

**Economic Commission for Europe**

**Inland Transport Committee**

**Working Party on the Transport of Dangerous Goods**

English

24 August 2016

**Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)**

**Twenty-ninth session**

Geneva, 22 - 26 August 2016

Item 3 (b) of the provisional agenda

**Implementation of the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN):**

Special authorizations, derogations and equivalents

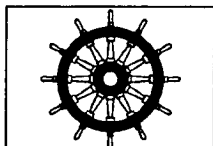
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**Addendum to ECE/TRANS/WP.15/AC.2/2016/48 - Request for a temporary derogation for the pusher vessel "DONAU" (06105358) for the use of a dry aerosol generating fire extinguishing system (Fire Pro)**

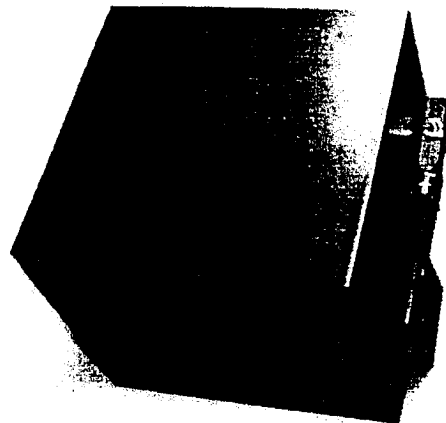
**Transmitted by the Government of Belgium**



## DROGE AEROSOL BLUSSER



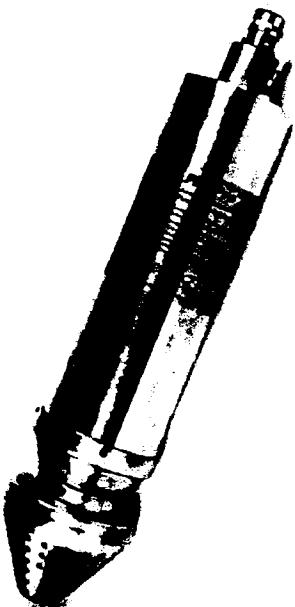
0086/10




TECHNISCHE INFORMATIE	
Model	FP-5700 / RVS
Type	Cold
Activeringsmechanisme	thermische activering door thermokoord elektrisch (6-32V D/C 0,8A in 3-4 seconden)
Activering	verwarmingelement 2 Ohm weerstand
Te testen stroomsterkte	maximaal 5 mA.
Gewicht Bruto	31.400 gram
Gewicht Bruto blusstof	5.700 gram
Gewicht Netto blusstof	3.500 gram effectief
Operationele uitstroom tijd	15-20 seconden
Uitstroom opening	1
Uitstoot lengte	8 m
Afmeting	323 mm x 343 mm x 350 mm
Brandklasse	A, B, C, F

TOEPASBAARHEID PER UNIT IN m <sup>3</sup> INCL. VEILIGHEIDSFACITOR 1,3	
Brandklasse A & E	48,77
Brandklasse B	51,78
Brandklasse C	89,74
Brandklasse F	35,43

TOEPASSINGEN	
Ruimten	< winkels, kantoor, musea
Vervoer	< scheepvaart, trein, container, vrachtwagen
Opslag	< magazijn, archief, loods
Mechanische ruimten	< machinekamer
Industrie	< technische ruimten, diverse

<p><b>FP-500</b></p> 	TECHNISCHE INFORMATIE	
	Model	FP-500
	Type	Cold
	Inhoud blusstof	457 gram effectief
	Activeringsmechanisme	thermische activering door thermocord elektrisch (6-32V D/C 0,8A / 3-4 seconden)
	Activering	verwarmingselement met 2 Ohm weerstand
	Te testen stroomsterkte	maximaal 5 mA.
	Gewicht Bruto	2.670 gram
	Gewicht Netto blusstof	500 gram
	Operationele uitstroomtijd	5-10 seconden
	Nozzle	Standaard
	Uitstroomopening	1
	Uitstootlengte	2,5 m
	Afmeting	293 mm x 84 mm (diameter)
	Brandklasse	A, B, C, F
	Voor aanvullend informatie	Informatie, instructie- en gebruikershandleiding. Montage en nazorg door CATTAS gecertificeerde personen
	TOEPASSINGEN	
Ruimten	< server ruimten, dubbele plafonds/vloeren	
Vervoer	< vrachtwagen, bus, trein, metro, tram	
Opslag	< kasten, kluisen	
Grote schakelruimten	< meterkasten, besturingsunits	
Transformators (groot)	< industrie	

