p> <p>202. Notation</p> <p>1. Table 3.2.1 shows the Class Notation of EGC, and the EGC installed for the purpose as above provisions of 301. 1 is basically given <u>EEASCEmS-EGC</u> notation of Table 3.2.1. In addition to <u>EEASCEmS-EGC</u>, <u>EEASCEmS-EGC(R)</u> and/or (S) may be additionally assigned if the relevant requirements are met.</p> <p><i>(hereinafter, revision of "EEAS-EGR → "CEmS-EGC")</i></p>	<p>- Update the notation</p>

Present	Amendment	Reason
<p>308. Survey and Test</p> <p>1. General</p> <p>(1) These requirements apply to shop test and onboard test of EGC systems and associated systems. Following tests may be incorporated with the tests required by Pt 5, Ch 2, 211. of the Rules.</p> <p>(2) SECC(SOx Emission Compliance Certificate) may be issued after inspection by the Administration or the Society.</p> <p>(3) <u>The components of the EGC are to be tested and inspected in accordance with Table 4 below in accordance with the applicable class notation in Table 1.</u></p>	<p>209. Survey and Test</p> <p>1. General</p> <p>(1) These requirements apply to shop test and onboard test of EGC systems and associated systems. Following tests may be incorporated with the tests required by Pt 5, Ch 2, 211. of the Rules.</p> <p>(2) SECC(SOx Emission Compliance Certificate) may be issued after inspection by the Administration or the Society.</p> <p>(3) The components of the EGC are to be tested and inspected in accordance with Table 3.2.4 below in accordance with the applicable class notation in Table 1.</p> <p>Table 3.2.4. Test and Survey for components of EGC</p> <div data-bbox="967 775 1765 948" style="border: 1px solid black; padding: 5px;"> <p>Note</p> <p><i><Omitted></i></p> <p>(5) For the applicable class notation 'CEmS-EGC(S)' in Table 3.2.1</p> </div>	<p>- Clarifying meaning of requirement by adding footnote (5) on Table 3.2.4</p>

Present	Amendment	Reason
<p>⟨New⟩</p>	<p style="text-align: center;"><u>Section 4 Ships using low sulphur fuel</u></p> <p><u>401. General</u></p> <ol style="list-style-type: none"> 1. <u>This Section applies to ships using fuel oil complied with Reg.14 of MARPOL Annex VI without exhaust gas cleaning system.</u> 2. <u>It is applied the "LSF" notation for ships arranged fuel oil system in 402., without exhaust gas cleaning system.</u> <p><u>402. Fuel oil system</u></p> <ol style="list-style-type: none"> 1. <u>Manual for bunkering or fuel oil change-over of fuel oil is to be provided on measures and procedures to minimize mixing of newly bunkered fuel with fuel already on-board or in-compatible fuel.</u> 2. <u>Fuel oil settling tanks and service tanks are to be provided with drain valves or cocks on their bottoms. Where drain valves or cocks are fitted to fuel oil tanks, the valves or cocks are to be of self-closing type.</u> 3. <u>If settling tanks for fuel oil are not provided onboard, the fuel oil bunker (storage) and daily service tanks are to be designed and constructed in such a way as to direct water and sludge towards a drainage outlet.</u> 4. <u>A heating or cooling units should be provided, where heating or cooling of fuel oil is required for the efficient functioning of the fuel oil treatment system.</u> 5. <u>For items not specified in this section, the relevant requirements specified in Pt 5 and Pt 8 of the Rules apply. ↓</u> 	<p>-Adding requirements for ships that meet the sulphur oxide requirements by using low-sulfur fuel without an exhaust gas scrubber cleaning system</p> <p>- Developing requirements based on general matters in Appendix 5-13 of Pt 5 of the Rules</p>