



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 05/JAN/2014. 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 07/JUL/2018 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: Fixed Aerosol Fire Protection and Detection System

Model Name(s): Stat-X# Aerosol Fire Protection System 30, 60, 100, 250, 500, 1000, 1500, 2500

Presented to:

FIREAWAY INC.
5852 BAKER ROAD
MINNETONKA
United States

Intended Service:

Fixed fire protection for use in normally unoccupied small spaces and machinery spaces of cargo ships of gross tonnage less than 500, fishing vessels of less than 20 meters, small work boats, pilot boats, motor/sailing pleasure and commercial craft subject to acceptance by the Flag Administration.

Description:

Stat-X# systems are designed for total flooding in small volume application which extinguish fire by using a low setting-rate aerosol containing ultra-fine chemical particulate plus inert gases. The agent produced is a Potassium based aerosol with particle sizes primarily in the less than 2 micron size. The aerosol has the flow characteristics of a gas and has been determined to be non-toxic to humans when exposed for short periods at recommended design concentrations. Stat-X# unit can be activated by using the following methods; -Electrical automatic operation -Electrical manual operation by means of a manual release device Detection may be by smoke, heat, water or gas point detectors as well as thermal sensing cables allowing automatic discharge, remote activation after preset time delays or immediate manual discharge of the fire extinguishing system. The thermal actuation of the Stat-X# Aerosol Generating Fixed Fire Extinguishing System Units is by means of an integrated thermal detector which may also be manually activated. Once temperature reaches the set temperature of the detector, Stat-X# Units are automatically actuated generating aerosol. Alternatively, the detector may be activated manually only by means of a cable pull.

Ratings:	- Maximum height of the protection space : 4.88 m - Minimum design density : 97g/m# (Class A), 62g/m# (Class B) - Storage temperature range : -54#C and +54#C - Operating temperature range : 0#C and +54#C - Humidity range of application : 0 ~ 98% See attached for details of the Automatic Aerosol Generators and Aerosol Generators
Service Restrictions:	1) The Stat-X# fixed aerosol system is suitable for installation in normally unoccupied spaces containing fuel having a flash point of not less than 43#C (closed up test), of vessels of less than 24 meters load line length, where the space to be protected does not exceed deck height of 4.88 meters, or an area of 116.21m#, with a maximum volume of 100 m#. 2) The Stat-X# units are not suitable for the following hazards or where the following materials may be present: Class A material that burn with deep-seated characteristics (wood fibre, cotton etc.), electrical equipment operating over 40,000 V, metal Hydrides, Pyrophoric substances, and Chemical substances that smoulder and burn without air, metal powders (magnesium, titanium, etc.), environments rated Hazardous (explosive atmospheres). 3) System design and installation shall be done in accordance with the Stat-X# Fire Suppression Systems Design, Installation, Operation & Maintenance Manual, Version 1.3.4, Issued November 2011 (Part No. 19000) or Automatic Unit Fire Suppression Systems Design, Installation, Operation & Maintenance Manual, Version 1.3, Issued March 2013 (Part No. 19002). 4) In area where personnel may be present the system must employ a pre-discharge alarm, 30 second time delay, and provision for system isolation and manual only activation whenever personnel are in the protected area. 5) Acceptance by the Flag Administration is required prior to fitting onboard vessels. 6) These Aerosol Units are not to be fitted on vessels certified under SOLAS. 7) The discharge of the Aerosol system shall be prevented by means of a system isolation switch or other means, that shall be manually operated when personnel are present within the protected compartment or adjacent areas which could be rendered hazardous by the discharge of the system. The system isolation switch shall be located outside the protected area close to the system control panel or adjacent to the main entrance to the space protected and shielded from accidental operation. While the system isolate switch is active and the discharge of the system is inhibited, the fire detection and alarm system (if required) shall continue to function. The system shall return to full manual control when the switch is reactivated. The operation of the isolation switch shall initiate a visual indicator at the system control panel. 8) 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.
Comments:	1) The Stat-X# fixed aerosol system is considered suitable for installation in normally unoccupied spaces containing fuel having a flash point of not less than 43 #C (closed cup test). Each configuration, control and external connection to fire detectors is to be specifically approved. 2) For each installation, the following details are to be submitted to the local ABS Technical office for review: (a) The schematic arrangement of the system. (b) Aerosol generator types, sizes, quantities and locations. (c) Details of the material specifications, wiring diagrams and sources of power for the release systems and alarms. (d) Calculations of the quantity of agent required for the protected space. (e) Certification for certified components. (f) Manuals and instructions for operation, safety, maintenance and testing. (g) Protocols for testing and inspection of the system. 3) Means are to be provided to close all openings, which may admit air into the protected space. 4) Clear and legible safety labels are to be placed at all the entrances to the protected space, inside the protected space, at the system isolation switch and the manual release point. 5) Simple operation instructions are to be placed at the system operating position. 6) Clear and legible instructions for installation, maintenance, testing and operation, applicable for the specific system fitted on the vessel shall be issued for conclusion in a manual or folder, to be retained onboard the vessel for use by the operating crew.
Notes / Documentation:	Stat-X Design, Installation Operation and Maintenance Manual for Fire Suppression Systems Version 1.3.4., Issued November 2011 (Part No. 19000). Stat-X Design, Installation Operation and Maintenance Manual for Automatic Fire Suppression Systems Version 1.3, Issued March 2013 (Part No. 19002). MCA fire test for condensed aerosol fire extinguishing systems (test date : 12 June 2006) MCA Certificate of inspection and tests, renewed on 10 January 2012. MCA File