<p><b>FP-1000M</b></p>  <p>Cardboard</p>	TECHNISCHE INFORMATIE	
	Model	FP-1000M
	Type	Hot
	Inhoud blusstof	950 gram
	Activeringsmechanisme	handmatig door verwijdering veiligheidspin
	Activering	compositie met 1,5 Ohm weerstand
	Te testen stroomsterkte	n.v.t.
	Gewicht Bruto	1.680 gram
	Gewicht Netto blusstof	1.000 gram
	Operationele uitstroomtijd	20-25 seconden
	Uitstroomopening	2
	Uitstootlengte	3 m
	Afmeting	200 mm x 88 mm (diameter)
	Zelfactivering temperatuur	300 °C
	Activering m. thermocord	n.v.t.
	Brandklasse	A, B, C.
	TOEPASSINGEN	
Gebruik	< alleen door professionele gebruiker welke een theoretische en praktische training heeft doorlopen	



Nummer	K49105/01	Vervangt	--
Uitgegeven	2010-05-27	D d.	--

**Procescertificaat****voor ontwerp, installatie, oplevering en nazorg  
van brandblusinstallaties gebaseerd op droge aërosol**

Op grond van onderzoek, alsmede regelmatig door Kiwa uitgevoerde controles, worden de door

**Fire Solutions Benelux B.V.**

uitgevoerde processen, gespecificeerd in dit certificaat, geacht te voldoen aan de Kiwa-beoordelingsrichtlijn BRL-K23003/01 "voor ontwerp, installatie, oplevering en nazorg van brandblusinstallaties gebaseerd op droge aërosol".

Bouke Meekma  
Directeur Kiwa N.V.

Dit certificaat is afgegeven conform het Kiwa-Reglement voor productcertificatie.

Dit certificaat bestaat uit 5 pagina's.  
Openbaarmaking van het certificaat is toegestaan.

Kiwa N.V.  
Sir W. Churchill-laan 273  
Postbus 70  
2280 AB RIJSWIJK ZH

Tel. 070 414 44 00  
Fax 070 414 44 20  
E-mail [certif@kiwa.nl](mailto:certif@kiwa.nl)  
[www.kiwa.nl/brand](http://www.kiwa.nl/brand)

**Onderneming**

Fire Solutions Benelux B.V.  
Benjamin Franklinstraat 14  
3261 LW Oud-Beijerland  
Tel. 0186 699699  
Fax 0186 636655  
E-mail [info@firepro.nl](mailto:info@firepro.nl)  
Internet [www.firepro.nl](http://www.firepro.nl)

Certificaat



*License No. 18907  
to mark a product:  
with the Green Label*

*The Standards Institution of Israel and the Ministry of the Environmental Protection have licensed:*

*OPEN EYE LTD.*

*HADERA*

*To mark with the Green Label the following products:*

*SBK FORMING FIREPRO - FIRE EXTINGUISHING AEROSOL  
GENERATORS*

*LIST OF TYPES IN ANNEX A*

*These commodities are produced in conformity with the requirements of the Israel Standard  
SI 1738 - General Guidelines for the Assessment of Products with Reduced Environmental Impact,  
the requirements set in the specific relevant standards, and by the Green Label Board.*

*This license is granted in conformance with SII procedure 004 - Rules for the Granting of the  
Green Label for Products with Reduced Environmental Impact. The license does not derogate  
any obligations, or other rules, which apply to the product(s) by law.*

*This license is valid from 01/01/2010 until 31/12/2010*

**Dr. Yossi Inbar**

Director General  
Ministry of Environmental Protection

**Doron Tamir**

Director General  
The Standards Institution of Israel



THE STANDARDS INSTITUTION OF ISRAEL



ANNEX A 18907

Page No. 1

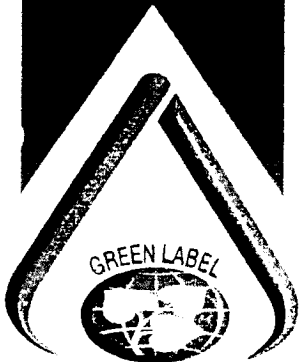
To: OPEN EYE LTD.

