



TYPE APPROVAL CERTIFICATE
No. FPE066616CS/003

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

<i>Description</i>	FIXED CLEAN AGENT FIRE EXTINGUISHING SYSTEM FOR MACHINERY SPACES
<i>Type</i>	EASYFIRE HFC227
<i>Applicant</i>	A.B.S. S.R.L. VIALE LOMBARDIA, 310 20861 BRUGHERIO (MB) ITALY
<i>Manufacturer</i>	A.B.S. S.R.L.
<i>Place of manufacture</i>	VIALE LOMBARDIA, 310 20861 BRUGHERIO (MB) ITALY
<i>Reference standards</i>	ISO 9094:2015
<i>Reference documents</i>	Rules for the Type Approval of Fixed Clean Agent Fire-Extinghishing Systems in Machinery Spaces

Issued in **Genoa** on **April 5, 2016**. *This Certificate is valid until* **April 4, 2021**



RINA Services S.p.A.
Paolo Brocca

This certificate consists of this page and 1 enclosure

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EASYFIRE HFC227

Product description

System characteristics		
Components	Clean agent container	1 storage bottle inside the space - Storage pressure:1.0 N/mm ²
	Discharge devices	Brass discharge valve fixed on bottle
	Distribution	---
System activation	Manual	Manual handle with sheathed steel wire Remote electric control box with pyrotechnic cartridge
	Automatic	<i>Sprinkler</i> type glass bulb set at 68°C / 79°C / 93°C
Extinguishing agent	Non ozone-depleting fire suppressant heptafluoropropane HFC 227 - Trading name FM 200	
Installation requirements		
	FM 200 quantity (kg)	Max gross volume of the protected space (m ³)
	1	1.7
	2	3.3
	3	5.1
	4	6.6
	6	10
	9	15
	12	20

Field of application

A and B Class fires in unmanned machinery spaces of pleasure vessels having a length not exceeding 24 m and machinery spaces with a gross volume not exceeding 20 m³, to which Directive 96/98/EC as amended is not applicable.

Reference documents

- A.B.S. S.r.l. technical specification booklet filed with n° FPE-8591 and Data sheet Easyfire Systems 1-3-6-9-12 Kg HFC227 filed by RINA with CSST 13525.

Tests carried out

- Fire tests n°FPE/4345/3 witnessed by RINA and performed at Manufacturer's facility.

Remarks

- In case of vessels certified according to Directive 94/25/CE as amended (CE marked), reference is to be made to ISO 9094:2015.
- In case of manual activation, the release device shall be readily accessible and labelled with a means of preventing accidental discharge.
- Automatic release of the system is accepted on RINA class vessels with protected spaces gross volume up to 14 m³ and on CE marked vessels only.
- For automatic systems a remote discharge indicator shall be installed and shall be clearly perceptible from the main helm position.
- A visual indication of discharge shall be provide outside the protected space.
- Maximum agent concentration per net volume is not to exceed the NOAEL level 9%.

Mass produced articles of the aforesaid material are to be marked or labelled with the trade name and the data of the Company to whom this Certificate is addressed. The validity of this Certificate is dependent on the compliance of each manufactured product with the prototype which underwent the type approval tests and such compliance shall be stated by the manufacturer. Moreover, the Company is fully responsible for ensuring compliance by performing all the necessary checks also in respect of its sub-suppliers. Notwithstanding the above, RINA reserves the right to make any checks it deems appropriate during production. The validity of this Certificate ceases in the case of amendments to the rules on the basis of which the Certificate was issued.

Genoa April 5, 2016



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A handwritten signature in blue ink, appearing to be 'J.P.R.', is written over the contact information.