Certificate Number: 14-HS1178190-5-PDA
06/APR/2016

Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 13/MAY/2020. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until 21/APR/2019 subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Galley Fire Extinguishing System
Model Name(s): Fire, Kidde Wet Chemical Galley Fire Protection System - WHDR-125, WHDR-260, WHDR-400S, WHDR-400M, WHDR-600 Design, Installation, Operation and Maintenance Manual.

Presented to:
KIDDE-FENWAL INC.
400 MAIN STREET
United States

Intended Service:	Wet Chemical system specifically designed and listed for the suppression of fires in galley cooking appliances, plenums, hoods, and ducts.
Description:	Manual/Automatic Fire Suppression System.
Ratings:	This system is a 175 psig (70 º F) nitrogen only pressurized system and as such is considered to be an ABS Class III system. Accordingly pipe fittings valves etc. where not specified in the approved manual are to be to the ABS Surveyor's satisfaction.
Service Restrictions:	Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. Each shipboard installation is to be reviewed for compliance with the manufacturers approved manual P/N 87-122000-001.
Comments:	The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. Note: In accordance with Manufacturer's manual, galvanized piping and fittings not allowed. Surveyor to verify DOT marking on cylinders. In addition, although it is understood that Kidde Fenwal Inc. do not supply the deep fat fryer, the attending Surveyor is requested to confirm that the supplier of the deep fat fryer where fitted, is in compliance with 4-7-2/5.5 (ii) of the

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	Steel Vessels Rules. As per USCG letter (16714/162.038/GEN) dated 01AUG2008, which confirms the validity of NVIC 6-70 dated 23AUG1970, the above type of equipment, when listed by UL, is acceptable for US flagged vessels. The ISO 15371 fire tests were performed on Models: WHDR-125, WHDR-260 only. Please see attached design specific requirements to ISO 15371 testing. For design specific requirements to ISO 15371 testing, please refer to the attachment. There is a deviation from the method from the ISO 15371:2015. The pressure, flow and amount of agent used in each test were not recorded during the actual extinguishing tests. Supplementary tests were performed in "cold" condition for measurement of pressure, flow rate and the amount of agent used.
Notes / Documentation:	Supporting Documentation: WHDR Wet Chemical Fire Suppression System - Design, Installation, Operation and Maintenance Manual, P/N 87-122000-001, dated APR 2009, 255 pages; Supplement to WHDR Wet Chemical Fire Suppression System Design, Installation, Operation and Maintenance Manual, Rev. AA, dated March 2013, 4 pages; Drawing No. PEO10011A Validation, PEO10011A Validation dated 29 March 2016, 1 Page; Drawing No. Test Report PEO10011A, Test Report PEO10011A, 23 Pages;
Term of Validity:	This Product Design Assessment (PDA) Certificate 14-HS1178190-5-PDA, dated 31/Mar/2016 remains valid until 21/Apr/2019 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.
ABS Rules:	Rules for Conditions of Classification, Part 1 2016 Steel Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following: Steel Vessel Rules (2016): 4-7-2/5.5 (i), (iii), (iv),(v);
National Standards:	Underwriters Laboratories standard UL 300: 2010 Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas;
International Standards:	ISO 15371: 2015 Ships and Marine Technology -- Fire-extinguishing systems for protection of galley deep-fat cooking equipment -- Fire tests;
Government Authority:	NVIC 6-70 dated 23AUG1970 as per USCG Letter (16714/162.038/GEN);
EUMED:	
Others:	

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	14-HS1178190-5-PDA	31/MAR/2016	21/APR/2019

ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.

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