



CIRCULAR

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To : All Surveyors and whom it may concern

No : 2022-7-E
Date : 2022. 5. 26

Subject	9.161 Notice for Amendment to the KR Technical Rules - Part 8 of the Rules/Guidance for the Classification of Ships
Application	Refer to Effective date for specified in Par.1

1. Please be informed that the amendments have been made to the following KR Technical Rules 2022 as attachment to reflect Requests for Establishment/Revision of Classification Technical Rules. You are kindly requested to apply the amendments on the relevant works according to effective date.

Amended KR Technical Rules	Effective date	Revision contents
Rules/Guidance for the Classification of Steel Ships Pt.8	To be applied retroactively	To reflect result of internal review

2. Furthermore, please be informed that the amendments will be included in 2022 edition for Rules and Guidance on KR Classification Technical Rules which is provided on the website.

Attachments: Amended KR Technical Rules (K/E) --- each 1 copy. (The End)

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

Pt. 8 Fire Protection and Fire Extinction



2022.5.

Machinery Rule Development Team

- Main Amendments -

(1) Effective date : Immediately

- Establishment of class notation “AFP-C(EV)” – Transportation of electric vehicle by ship has been increased while safety requirements has not been established so far. In this regards, enhanced requirements for ship’s facility is needed. (requested by KR Environment & Piping Team, ENP4500-1536-2022)

Amendment	Note
<p style="text-align: center;">Annex 8–9 Special Requirements of Fire Protection and Fire Extinction for Cargo Ships (2021)</p> <p style="text-align: center;">Section 1 General Requirements</p> <p>101. Application</p> <p>The AFP(Additional Fire Protection and fire extinction) notations as additional special features are given to the cargo ships complying with the requirements of this annex, and the details are as follows. <u>In addition, requirements of SOLAS Convention, FSS Code and the Flag Administration are also to be complied with. (2022)</u></p> <p>(1) AFP-A: Ships whose accommodation spaces comply with the requirement of Sec 2. (2) AFP-M: Ships whose machinery spaces comply with the requirement of Sec 3. (3) AFP-C: Ships whose cargo spaces comply with to the related requirement of Section 4. <u>(A) In case the container ships, the class notation as following of the below may be assigned to ships which have been constructed to comply with the related requirements.</u> <u>(a) AFP-C(1): Container ships whose cargo spaces comply with the requirements specified in of 405. 2</u> <u>(b) AFP-C(2): Container ships whose cargo spaces comply with the requirements specified in of 405. 3</u> <u>(c) AFP-C(3): Container ships whose cargo spaces comply with the requirements specified in of 405. 4</u> <u>(d) AFP-C(FSC): Container ships whose cargo spaces comply with the requirements specified in of 405. 5</u> <u>(B) In case the ro-ro ships and vehicle carriers, the class notation as following may be assigned to ships which have been constructed to comply with the related requirements. (2022)</u> <u>(a) AFP-C: Ro-ro ships and vehicle carriers whose cargo spaces comply with the requirements specified in 402. 2</u> <u>(b) AFP-C(EV): Ro-ro ships and vehicle carriers whose cargo spaces comply with the requirements specified in 402. 3</u> (4) Requirements of Section 2, Section 3 and Section 4 can be combined and applied. In case the cargo ship which complies with Section 2 and Section 3 is given a notation “AFP-AM” as addition special feature notation.</p> <p><i><Omitted></i></p>	<p>– Clarifications added : Related requirements by SOLAS, FSS Code and Flag Administration are also to be applied.</p> <p>– Re-numbering and (B) added : AFP-C(EV) notation added.</p>

