

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)
Viking 470 / Mare 470

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 **2022-06-12**.

Issued at **Høvik** on **2017-06-13**

DNV GL local station:
Ulsteinvik

Approval Engineer:
Tessa Biever



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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: **344.1-000330-13**
Certificate No: **MEDB00002W8**

Product description

Viking 470 /Mare 470, rigid rescue boat with fixed lifting hook or fixed lifting eye and rails for re-rightening after capsizing.

Materials:

Glassfiber, Multiaxials QX0800/10D01/127	Owens Corning Fiberglas, Spain
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: 4.75 m
Breadth: 1.90 m
Depth: 0.88 m

Weight of boat fully equipped with Tohatsu 60 hp: 680 kg
Weight of boat, fully manned 82.5 kg with Tohatsu 60 hp: 1175 kg
Weight of boat fully equipped with 2 x Mariner Petrol 25 hp: 750 kg
Weight of boat, fully manned 82.5 kg with 2 x Mariner Petrol 25 hp: 1245 kg

Hook manufacturer and type: Viking Release Hook 1.6 T, on load
Hook SWL 1600 kg
Hull material GRP

Propulsion system: Outboard engine

Engine manufacturer, types and bollard pull:

Mariner Petrol 25 hp	1.2 kN
Yamaha Petrol 25 hp	1.5 kN
2 x Mariner Petrol 25 hp (must be combined with re-righting bag)	2.3 kN
Mariner Petrol 40 hp	2.0 kN
Mariner Petrol 60 hp:	4.1 kN
Mariner Petrol 60 hp bigfoot with 75 gearbox:	4.8 kN
Yanmar Diesel 27 hp	1.6 kN
Yanmar Diesel 36 hp	2.3 kN
Yamaha F60C, 60 hp	3.5 kN
Yamaha 60F, 60 hp	4.3 kN
Yamaha 40 V/40Y, 40 hp	2.5 kN
Tohatsu M60C, 60 hp	4.6 kN
Tohatsu M25C, 25 hp	1.5 kN
Tohatsu M40CL, 40 hp	-

Applications/Limitations

Approved engine power: 44.7 kW

Number of persons, max: 6
Maximum load of persons 82.5 kg: 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).

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- 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:

General	Date
Inspection report from DNV	1997-09-30
Survey report, moulding of boat from DNV	1997-10-01
Survey report testing of GRP laminates from DNV	1997-10-01
Inspection by DNV	2007-12-14
Instruction and operation manual MOB Rescue Boat Type Viking 470 GRP 1	1995-05-09
Instruction and operation manual for Hook Release Gear Type Viking 1.6 ton	1994-08-02
DNV Approval letter	2007-03-05
Drawings	
Design change No. 80004 dated with referenced drawings	2000-02-15
Viking 470 GRP 1 6 pers. with hydrostatic release gear 1.6 ton, Part list no 406-606	1995-01-30
List, MCA Approved drawings for Viking 470G GRP 1	1998-12-28
Equipment list	1994-04-21
Drawing No. 406-186, Viking 470 GRP 1, with lifting mast, 60 HP Yamaha outboard four stroke type F60C.	2008-12-01
Drawing No. 406-164, Viking 470 GRP 1 with lifting mast and fitted with Tohatsu Outboard 60 HP 2-stroke	-
Seating arrangement	2008-01-09
Drawing No. 400-010, Lifting mast with eye	2008-10-27
Drawing No. 406-303.5, Laminate Plan Standard	2009-10-13
Calculations	
Calculations of lifting post from Rambøll Hannemann & Højlund A/S	1994-07-07, approved by MCA dated 1995-02-09
Test reports	
Prototype test reports	1999-11-09/12/18 1999-12-22
Evaluation and test report for rigid rescue boat approved by MCA	1998-02-06
Evaluation and test report for rigid rescue boat approved by DNV	1998-03-20
Evaluation and test report for rigid rescue boat approved by MCA and RINA	1994-11-24
Evaluation and test report for rigid rescue boat	1998-09-18
Evaluation and test report for rigid rescue boat approved by DNV	1998-04-15
Prototype test reports approved by DNV	2007-08-23
Witness test report No. 50008018 approved by DNV	2008-08-05
Evaluation and test report for rigid rescue boat approved by DNV	2008-11-13
Prototype test report dated witnessed by DNV surveyor	2010-05-18
Viking test report "The Maximum Towing Force" witnessed by DNV	2011-04-11
Prototype test report "Operational tests – Liferaft Towing" witnessed by DNV	2011-03-24
Laminate strength test report, Journal no. cau-892 for both tensile and flexural strength, Reichhold AS, Laboratory 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

Tests carried out



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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.