Reference (MS 47 / 11 / 1042), Final Inspection Report of ECB reference FIU-1561 to FIU-1568 on 8 October 2007, Product Listing Data Sheet of Active Fire Protection-Equipment Listing Scheme, Listing number afp -2108 on 23 May 2007, ULC (Underwriters Laboratories of Canada) Certificate, Project No. 03CA10370, File No. EX6407, CCN No. AAAEC, Underwriters Laboratories Inc. Report, Project No. 06CA18423, File No. NC8961 on 4 April 2007. Underwriters Laboratories Inc. Report, Project No. 06CA31862, File No. EX15004 dated 26-30 March 2007. Commonwealth Scientific Industrial Research Organisation (CSIRO) report no FS0005/ R1 dated 09 May 2007. This Product Design Assessment (PDA) is valid only 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.

Term of Validity:

This Product Design Assessment (PDA) Certificate 08-LD310998/2-PDA, dated 08/Jul/2013 remains valid until 07/Jul/2018 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:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. The Rules applicable to this assessment are: 2013 Steel Vessel Rules 1-1-4/7.7, 4-7-3/3.11

National Standards:

Australian/New Zealand Standard AS/NZS 4487: 1997 "Pyrogen fire extinguishing aerosol systems", Australian Standard AS 1851-2005, "Maintenance of fire protection systems and equipment" including Amdt 1 (26 July 2006), NFPA Standard NFPA 2010-2005, "Fixed Aerosol Fire Extinguishing Systems".

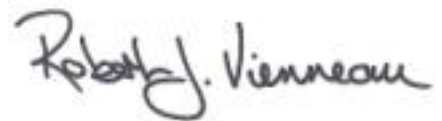
International Standards:

IMO MSC/Circ. 848, IMO MSC/Circ. 1007

Government Authority:**EUMED:****Others:**

Annex 1-a of the European Recreational Craft Device 94/25/EC as amended by Directive 2003/44/EC, Merchant Shipping (Fire Protection) Regulations 2003 Regs 7 (1), CEN prRN 15276-1& 2, "Fixed fire fighting systems - Condensed aerosol extinguishing systems", Underwriters Laboratories Standards UL 2127 & UL 33.

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	08-LD310998/2-PDA	08/JUL/2013	07/JUL/2018



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.