



## 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, 2014/93/EU and 2015/559 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 ARC AFFF 3% -45' Type 'B' 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.**

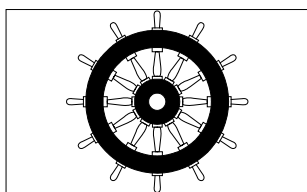
Date of issue 26 July 2016 Expiry date 25 July 2021

Certificate No. MED 1650199 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**

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**DESIGN APPRAISAL DOCUMENT**

Date 26 July 2016	Quote this reference on all future communications SOUTSO/SFS/TA/SA/WP26532058
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**ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. MED 1650199**

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 Test Witness Certificate No: CPN 1620503/1, dated 14 June 2016, for testing conducted at the Falck Safety Service – Esbjerg, Denmark and DAFO Fomtec AB – Helsingborg, Sweden.

**CONDITIONS OF CERTIFICATION**

1. Type: B Aqueous Film Forming Foam (Newtonian) 'FOMTEC AFFF 3 % -45': When used in 3% concentration and an as-tested foam expansion ratio of 8.9:1, 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 AFFF 3 % -45	Aqueous Film Forming Foam (Newtonian)	-45	-45 to 55

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

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##### PLACE OF PRODUCTION

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

Saji Abraham  
Senior Specialist  
Statutory Fire & Safety  
Southampton Technical Support Office, Marine & Offshore  
For and on behalf of Lloyd's Register Verification  
**LRV EC Distinguishing No. 0038**