HADERA

Products: SBK FORMING FIREPRO - FIRE EXTINGUISHING AEROSOL GENERATORS

Types:

- 1 .FP - 8
- 2 .FP - 20
- 3 .FP - 100
- 4 .FP - 200M
- 5 .FP - 200
- 6 .FP - 500
- 7 .FP - 1000M
- 8 .FP - 1200
- 9 .FP - 1200C
- 10 .FP - 3000
- 11 .FP - 6300C
- 12 .FP-80
- 13 .FP-2000
- 14 .FP-5700



THE STANDARDS INSTITUTION OF ISRAEL

*This license is valid from 01/01/2010 until 31/12/2010*

**Dr. Yossi Inbar**

Director General  
Ministry of Environmental Protection


**Doron Tamir**

Director General  
The Standards Institution of Israel

# Certificate

## EC TYPE-EXAMINATION (MODULE B) CERTIFICATE No. BSI/A.1/3.46/560436

This is to certify that BSI did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the Fire protection requirements of Marine Equipment Directive (MED) 96/98/EC, as amended, last amended by Directive 2009/26/EC, subject to any conditions in the schedule attached hereto.

Applicant Address	FirePro Systems Limited 6 Koumandarias & Spyrou Araouzou Street Tonia Court No2, 6 <sup>th</sup> Floor Limassol 3036 Cyprus	
Manufacturer Address	FirePro Systems Limited Ayios Athansios 4 Falea Street Limassol District Cyprus	
Annex A1 Item	A.1/3.46 - Equivalent fixed gas fire extinguishing systems for machinery spaces (aerosol systems)	
Product Type	Aerosol Fire Extinguishing System Units with dry condensed extinguishing agent	
Product Description	FP20S, FP40S, FP80S, FP100S, FP200S, FP500S, FP1200, FP2000, FP3000 & FP5700.	
Specified Standard	MSC 1270	

The attached schedule of approval forms part of this certificate.

First Issued: 20 August 2010

Issued by BSI (Notified Body No 0086)

Date of issue: 20 August 2010

Expiry date: 19 August 2015

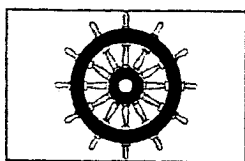
Signed



David W. Ford, Executive Director, Healthcare and Testing Services

Notes:

- (i): This certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with the notified body named on this certificate.
- (ii): Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply.
- (iii): "The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D) of ANNEX B of the Directive is fully complied with and controlled by a written inspection agreement with a notified body."



0086/yy

- iv) "Wheelmark" Format yy Last two digits of year mark affixed.  
0086 Notified Body number undertaking surveillance module

Sheet 1 of 4

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# Certificate

Certificate No. BSI/A.1/3.46/560436

Date: 20 August 2010

## SCHEDULE OF APPROVAL

### Product Specification

- FP20S : Aerosol generating fire extinguishing system unit with 20g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, Fire Class A & B
- FP40S : Aerosol generating fire extinguishing system unit with 40g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP80S : Aerosol generating fire extinguishing system unit with 80g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP100S : Aerosol generating fire extinguishing system unit with 100g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP200S : :Aerosol generating fire extinguishing system unit with 200g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP500S : :Aerosol generating fire extinguishing system unit with 500g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP1200 : :Aerosol generating fire extinguishing system unit with 1200g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP2000 : :Aerosol generating fire extinguishing system unit with 2000g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP3000 : :Aerosol generating fire extinguishing system unit with 3000g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B
- FP5700 : :Aerosol generating fire extinguishing system unit with 5700g dry condensed extinguishing agent, thermal activation by thermocord at 172 °C, electrical (6 - 36 V D/C 0.8 A in 3 - 4 sec), heating element with 2.3 ohm resistance , Fire Class A & B



