

# Certificate Of Fire Approval

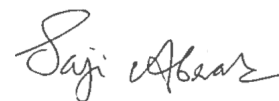
This is to certify that the product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

<b>Manufacturer</b>	<b>ANAF FIRE PROTECTION SPA</b>
<b>Address</b>	VIA DEL COMMERCIO 4, TORRE D'ISOLA, PAVIA, 27020, Italy
<b>Type</b>	Portable Foam Applicators for Machinery Spaces
<b>Description</b>	Portable Foam Applicator Units: 'Type: "P.AS.SP.XX06" (6% Suction Model) and Type: "P.AS.SP.XX03" (3% Suction Model) for use with Low Expansion Foam Branch pipes 'Type: "P.AS.LS.2X6" and "P.AS.LS.2X3" respectively
<b>Trade Name</b>	"P.AS.SP.XX06" (6% Suction Model) & "P.AS.SP.XX03"(3% Suction Model) "P.AS.LS.2X6" & "P.AS.LS.2X3"
<b>Specified Standard</b>	Performance Testing in accordance with SOLAS 1974 (as amended) and IMO Fire Safety Systems (FSS) Code Chapter 4 Paragraph 3.2, as amended.

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document LR21168010SF - DA and its supplementary Type Approval Terms and Conditions form part of this Certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.



**Saji Abraham**

Surveyor to Lloyd's Register EMEA  
A member of the Lloyd's Register group

**DESIGN APPRAISAL DOCUMENT**

**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR21168010SF**

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

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This Certificate is a renewal and amendment of Certificate Number SAS F150315

**APPROVAL DOCUMENTATION**

**TEST REPORTS**

Lloyd's Register Witness Certificate No: MLN1580769/01 A2 dated 31 August 2015 describing performance tests for Portable Foam Applicator Units "Type: 82600 with Low Expansion Foam Branchpipe 82116" and "Type: 82601 with Low Expansion Foam Branchpipe 82117".

**CONDITIONS OF CERTIFICATION**

- For applications in machinery spaces in accordance with IMO Fire Safety Systems (FSS) Code Chapter 4 Paragraph 3.2, as amended.
- Performance test results for Portable Foam Applicator Units Type: "P.AS.SP.XX06" (6% Suction Model) and Type: "P.AS.SP.XX03" (3% Suction Model) when used in conjunction with Low Expansion Foam Branchpipes "P.AS.LS.2X6" and "P.AS.LS.2X3" respectively are described in Tables 1 & 2 below:

<b>Table 1- Performance test results for Portable Foam Applicator Unit Type: "P.AS.SP.XX06" (6% Suction Model) with Low Expansion Foam Branchpipe "P.AS.LS.2X6"</b>					
Foam Concentrate used in the test **	Pressure (bar)	Flow Rate (litres/minute)	Foam Induction (%)	Applicator Horizontal Throw Length (m)	Applicator Throw Length (m) at 30° angle
"P. SC.PNFPNY6.02" Fluoroproteinic	2.5	224	6.02	6.5	15
	3	246.1	5.51	7.5	18
	4	275.2	4.94	9.5	23
	5	291.1	4.74	11.5	27
	6	322.5	4.37	13.5	30
	7	339.7	4.26	15.5	34.5
"P.SC.SFAFNY6.02" AFFF	2.5	221	6.09	6.5	15
	3	247	5.53	7.5	18
	4	274.8	4.97	9.5	23
	5	292.2	4.81	11.5	27
	6	324.2	4.48	13.5	30
	7	340.1	4.32	15.5	34.5

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<b>Table 2- Performance test results for Portable Foam Applicator Unit Type: "P.AS.SP.XX03" (3% Suction Model) with Low Expansion Foam Branchpipe Type: "P.AS.LS.2X3"</b>					
Foam Concentrate used in the test **	Pressure (bar)	Flow Rate (litres/minute)	Foam Induction (%)	Applicator Horizontal Throw Length (m)	Applicator Throw Length (m) at 30° angle
"P.SC.PNFPNY3.02" Fluoroproteinic	2.5	215.5	3.01	6.5	15
	3	240.7	2.91	7.5	18
	4	269.4	2.67	9.5	23
	5	276	2.46	11.5	27
	6	301.9	2.27	13.5	30
	7	324	2.19	15.5	34.5
"P.SC.SFAFNY3.02" AFFF	2.5	215.4	3.04	6.5	15
	3	241.2	2.92	7.5	18
	4	268.2	2.64	9.5	23
	5	275.4	2.47	11.5	27
	6	303	2.29	13.5	30
	7	326	2.21	15.5	34.5

\*\* All foam concentrates are to be separately approved for low expansion foam applications and final installation trials are to be conducted for each installation as also described in Condition 5. This certificate does not approve the foam concentrates used and those identified in the Tables are only representative foam concentrate types that were used in the testing.

3. The Portable Foam Applicator Units are to be supplied together with a portable tank containing at least 20 litres of foam concentrate and at least one spare tank of foam concentrate of the same capacity.
4. Instructions concerning the maintenance and operation of the units are to be supplied.
5. Each product assembly installed onboard shall be tested with each low-expansion foam concentrate to demonstrate they can provide at least the same performance as in Tables 1 & 2 above (as applicable) and that they are suitable for the relevant project, in order to obtain final acceptance from the relevant project approval authority.
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype.

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7. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products, whether manufactured by themselves or their licensee manufacturers, if agreed by Lloyd's Register, are fully compliant with the relevant statutory regulations and Lloyd's Register Class rules as applicable and designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.

**PLACE OF PRODUCTION**

ANAF FIRE PROTECTION S.p.A.  
Viale Lombardia, 310  
20861 Brugherio (MB), Italy

**Saji Abraham**

Senior Specialist  
Fire & Safety, Statutory Discipline Team  
UK&I Technical Support Office, Marine & Offshore  
Lloyd's Register EMEA

**Supplementary Type Approval Terms and Conditions**

*This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).*