DNV·GL

Certificate No:
MEDB0000184

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Helicopter facility foam fire-fighting appliances

with type designation(s)
Foam/Water Monitors Type: UFM-80M, UFM-100M, UFM-150M, UFM-80H, UFM-100H

Issued to
Wilhelmsen Technical Solutions
Shanghai, **China**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2015/559,**
Annex A.1, item No. A.1/3.67 and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/18 and IMO MSC.1/Circ.1431

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-03-09**.

Issued at **Høvik** on **2017-03-10**

DNV GL local station:
Tianjin

Approval Engineer:
Helge Bjørnarå

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

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Job Id: **344.1-004889-1**
Certificate No: **MEDB0000184**

Product description

"Foam/Water Monitors Type: UFM-80M, UFM-100M, UFM-150M, UFM-80H, UFM-100H"
are foam monitors with non air-aspirating nozzles. The fog/jet nozzles are of constant flow type, i.e. flow is the same at both fog and jet settings. The nozzles do not return automatically to maximum spray angle after use.

The monitor comes in two verisons: manual operated (M) or hydraulic/manual operated (H).

Foam monitor type:		UFM-80	UFM-100	UFM-150
Capacity [lpm]		500-3850	750-6950	1550-12900
k-factor [lpm/bar^{0,5}]		260-1300	390-2350	810-4370
Rated working pressure [bar]		4-10	4-10	4-10
Max. working pressure [bar]		16	16	16
Max. throw length (still air) [m]		27-72	37-80	40-89
Foam admixture [%]		3	3	3
Max Elevation	M	-60° - +90°	-60° - +90°	-60° - +90°
	H	-45° - +60°	-45° - +60°	NA
Rotation	M	360°	360°	360°
	H	±150°	±150°	NA

Application/Limitation

The system shall be designed according to the principal requirements of IMO MSC.1/Circ.1431.

Only the monitor is approved by this certificate. Other systems components are subject to case-by-case approval.

Each monitor to be function and hydraulicly pressure tested at 1.5 times max. working pressure (24 bar).

Each monitor shall be supplied with its manual for installation, operation and maintenance.

Type Examination documentation

Test reports:

- No. THIN1507007346MR dated 25 August 2015 from SGS-CSTC Standards Technical Service (Tianjin) Co., Ltd.
- No. Unitor-20091117 dated 9 December 2009 from Wilhelmsen Ships Equipment.
- No. Unitor-20150730 dated 23 october 2015 from Wilhelmsen Technical Solutions.

Main dimensional drawings:

- 53-02-100 (UFM-80M)
- 53-02-103 (UFM-80H)
- 53-02-101 (UFM-100M)
- 53-02-104 (UFM-100H)
- 53-02-102 (UFM-150M)

System design:

- Helideck: No. 53-D14-03-04 Rev. 2 dated 25 March 2014 from manufacturer.
- Operating Instruction: No. 53-00-001-7-E Rev. 1 dated 12 June 2014 from manufacturer.

Data sheets:

- No. 53-02-100 (UFM-80M) dated 29 May 2012 from Wilhelmsen Technical Solutions
- No. 53-02-103 (UFM-80H) dated 7 July 2014 from Wilhelmsen Technical Solutions
- No. 53-02-101 (UFM-100M) dated 29 May 2012 from Wilhelmsen Technical Solutions
- No. 53-02-104 (UFM-100H) dated 7 July 2014 from Wilhelmsen Technical Solutions
- No. 53-02-102 (UFM-150M) dated 29 May 2012 from Wilhelmsen Technical Solutions

Tests carried out

The monitor is tested as branchpipe according to EN 13565-1 (2003) including A1 (2007).

Marking of product

The product or packing is to be marked according to EN 13565 (2003) + A.1 (2007) Section 11 and the MED Mark of Conformity.