Amendment	Note
<p><i><Omitted></i></p> <p>Section 4 Protection of Cargo areas</p> <p>402. Ro-ro ship and vehicle carrier <i>(2022)</i></p> <p>1. Application</p> <p>This article is applicable to the ro-ro ship and vehicle carrier which apply to the <u>following</u> notations. <u>AFP-C.</u></p> <p><u>(1) AFP-C: Ships whose cargo spaces comply with the requirements specified in 402. 2</u></p> <p><u>(2) AFP-C(EV): Ships whose cargo spaces comply with the requirements specified in 402. 3</u></p> <p>2. fire detection and fire alarm system AFP-C</p> <p>A<u>The</u> fixed fire detection and fire alarm systems <u>for all ro-ro spaces and vehicle spaces are is</u> to be capable of individually identifying each detector.</p> <p>3. AFP-C(EV)</p> <p><u>The following requirements are to be satisfied for ro-ro spaces and vehicle spaces intended for the carriage of battery-powered electric vehicles and a plan for fighting its fire is to be available on board.</u></p> <p><u>(1) Fire detection and fire alarm system</u></p> <p><u>(A) Combined type smoke and heat detectors and fire alarms are to be arranged and installed for all ro-ro spaces and vehicle spaces.</u></p> <p><u>(B) Cameras (CCTV) are to be installed that can monitor the ro-ro spaces and vehicle spaces intended for the carriage of battery-powered electric vehicles. Colour video monitoring is to be available at the navigation bridge or the fire control station.</u></p> <p><u>(C) At least two explosion-proof portable thermal imaging cameras are to be provided on board to measure the temperature of the ro-ro spaces and the vehicle spaces periodically.</u></p> <p><u>(2) Fixed fire extinguishing arrangement</u></p> <p><u>Where the fixed CO₂ fire extinguishing system is fitted for ro-ro spaces and vehicle spaces, a connection such as spool piece or flexible hose that connects the fire main system and the CO₂ discharge piping is to be provided to supply water to the CO₂ discharge nozzles. The purpose of this arrangement is to provide an auxiliary means to cool down the ro-ro spaces and vehicle spaces by supplying water to the CO₂ discharge nozzles, in case the total amount of CO₂ extinguishing agent is discharged in the event of fire or the CO₂ fire extinguishing system fails to operate.</u></p> <p><u>(4) Fire fighting equipment</u></p> <p><u>(A) In addition to the fire-fighter's outfits required by SOLAS Reg. Ch. II-2, at least two sets of fire-fighter's outfits are to be provided in an easily accessible location adjacent to the designated area for the carriage of battery-powered electric vehicles.</u></p> <p><u>(B) At least one water mist lance together with at least one fire blanket shall be provided at each cargo space where capable of being sealed and carrying battery-powered electric vehicles.</u></p>	<p>– Clarification added.</p> <p>– AFP-C(EV) notation added. : Report by ENP and other material referenced.</p> <p>– 3.(2) : Installation of water supply connection as an auxiliary means and the purpose added.</p> <p>– 3.(4).(B) : Generally, PCTC has cargo spaces capable of being sealed in 4 groups (No.1 to 4/5 to 6/7 to 9/10 to garage deck), in this case, 4 water mist lances and 4 fire blankets are required on board.</p>

Amendment	Note
<p>(5) Recommendations for the safe operation of battery-powered electric vehicle charging <u>In case an electric vehicle charging facility is installed on board, charging of electric vehicles is available only when safety is presented while vehicles are being unloaded. The following items are to be considered:</u></p> <p>(A) <u>Available charging per unit shall in general be provided with low/medium power (up to 5 kW).</u></p> <p>(B) <u>Power supply circuits serving such units shall be monitored for short circuit/ground fault with alarm to a continuously manned control station. Means to isolate these circuits shall be readily accessible for the crew and clearly marked.</u></p> <p>(C) <u>A manual for the safe operation of the charging facility shall be available on board. The connection of chargers shall be monitored by the crew.</u></p> <p>(D) <u>Charging shall be in an area where the impact from a fire in other units is minimized and impact from a fire starting in charges or electrical vehicle being charged is minimized. Charging of electric vehicles is available only when safety is presented while vehicles are being unloaded. Safety procedures such as sufficient ventilation while charging and limitation of the State of Charge (SOC) of the battery, etc. are to be complied with in order to minimize fire risk.</u></p> <p><i>⟨Omitted⟩</i></p>	