Certificate No. BSI/A.1/3.46/560436

Date: 20 August 2010

## SCHEDULE OF APPROVAL

### Conditions of Certification

- i) The certificate remains valid unless cancelled or revoked, provided the conditions listed below are complied with and the equipment remains satisfactory in service
- ii) The equipment detailed on page 1 on this certificate is to be manufactured in accordance with Production Quality Assurance system (Module D)
- iii) Detailed User instructions are to be provided with each product.
- iv) If the specified standards are amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply.
- v) Production tests are to be conducted in accordance with the applicable requirements of the IMO Resolutions and applicable standards and be recorded by the manufacturer in accordance with the approved Production Quality Assurance system (Module D) of the Marine Equipment Directive.
- vi) Each item, batch or lot of the equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity".

Certificate No. BSI/A.1/3.46/560436

Date: 20 August 2010

## SCHEDULE OF APPROVAL

Approval Documentation that forms part of this certification:

Drawing No.	Rev./ Issue No.	Date	Title
C20ASS	0	17/01/2009	FP20S – General Assembly Drawing
C40ASS	0	16/01/2008	FP40S – General Assembly Drawing
C80ASS	0	16/01/2008	FP80S – General Assembly Drawing
C1AS	2	29/05/2009	FP100S – General Assembly Drawings
C2AS	2	25/05/2009	FP200S – General Assembly Drawings
C5AS	2	16/02/2009	FP500S – General Assembly Drawings
B12AS	0	01/01/2008	FP1200 – General Assembly Drawing
B12EH	0	01/01/2008	FP1200 – External Housing Construction Drawing
B12IH	0	01/01/2008	FP1200 – Internal Housing Construction Drawing
B12IAS	0	01/01/2008	FP1200 – Internal Assembly Drawing
B20AS	0	01/01/2008	FP2000 – General Assembly Drawing
B20IAS	0	01/01/2008	FP2000 – Internal Assembly Drawing
B30AS	0	01/01/2008	FP3000 – General Assembly Drawing
B30IAS	0	01/01/2008	FP3000 – Internal Assembly Drawing
B2030EH	1	01/01/2008	FP2000 & FP3000 – External Housing Construction Drawing
B2030IH	0	01/01/2008	FP2000 & FP3000 – Internal Housing Construction Drawing
B122020BRKT	0	01/01/2008	FP1200 – Mounting Bracket
B2030BRKT	0	01/01/2008	FP2000 & FP3000 – Mounting Bracket
AELACT	0	01/01/2008	Electrical Activators for all Models where fitted
<b>Supporting Documentation</b>			
Technical Dossier	0	22/07/2010	SMO Ref 7498123– Electronic copy of the Technical file covering all models listed on page 1
Reports & Certificates	-	-	KIWA Certificate K21477/08 01/04/2010 UL Test Report, Project Ref 05CA05359, File EX6960 USCG Report CG-D-03-06 Russian Maritime Register of Shipping, Type approval Certificate Ref 10.80012.180 dated 11/06/2010 for MCS 1270 Hughes Associates INC Analysis Report dated Nov 2004 & 15/01/2009
Report	-	06/08/2010	Technical Dossier Assessment Report 2411/7498123

# Certificate

## EC QUALITY SYSTEM (MODULE D) CERTIFICATE No. BSI/MED/PC/560437

This is to certify that BSI did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the Fire protection requirements of Marine Equipment Directive (MED) 96/98/EC, as amended, last amended by Directive (2009/26/EC), subject to any conditions in the schedule attached hereto.

The

Manufacturer **FirePro Systems Limited**  
Registered office **6 Koumandarias & Spyrou Araouzou Street  
Tonia Court No2, 6<sup>th</sup> Floor  
Limassol 3036  
Cyprus**  
Manufacturing location **Ayios Athansios  
4 Falea Street  
Limassol District  
Cyprus**



maintains and applies a quality system in accordance with the requirements of the Maritime Equipment Directive Annex B, Module D.

Scope:

**A.1/3.46** *Equivalent fixed gas fire extinguishing systems for machinery spaces (aerosol systems)*

This certificate remains valid unless cancelled, expired or revoked.

