

# 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 Rigid rescue boats

with type designation(s)  
**MARE RB 550**

Issued to

**MARE SAFETY AS**  
**ULSTEINVIK, Norway**

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

Regulation **(EU) 2017/306,**

**item No. MED/1.18. SOLAS 1974 as amended, Reg. III/4, III/21, III/31, III/34 & X/3, LSA Code, 2000 HSC Code 8 and IMO MSC/Circ.1006**

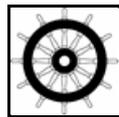
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-06-01.**

Issued at **Høvik** on **2017-06-02**

DNV GL local station:  
**Ulsteinvik**

Approval Engineer:  
**Tessa Bieber**



Notified Body  
No.: **0575**

for **DNV GL AS**

**Vidar Dolonen**  
**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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-005704-1**  
Certificate No: **MEDB00001BC**

## Product description

Rigid rescue boat w/ lifting pole and centric, alternatively eccentric, control position. Equipped with rigid buoyancy pontoon to remedy re-righting after capsized.

Glassfiber, Multiaxials QX0800/10D01/127	Owens Corning Fiberglas, Spain
Fire retardent resin, DION FR 820 M878	Reichhold AS, Norway
Gelcoat resin, ENGUARD 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: 5.50 m  
Breadth: 2.40 m  
Depth: 0.30 m  
Weight of boat, fully equipped, incl. engine : 1030 kg  
Weight of boat, fully manned (82.5 kg/person): 1525 kg

Hull material: GRP

Lifting pole SWL: 1525 kg

Propulsion system: Outboard engine  
Engine manufacturer and type: Yamaha F60F (1)  
2 x Yamaha F30 BETL (2)

Bollard pull: 2.9 kN (1)  
3.7 kN (2)

## Application/Limitation

Approved engine power: kW  
Number of persons, max: 6  
Maximum load of persons (82.5 kg/person): 495 kg

- 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).
- Various components transferring the load ("loose gear") such as shackles, chains, links, blocks etc. shall comply with recognised standard or code and shall be delivered with manufacturer's certificate, confirming a safety factor minimum 6 compared to the sustained load (LSA Code Ch. 6.1.1.6).
- The design assessment is based on LSA Code 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), part 2, item 5.4.

## Type Examination documentation

Basis for approval:

Drawings:	Date
MRB-550-EX-100, Rev. C, General arrangement Yamaha 60 HP	2017-05-15
MRB-550-EX-101, Rev. A, Line drawing	2016-04-18
MRB-550-EX-102, Rev. A, Hull lay up	2016-03-29
MRB-550-EX-103, Rev. A, Inner liner layup	2016-03-29
MRB-550-EX-104, Rev. A, Steering console lay up	2016-03-29

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MRB-550-EX-105, Rev. A, Engine well layup	2016-03-29
MRB-550-EX-106, Rev A, Canopy layup	2016-03-29
MRB-550-EX-107, Rev A, Deck and cover	2016-04-25
MRB-550-EX-108, Rev. A, Lifting tube to shell attachment	2016-04-15
MRB-550-EX-109, Rev. D, Lifting tube	2016-06-08
MRB-550-EX-110, Rev. B, Buoyancy	2016-10-12
MRB-550-EX-111, Rev. B, Electrical systems	2016-09-12
MRB-550-EX-112, Rev. B, Systems - piping	2016-09-15
MRB-550-EX-113, Rev. B, Righting frame	2016-05-04
MRB-550-EX-114, Rev. A, Air tank	2016-05-04
MRB-550-EX-119, Rev. A, Metal parts	2016-02-02
MRB-550-122 Rev. A, Twin installation of outboard engines – general arrangement	2016-09-08
100-000-100 (2 sheets), Structure RB 550	Dec. 2015
<b>Calculations</b>	
MS-2016-01, Rev.1, Strength analyses of lifting frame, Marine Rådgivningstjenester AS, Ålesund, Norway	2016-05-31
MS-2017-01 Rev.0, Twin installation of outboard engines – strength analyses, Marine Rådgivningstjenester AS, Ålesund, Norway	2017-03-16
MRB-550-EX-110, Rev. B, Buoyancy Caclulations	2016-10-12
<b>Reports</b>	
Prototype test report iaw IMO MSC./Circ. 980 witnessed by DNV GL surveyor	2017-02-23
Overload test iaw LSA Code part 1 §7.1.4 + surveyors report	2017-02-23
Liferaft towing test iaw LSA Code part 1 §7.1.2 (twin engines)	2017-04-05
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
<b>Manual</b>	
Operation and maintenance manual MARE RB 550 with outboard engine – 6 persons, Rev.1	2017-01-26

## 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), 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 manufacture, 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 rescue boat equipment to be posted in the boat.