



Confirmation of Product Type Approval 06/JUL/2011

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

This is to certify that, 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 26/JUN/2016. 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 24/MAY/2016 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.

FIREBOY-XINTEX, INC. Model Name(s): FES Series

Presented to:
FIREBOY-XINTEX, INC.
0-379 LAKE MICHIGAN DR.
GRAND RAPIDS
United States

Intended Service:	Marine and Offshore Applications-for total Flooding Clean agent fire extinguishing systems for the protection of machinery spaces, cargo pump rooms and enclosed spaces with flammable liquid hazards.
Description:	HFC-227ea (FM200) Clean Agent Fire Extinguishing System
Ratings:	See attached "pdf" for HFC-227ea & FM-200 Parts List. Tank Pressure :360 psi (25 Bar) at 70 °F (21 °C); Maximum Design Concentration: 8.7%
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. Not acceptable for Cargo Hold Protection. 1) Type Approval only covers individual control, activation, distribution, and alarm components as listed as per Manual Part No. 91044. Complete details for each installation must be submitted to ABS Technical Office for review and approval and are to include the following: a) System schematic and arrangement drawings for compliance with 4-7-3/3 of the SVR; 5-2-3/3 of the MODU Rules; SOLAS Ch. II-2/Reg. 10.4 and IMO MSC/Circ. 848 as amended by IMO MSC/Circ. 1267. b) Control arrangement and location boxes; c) Capacity calculations d) Bill of Materials with pipes as per 4-7-3/Table 2 of the SVR; e) Storage arrangements for the agent cylinders as per 4-7-3/3.1.9 and SOLAS Ch. II-2/Reg. 10.4.3; f) Control arrangements for closing all opening and stopping ventilation fans; g) Equipment such as cables, alarms, etc. are to be suitable for the space in which they are intended; h) All piping, electrical and mechanical components part numbers are to be as listed in the Design, Installation, Recharge and Maintenance Manual Part No. 91044; 2) Acceptance of

the agent by the appropriate Flag Administration. 3) For installation not governed by SOLAS, acceptance by the Flag Administration of the SOLAS compliant storage of extinguishing medium within the protected space, if applicable.

Comments:

None

Notes / Documentation:

Identifying Data: UL File EX4510, Vol. 11 Design, Installation, Recharge & Maintenance Manual Part No.91044, Issued:2009-06-17; UL ML File No EX15550 Multiple Listing of Clean Agent Fire Extinguishing System; UL File Ex5104, Issued Feb 5, 1999, Revised Sept 24, 1999 "Clean Agent Extinguishing System Units"

Term of Validity:

This Product Design Assessment (PDA) Certificate 11-HS749861-PDA, dated 25/May/2011 remains valid until 24/May/2016 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:

2011 Steel Vessels Rules 1-1-4/7.7, 1-1-Appendix 3, 4-6-2/7, 4-7-1/1, 4-7-2/1.1.1(i) & 4-7-3/3.1

National Standards:**International Standards:**

IIMO MSC/Circ. 848 as amended by IMO MSC/Circ. 1267, IMO SOLAS 2000 Amendments Reg. 10.4 & 10.5, IMO FSS Code.

Government Authority:

Coast Guard Approval Number: 162.161/A10/0; Approval Date : 6 July 2009; Expires: 06 July 2014

EUMED:**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	11-HS749861-PDA	25/MAY/2011	24/MAY/2016


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.