First Issued: 20 August 2010

Issued by BSI (Notified Body No. 0086)

Date of issue: 20 August 2010

Expiry date: 19 August 2013

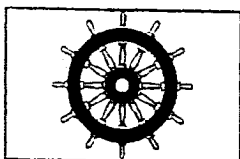
Signed

David W. Ford, Executive Director, Healthcare and Testing Services

Notes:

This certificate authorises the manufacturer or his authorised representative established within the Community in conjunction with the EC TYPE EXAMINATION (MODULE B) CERTIFICATE of the equipment listed in the scope to affix the "Mark of Conformity" (wheelmark). This certificate loses its validity if the manufacturer makes any changes or modifications to the approved quality system, which have not been notified to, and agreed with the notified body named on this certificate and/or after lapse of time, withdrawal or revocation of the EC Type Examination (Module B) Certificate.

Example for the Application of the "Mark of Conformity":



0086yy

"Wheelmark" Format yy Last two digits of year mark affixed.  
0086 Notified Body number undertaking surveillance module

Sheet 1 of 2

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# Certificate

Certificate No. BSI/MED/PC/560437

Date: 20 August 2010

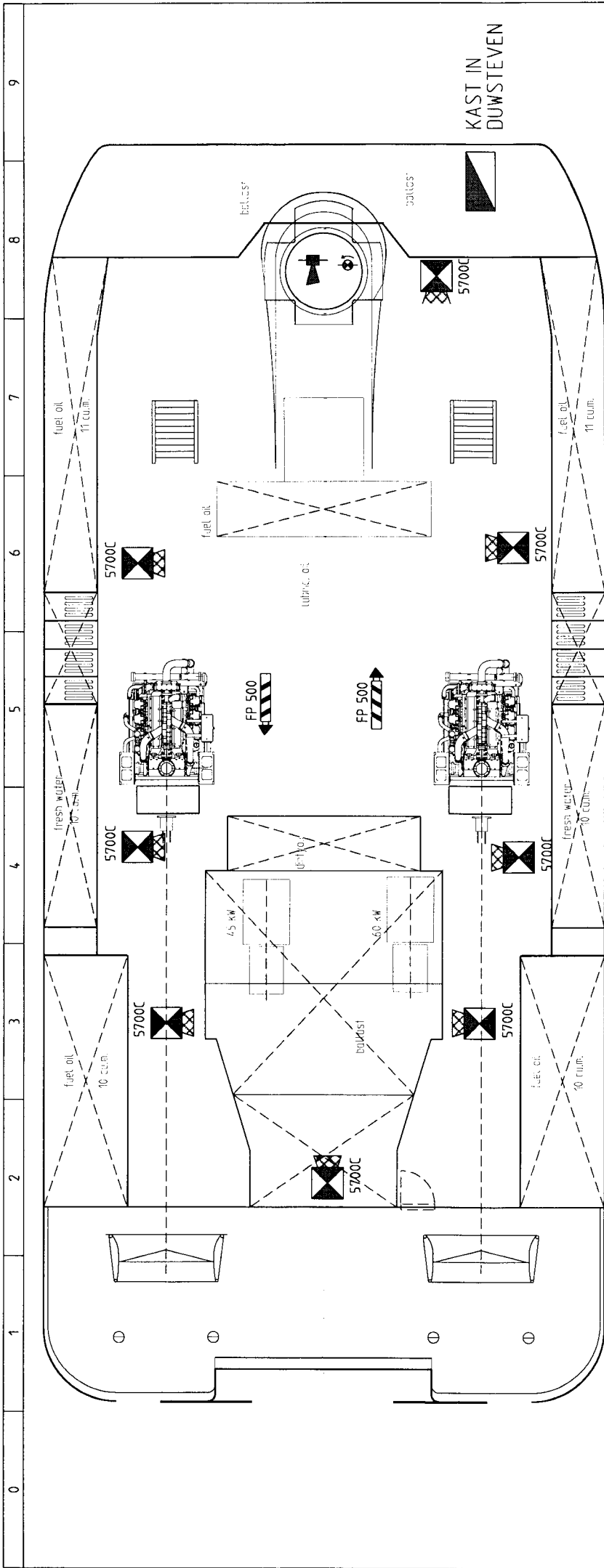
Annex to  
**EC QUALITY SYSTEM (MODULE D)**  
**CERTIFICATE No. BSI/MED/PC/560437**

