

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 Lifeboats: Davit-launched lifeboats: partially enclosed/totally enclosed

with type designation(s)
VG13.00 HLB

Issued to

Vanguard (Nantong) F.R.P. Co., Ltd.
Nantong, Jiangsu, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/1.17a. SOLAS 74 as amended, Regulation III/4, III/21, III/31, III/34 & X/3,
LSA Code, IMO MSC/Circ. 1006 & 1423, and 2000 HSC Code 8

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

This Certificate is valid until **2023-10-15**.

Issued at **Høvik** on **2018-10-16**

DNV GL local station:
Shanghai CMC

Approval Engineer:
Tessa Biever



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Job Id: **344.1-006826-1**
Certificate No: **MEDB00002H0**

Product description

Totally enclosed fire-protected hyperbaric lifeboat with self-contained air support system.

Length: 13 m
Breadth: 3.30 m
Depth: 1.25 m
Weight of boat, fully equipped: 22200 kg
Weight of boat, fully manned (100 kg/per person): 26500 kg

Hook manufacturer and type: Vanguard, CSAFE 14, on-load
Hook SWL: 14000 kg
Hull material: FRP

Propulsion system: Inboard engine
Engine manufacturer and type: STEYR MOTORS GMBH
STEYR MO144M38, 106 kW
Bollard pull: 5.1 kN

Hyperbaric chamber:
Dimensions: Internal Diameter 1750mm x Length 7600mm
Weight: 6420 kg

Application/Limitation

Approved engine power 106 kW
Maximum number of persons: 24 divers and 4 crew
Maximum load of persons (100 kg/per person): 2800 kg

- For hyperbaric evacuation this lifeboat shall also hold (or be part of) a Certificate stating conformity to the relevant IMO publications regarding Hyperbaric Escape Units (IMO Res. A.692(17)) or equivalent Class publications (DNV-RP-E403) as acceptable to the Administration.
- The lifeboat shall only be operated onboard ships with a Contingency Plan for hyperbaric evacuation developed by the shipowner and approved by the ship's Flag Administration or designated Recognized Organization.
- Lifeboat 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 design assessment is based on International Life-Saving Appliances (LSA) Code, 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), Part 2 as amended.

Type Examination documentation

Basis for approval:

Drawings	Date
General arrangement, VG13.00HLB-00 (4 sheets), Rev.2	2017-06-16
Seating plan, VG13.00HLB-00-04, Rev.1	2017-05-09
Buoyancy arrangement, VG13.00HLB-03, Rev.2	2018-09-27
Spray system, VG13.00HLB-04-0, Rev.0	2017-03-02
Door, window, hatch, hook, skate arrangement plan, VG13.00HLB-05-0, Rev.3	2017-07-07

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Lines plan, VG13.00HLB-01, Rev.0	2017-03-02
Structure figure, VG13.00HLB-02, Rev.1	2018-09-27
Propeller arrangement, VG13.00HLB-35, Rev.1	2018-05-16
Power system, VG13.00HLB-08-0, Rev.3	2018-03-19
Electrical diagram, VG13.00HLB-00DYL, Rev.2	2017-11-15
Electric arrangement, VG13.00HLB-00DYLB, Rev.1	2016-10-25
Emergency air supply system, VG13.00HLB-07-0, Rev.3	2017-07-07
Steering system, VG13.00HLB-09-0, Rev.0	2017-03-02
Release mechanism, VG13.00HLB-06-0, Rev.1	2018-03-28
Hook device, Csafe14	2017-03-02
Painter release device, VG13.00HLB-10-0, Rev.0	2017-03-02
Reflective tape, VG13.00HLB-34, Rev.1	2018-03-19
Calculations	Date
Release mechanism, VG13.00HLB-06-0, Rev.1 : Strength calculation sheet for hook	2018-03-28
Single point lifting arrangement, VG13.00HLB-SPLA, Rev.0	2017-03-02
Calculation strength (hull), VG13.00HLB-00JS5, Rev.0	2017-03-02
Calculation buoyancy, VG13.00HLB-00JS4, Rev.0	2017-03-02
Calculation for air supply, VG13.00HLB-00JS9, Rev.0	2017-03-02
Calculation towing eye, VG13.00HLB-TE, Rev.0	2017-03-02
Calculation sheet for weight center gravity, VG13.00HLB-00JS1, Rev.0	2017-03-02
Capsize stability calculation sheet for totally enclosed condition, VG13.00HLB-00JS2, Rev.0	2017-03-02
Capsize stability calculation sheet for totally flooded condition, VG13.00HLB-00JS3, Rev.0	2017-03-02
Reports	Date
Prototype test witnessed by DNV GL and LR	2018-01-22 2018-01-25 2018-02-14
Impact test, test report no. S050-XPZ-2018	2018-02-14
Towing test iaw DNV-RP-E403/LSA Code item 4.4.7.7 + LSA Code Part 1 item 6.11.1	2018-02-14
Declaration fuel system iaw ISO10088 Annex A.2	2017-12-26
Air hoses and hose assemblies test	2016-11-21
Laminate strength test, test report no. 2017-09-0778 from Shanghai R&D Center for Polymer Materials, Shanghai, China	2018-02-14
Fire retardent test iaw IMO MSC/Circ. 1006, test report no. 2017-09-M010 from Shanghai R&D Center for Polymer Materials, Shanghai, China	2017-09-25
Other	Date
Operation and maintenance manual, VG13.00HLB-00SM1, Rev.4	2017-10-26
Hook system operation and maintenance manual, VG13.00HLB-00SM2, Rev.0	2017-02-03
Equipment list, VG13.00HLB-00SJ, Rev.1	2017-05-09
FRP lifeboats hull and canopy building technology, VG13.00HLB-00GY1, Rev.0	2017-03-02
Statement from manufacturer wrt fire test in accordance with LSA Code part 1 item 6.16 based on performed full scale fire test on VG8.5C-F totally enclosed lifeboat – test report no. S413-XHS-2008 dated 2008-12-08.	May 2018

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, and bear the MED mark of conformity (see page 1)



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List of lifeboat equipment to be posted in the boat.