

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 Norway.

This is to certify:

That the Fast rescue boats: rigid

with type designation(s)
MARE 600 FRB

Issued to

MARE SAFETY AS
ULSTEINVIK, Norway

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2018/773**,
item No. MED/1.20b. SOLAS 74 as amended, Regulation III/4, III/26, III/34, LSA Code and
IMO MSC/Circ.1006, 1016 & 1094

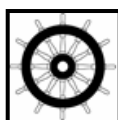
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-04-02**.

Issued at **Høvik** on **2019-04-03**

DNV GL local station:
Ulsteinvik

Approval Engineer:
Jasna Jovovic-Lainis



Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
Head of Notified Body



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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

"MARE 600 FRB" – a rigid fast rescue boat with single point lifting hook and inflatable bag for re-righting after capsizing.

Materials:

Glassfiber, CSM 300/450/600 g/m ²	Owens Corning, Belgium
Fire retardent resin, DION FR 820 M878	Reichhold AS, Norway
Gelcoat resin, ENGWARD 329826 (Enguard series based on Aropol C138)	Ashland Poland SP Z.O.O., Polen
Buoyancy materials, Elastopor H 1700/10 – 1700/11 – 1702/4	BASF Polyurethanes Nordic AB, Sweden

Length over all, max: 6.50 m
Beam over all, including fenders, Bmax: 2.85 m
Draught: 1.00 m
Weight of boat, fully equipped: 2220 kg
Weight of boat, fully manned (82.5 kg/person): 3045 kg

Hook manufacturer and type: H. Henriksen Mek. Verksted A/S, HMK 3.5, off-load
Lifting arrangement max. WL: 3500 kg

Hull material: GRP

Propulsion system: Inboard engine with waterjet
Engine manufacturer and type: Steyr 164
Steyr 236
Volvo D3-190
Volvo D4-225
Yanmar 4LHA-STP

Waterjet types: Alamarin 230
Alamarin 245
Hamilton 213

Bollard pull: 2.9 kN with 120 kW engine
5.8 kN with 177 kW engine

Application/Limitation

Approved engine power: 118 kW (Steyr 164)
170 kW (Steyr 236)
143 kW (Volvo D3-190)
165 kW (Volvo D4-225)
177 kW (Yanmar 4LHA-STP)

Number of persons, max: 10
Maximum load of persons (82.5 kg/person): 825 kg

Fast rescue boat equipment and marking/instructions to be inspected after installation onboard the ship. Equipment shall comply with LSA Code and IMO Res.MSC.81(70).

The fast rescue boat is fitted with a release hook without on-load release capabilities, in accordance with LSA Code 4.4.7.6.17. Hence, if it is to be combined with launching appliances with permanent high speed tensioning device (LSA Code 6.1.7.3), compatibility must be assured.

The normal equipment of the fast rescue boat to include a hands-free and watertight VHF radiocommunication set, in addition to the ones required on the bridge.

The design assessment is based on IMO Res. MSC.48(66) as amended by IMO Res. MSC.207(81), IMO Res. MSC.218(82), IMO Res. MSC.272(85) and IMO Res. MSC.320(89).

Production and installation testing shall be carried out according to IMO Res. MSC.81(70) as amended, Part 2.

Type Examination documentation

Basis for approval:

Technical file as per approval letter no. J-1	2008-10-21
Prototype test report witnessed by DNV	2004-06-22
Prototype Test, witnessed by DNV GL (Yanmar 4LHA-STP)	2017-11-20
Laminate strength test report, Journal no. cau-892 for both tensile and flexural strength, Reichhold AS, Labatory site in Sandefjord, Norway	2016-09-20
Laminate fire test report (IMO MSC/Circ.1006.), test report no. F17 130010-10 Rev.1 from RISE Fire Research, Trondheim, Norway	2017-05-15

Drawings:

Drawing No. MS600.000.02 (Rev.A) – Mare Safety 600 FRB, GA	2008-07-09
Drawing No. 1007-001-01 (Rev.3) – Lifting Frame Assy (3 pages)	2013-10-15
Drawing No. 1007-001-02 (Rev.1) – Calculation Report, Lifting Frame	2014-05-02

Tests carried out

Tests are documented in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC.81(70) Part 1, as amended by IMO Res. MSC.226(82), IMO Res. MSC.274(85), IMO Res. MSC.321(89) and IMO Res. MSC.323(89) and IMO MSC/Circ.1006.

Marking of product

The product is to be indelibly marked with name and address of manufacturer, boat model and serial number, month and year of manufacturer, number of persons approved for and operational restrictions, if any, according to LSA code item 4.4.1.2 and the mark of conformity (see page 1).

List of fast rescue boat equipment to be posted in the boat.