



**TYPE APPROVAL CERTIFICATE**  
**No. FPE416310CS**

**This is to certify that the product identified below satisfies the requirements of the standard quoted under "Reference standard"**

<i>Description</i>	<b>FIXED CLEAN AGENT FIRE EXTINGUISHING SYSTEM FOR MACHINERY SPACES</b>
<i>Type</i>	<b>FIREBOY-XINTEX NOVEC 1230 FES</b>
<i>Applicant</i>	<b>FIREBOY-XINTEX LTD. 10 HOLTON ROAD, HOLTON HEATH BH16 6LT POOLE UNITED KINGDOM</b>
<i>Manufacturer</i>	<b>FIREBOY-XINTEX LTD.</b>
<i>Place of manufacture</i>	<b>10 HOLTON ROAD, HOLTON HEATH BH16 6LT POOLE UNITED KINGDOM</b>
<i>Reference standards</i>	<b>IMO MSC/Circ. 848; IMO MSC.1/Circ.1267</b>
<i>Reference documents</i>	<b>Rules for the Type Approval of Fixed Clean Agent Fire-Extinguishing Systems in Machinery Spaces</b>

*Issued in* **Genoa** on **October 12, 2010**. *This Certificate is valid until* **October 11, 2015**



*[Handwritten Signature]*

RINA  
**Piero Moncheroni**

This certificate consists of this page and 1 enclosure

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**FIREBOY-XINTEX NOVEC 1230 FES**

**Product description**

Extinguishing Agent:

Trade name	Novec 1230
Manufacturer	3M Specialty Materials
NOAEL (% volume)	10.0
LOAEL (% volume)	>10.0
Chemical formula	$CF_3CH_2C(O)CF(CF_3)_2$
Cylinder capacity	20, 50, 90, 140, 280, 390, 450, 850 lb or equivalent liters capacity
Storage pressure	25 bars at 21° C ( 360 Psi at 70° F)
Operating temperature	-18° to 55° C ( 0° to 130° F)
Assembly cylinder position	Vertical only

**Field of application**

Fixed gas fire-extinguishing systems for use in machinery spaces of category A and cargo pump-rooms equivalent to fire-extinguishing systems required by SOLAS Ch II-2, Reg 7.

**Reference documents**

Marine Novec 1230 System - Design, Installation, Recharge and Maintenance Manual issued on January 30, 2006 by Fireboy-Xintex Marine Safety Systems and filed by RINA with n° CSST 6052.

**Test report**

Fire Test report n° EX6263 issued by Underwriters Laboratories Inc. on September 23, 2002 and filed by RINA with n° CSST 6053

**Remarks**

1. In case of design concentrations above the NOAEL concentrations, controls as required by para 2.2.2.1 and 2.2.2.2. of Chapter 5 of Fire Safety System Code are to be provided;
2. The approval of the system is subjected to the acceptance of the extinguishing agent by the flag Administration
3. System using only one bottle located inside the protected space, can not be accepted. Such systems shall be designed with the bottle located outside the protected space.
4. Prior to fitting the relevant system on board, the following details shall be submitted to RINA Head Office for approval for each installation:
  1. schematic arrangement of the system including sizes and material of piping and method of pipe jointing, nozzle types and temperature rating for each location;
  2. capacity calculations;
  3. wiring diagrams and cable specifications;
  4. isometric drawings and pressure loss calculations;
  5. testing/approval documentation of system components.
5. The approval of the system is subjected to the acceptance of the extinguishing agent by the flag Administration

Genoa October 12, 2010

