



EC TYPE EXAMINATION (MODULE B) CERTIFICATE

This is to certify that:

LLOYD'S REGISTER VERIFICATION LIMITED (LRV), specified as a "notified body" under the terms of The Merchant Shipping (Marine Equipment) Regulations S.I. 1999 No. 1957, did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the essential Fire protection requirements of Marine Equipment Directive (MED) 96/98/EC as modified by Commission Directives 98/85/EC, 2001/53/EC, 2002/75/EC, 2002/84/EC, 2008/67/EC, 2009/26/EC, 2010/68/EU, 2011/75/EU, 2012/32/EU, 2013/52/EU and 2014/93/EU subject to any conditions in the Design Appraisal Document attached hereto.

Manufacturer Dafo Fomtec AB

Address Vindkraftsvägen 8
135 70 Stockholm
Sweden


Annex A1 Item **A.1/3.58 FOAM CONCENTRATE FOR FIXED LOW EXPANSION FOAM FIRE EXTINGUISHING SYSTEMS FOR MACHINERY SPACES AND TANKER DECK PROTECTION**

Type **FOAM CONCENTRATE**

Description Fire Extinguishing Low Expansion Foam Concentrate: 'Fomtec FFFP 3%' Type 'B' Protein Foam Concentrate.

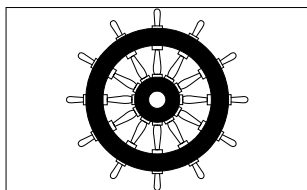
Specified Standard IMO MSC.1/Circular 1312
IMO MSC.1/Circular 1312/Corrigendum 1

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

| | | | |
|-----------------|---------------|-------------|--|
| Date of issue | 21 April 2016 | Expiry date | 20 April 2021 |
| Certificate No. | MED 1650134 | Signed |  |
| Sheet No | 1 of 3 | Name | S. Abraham For and on behalf of Lloyd's Register Verification LRV EC Distinguishing No. 0038 |

Note:

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 the notified body named on this certificate of any modification or changes to the equipment in order to obtain a valid Certificate.



0038/yy

Subject to compliance with the conditions in the attached Design Appraisal Document (schedule), which forms part of this certificate, and those of Articles 10.1(i) and 11 of the Directive, the Manufacturer is allowed to affix the "Mark of Conformity" to the Product described herein.
yy Last two digits of year mark affixed.

This certificate is issued under the authority of the MCA.

Lloyd's Register Verification Limited (Reg. no. 4929226) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK.
A subsidiary of Lloyd's Register Group Limited.



Lloyd's
Register

Lloyd's Register Verification Limited

71 Fenchurch Street, London, EC3M 4BS
Telephone 020 7423 2416 Fax 020 7423 2053
Email med@lr.org

| |
|--------------------------------|
| Page 2 of 3 |
| Document number MED 1650134 |
| Issue number 1 |

DESIGN APPRAISAL DOCUMENT

| | |
|-----------------------|---|
| Date 21 April 2016 | Quote this reference on all future communications MTES/SFS/TA/TR/SA/WP25575249 |
|-----------------------|---|

ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1650134

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

APPROVAL DOCUMENTATION

Lloyds Register Copenhagen Office witness certificate CPN 1520982/1, dated 02 October 2015 for testing conducted at the Falck Nutek Test Facility, Esbjerg, Denmark.

CONDITIONS OF CERTIFICATION

1. Type: B Protein Foam concentrate 'FFFP 3%': When used in 3% concentration and an as-tested foam expansion ratio of 6.4:1, in suitable equipment for hydrocarbon fires in machinery spaces and tanker decks
2. The foam concentrate should be stored above their freezing temperature as per Table 1

Table 1:

| Foam Type | Foam Concentrate | Freezing Temperature (°C) | Storage Temperature Range (°C) |
|----------------|------------------|---------------------------|--------------------------------|
| Fomtec FFFP 3% | Protein Foam | -15 | -15 to 49 |

3. The storage container should be compatible with the foam concentrates throughout the service life of the foam
4. Each product is to be supplied with its manual for application, use, transport, storage and maintenance
5. Periodical testing of foam concentrates for hydrocarbon fires should be carried out not more than 3 years after being supplied to the ship and after that, every year, by independent laboratories or authorised service suppliers acceptable to the Administration
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
7. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place
8. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place



Lloyd's
Register

Lloyd's Register Verification Limited

71 Fenchurch Street, London, EC3M 4BS

Telephone 020 7423 2416 Fax 020 7423 2053

Email med@lr.org

| |
|--------------------------------|
| Page 3 of 3 |
| Document number MED 1650134 |
| Issue number 1 |

DESIGN APPRAISAL DOCUMENT

| | |
|-----------------------|---|
| Date 21 April 2016 | Quote this reference on all future communications MTES/SFS/TA/TR/SA/WP25575249 |
|-----------------------|---|

ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1650134

PLACE OF PRODUCTION

Dafo Fomtec AB
Garnisonsgatan 47A,
254 66 Helsingborg,
Sweden


London Office
Lloyd's Register Verification Ltd
Lloyd's Register

Saji Abraham
Senior Specialist
Statutory Fire and Safety
Marine Technology and Engineering Services
For and on behalf of Lloyd's Register Verification
LRV EC Distinguishing No. 0038