

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Rigid rescue boats**with type designation(s)
BH-R4

Issued to

**Boatbuilding Yard, Qingdao Beihai Shipbuilding Heavy
Industry Co., Ltd.
Qingdao, Shandong, China**

is found to comply with

**SOLAS 74 as amended, LSA Code as amended. DNV Standard for Certification of Lifeboats and
Rescueboats 2007. IMO Res. MSC 81(70)****Application :****Rigid Rescue Boat**Issued at **Høvik** on **2019-11-04**This Certificate is valid until **2024-11-03**.for **DNV GL**DNV GL local station: **Dalian**Approval Engineer: **Thorvald Furuseth**

Mårten Schei-Nilsson
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-006156-7**
Certificate No: **TALB000002M**

Product description

Rigid rescue boat with 4 point sling arrangement and single point lifting hook.

Length: 4.19 m
Breadth: 1.70 m
Depth: 0.84 m
Weight of boat, fully equipped: 647 kg (25 Hp)
671 kg (40 Hp)
Weight of boat, fully manned (82.5 kg/person): 1142 kg (25 Hp)
1166 kg (40 Hp)

Hull material: GRP

Propulsion system: Outboard engine
Engine manufacturer and type: TOHATSU M25C (1)
Mercury Mariner 25 Hp (2)
Mercury Mariner 40 Hp (3)

Bollard pull: 2.0 kN (1)
2.0 kN (2)
2.8 kN (3)

Material	Type designation	Manufacturer
Polyester resin	FL-918	Jiangsu Fullmark Chemicals Co., Ltd.
Polyester resin	TM-107BH, FN-H1135	Changzhou Huari New Material Co., Ltd.
Gelcoat	C138	Ashland (Changzhou) Advanced Chemical Co., Ltd.
Glass fibre	EMC-300, EMC-450, EWR 570	Taishan Fiber Glass Inc.
Buoyant material	LM-206A, LM-206B	Qingdao Lianmei Chemical Co., Ltd.

Application/Limitation

Approved engine power: 18.4 kW (1)
18.4 kW (2)
29.4 kW (3)
Number of persons, max: 6
Maximum load of persons (82.5 kg/person): 495 kg
Approved colour: Orange

- 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 IMO Res. MSC.48(66) as amended by IMO Res. MSC.207(81), IMO Res. MSC.218(82) and IMO Res. MSC.272(85) and IMO Res. MSC.320(89).
- The manufacturing of the rescue boat shall meet the requirements in DNV Standard for Certification of Lifeboats 2007, Ch. 12 and 13 (manufacturer's quality assurance of production).

- Production and installation testing shall be carried out according to IMO Res. MSC.81(70), part 2.
- The rescue boat shall be delivered together with DNV GL boat certificate.

Type Approval documentation

Certification in accordance with Class Programme DNVGL-CP-0338, September 2018.

Basis for approval:

Doc./Dwg. No.	Rev.	Title
BC332-100-01	02	General Arrangement
BC332-100-02	00	Hull Line
BC332-101-01	00	Hydrostatic Curves
BC332-101-02	00	Calculation of Gravity Center
BC332-101-03	00	Calculation of Stability
BC332-101-04	00	Buoyancy And volume Calculations
BC332-102-00	00	Calculation of construction
BC332-102-01	00	GRP Laminate
BC332-102-01JS	02	Calculations of Lifting System
BC332-102-02Q	00	Buoyancy Material Distributing
BC332-104-01	00	Anti-slip Arrangement
BC332-104-02	00	Reflected Strip & Lifeline Arrangement
BC332-105-00	00	Equipment Arrangement
BC332-110-01	01	Laminating Technology
BC332-111-03	01	Operations & Maintenance Manuals for HB-R4
BC332-112-00	00	Battery Box Vent. Arrangement
BC332-120-00	01	Boat Lifting Gear
BC332-120-01	00	Lifting rope
BC332-120-01		Lifting Mount(I)
BC332-120-02		Lifting Mount(II)
BC332-120-03		Lifting Mount(III)
BC332-121-00	00	Hand Rail Arrangement
BC332-130-00	00	After Bollard Arrangement
BC332-131-00	00	Assembly Of Releaser
BC332-133-00	00	Boarding Ladder Arrangement
BC332-204-00	00	Bilge System Arrangement
BC332-300-00	00	Mechanism Of Self-Righting Arrangement
BC332-330-01	01	Electrical System
2010-04-29		Prototype test report
2005-06-25		Prototype test report (buoyant material)
2011-01-24		Prototype test report (towing, endurance and speed & engine out of water)
2013-02-27		Prototype test report (load, strength, overload test)
		Fire retardant & flame resistant test
FR-2008-2-001		Flame resistant test
		Fire retardant test

Job Id: **262.1-006156-7**
Certificate No: **TALB000002M**

2010-07-M015	Fire retardant and flame resistant test
2009-12-M009-1	Fire retardant and flame resistant test
	Glass Steel Material Test

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 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.

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

Periodical assessment

DNV GL's surveyor is to be given permission to perform Periodical Assessments at any time during the validity of this certificate and at least every second year. The arrangement is to be in accordance with procedure described in Class Programme DNVGL-CP-0338, Section 4.