Certificate No: LR23400002SF
Issue Date: 23/11/2023
Expiry Date: 22/11/2028

Certificate Of Fire Approval

This is to certify that the product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	**Knaack & Jahn Schiffbau GmbH**
Address	Witternstraße 4a, Hamburg, 21107, Germany
Type	Fixed Gas Fire Extinguishing System
Description	Fixed Gas Fire Extinguishing System – Type: "SAPPHIRE (NOVEC 1230 or equivalent FK-5-1-12 extinguishant) Total Flood Fire Suppression 25 bar System" using 180° Nozzles (25mm to 50mm) and 360° Nozzles (25mm only), for Machinery Spaces of Category A and Cargo Pump Rooms, equivalent to fire-extinguishing systems required by SOLAS 1974 as amended, Chapter II-2/10.5 and 10.9
Trade Name	Sapphire (Novec 1230; FK-5-1-12) Total Flooding Fire Suppression 25 bar Systems
Specified Standard	IMO MSC/Circ.848 as amended by MSC.1/Circ.1267 & MSC.1/Circ.1316

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.
The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form part of this Certificate.
This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

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Bruce McDonald

Global Fire & Safety Manager to Lloyd's Register North America, Inc.
A member of the Lloyd's Register group

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United States

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