Product Designation	Model	Certificate No.	Issue Date	Notified Body
A.1/3.46	FP20S, FP40S, FP80S, FP100S, FP200S, FP500S, FP1200, FP2000, FP3000 & FP5700 aerosol generating fire extinguishing system unit with dry condensed extinguishing agent, Fire Rating Type A & B	BSI/MED/A.1/3.46/560436	20/08/2010	0086

Conditions of Certification

- i) The certificate remains valid unless cancelled or revoked, provided the conditions listed below are complied with and the equipment remains satisfactory in service
- ii) The equipments detailed above are to be manufactured in accordance with Production Quality Assurance system (Module D) of the Marine Equipment Directive.
- iii) If the specified standards are amended during the validity of this certificate, the product type are to be re-approved prior to it being supplied to vessels to which the amended standards apply.
- iv) Production tests are to be conducted in accordance with the applicable requirements of the Directive and be recorded by the manufacturer in accordance with the approved Production Quality Assurance system (Module D) of the Marine Equipment Directive.
- v) Each equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity".

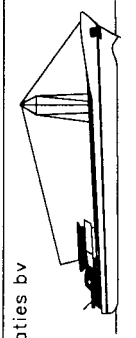




MAIN DATA	
LENGTE O.A.	22.68M
BREEDTH O.A.	10.04M
DEPTH	2.70M
DRAFT	1.85M

LEGENDA	
	FP / 500
	5700C
	AF-X MARINE PANEL
	SIGNAAL
	ZWAAILAMP

Leeuwestein Scheepsinstallaties bv  
 Keizershof 14  
 3311 JP Dordrecht  
 telf. 078-6311477  
 fax.078-6314538



Get.: Andre  
 Datum: 28-8-2012  
 Revisie:

Klant: Frantk Rycquart  
 Bedrijf/dhr.:  
 Plaats: Mdb Danau  
 Scheepsnaam: 06105358  
 Reg.nr.:

installatie: Afx overzicht



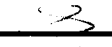

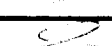



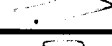

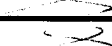






tek.nr.:	
aantal bl.	
blad nr.:	3
func.:	
loc.:	

ENI 06105358



## Protocol aanleg af-x blusinstallatie

Akkoord

Wanau

01.	Controle componenten op beschadiging.	
02.	Juiste doorvoeringen voor bekabeling aanwezig door schotten	
03.	Goede, juiste fundatie voor ophangen componenten	
04.	Controle inhoud desbetreffende ruimte of deze juist is berekend t.o.v. aangeleverde tekeningen	
05.	Units ophangen zodat er een goede worp gecontinueerd wordt.	
06.	Controle kabels naar units volgens keur FB JER-H(st)H E30-90	
07.	Bekabeling deugdelijk bevestigen in schip	
08.	Wanneer meerdere kabels verbinden dit in een kastje met geïsoleerd porselein en een kabeldoos met wartels Wiska 208 of Spelsberg WKE	
09.	Aansluiten van de units in desbetreffende ruimtes.	
10.	Schone voeding gezekeerd 24V naar Marine Panel	
11.	Noodvoeding gezekeerd 24V of d.m.v. aangeleverd batterijen in unit	
12.	Aansluiten, verbinding maken en sirene en akoestisch alarm naar unit	
13.	Aansluiten Marine Panel volgens aangeleverde procedure.	
14.	Controle of openingen, deuren goed afsluitbaar zijn Scheeps- en adresgegevens controleren Als het gekeurde logboek aanwezig is en alles gecontroleerd en goed bevonden is deze invullen met nummer en handtekening	
15.	Wanneer het gekeurde logboek nog niet aanwezig is dit melden op kantoor	
16.	Kantoor meldt de goedkeuring aan desbetreffende keuringsinstantie	
17.	Bordje vaste blusinstallatie plaatsen bij ingang betreffende ruimte.	

### Protocol alleen te gebruiken door cattas gecertificeerde personen

Datum controle:	20-9-2012	
Naam bedrijf:	Leeuwestein Scheepsinstallaties B.V.	
Naam cttas controleur:	J.T. Leeuwestein	