EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00008CH

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 AS under the authority of the Government of Norway.

This is to certify:

That the Marine evacuation systems

with type designation(s)
Viking Evacuation Mini Chute (VEMC) 1.16T

Issued to
Viking Life-Saving Equipment A/S
Esbjerg V, **Denmark**

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2022/1157,**
item No. MED/1.27. SOLAS 74 as amended, Reg. III/4, III/15, III/26, III/34 & X/3, LSA Code and 2000 HSC Code 8.

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

This Certificate is valid until **2025-02-15**.

Issued at **Høvik** on **2023-02-16**

DNV local unit:
Denmark CMC

Approval Engineer:
Tessa Biever

Notified Body
No.: **0575**

for **DNV AS**

Sverre Olav Bergli
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005, and amended by Decision No 1/2019 dated February 22nd, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

'Viking Evacuation Mini Chute (VEMC) 1.16T'
is a Marine Evacuation System (MES) consisting of a single vertical mini chute which provides evacuation directly into an open reversible liferaft of type '150 DKR'. The MES container consists of the chute and one '150 DKR' liferaft. The second liferaft is a separate drop-down raft of same type which is deployed and inflated simultaneously. The MES is equipped with a traffic light system.

The VEMC MES system is kept to the ships side by a bowsing system consisting of split tubes mounted on the ship side and is equipped with a second steering wire and elastic.

The rafts are equipped with HSC emergency pack.

The VEMC 1.16T MES has been tested according to IMO Res. MSC.81(70) items 12.6.1 and 12.6.2 with Viking 150 DKR and 150 DKS drop-down liferafts respectively.

For further details and materials used please see under Type Examination documentation.

Application/Limitation

Installation height:	6.1-14.5 meter (depending on the width of the vessel)
Max evacuation capacity:	320 persons in 17 min. 40 sec. according to the HSC code (including 34 sec. for cut free of liferafts) and 577 persons in 30 min.

Evacuation capacity: *(136 seconds includes preparation of system and cut free of last liferaft.)*	specified evacuation time – 136 seconds 2.88 seconds/person

Integrated and associated liferafts shall have separate MED approval and bear the MED Mark of Conformity.

Open reversible liferafts are subject for approval by the Flag Administration.

Gas cylinders used for the inflation of the liferafts shall be of an approved type.

Components in the gas inflation system should be approved according to ISO 15738:2019.

The on-board arrangements and installation of this MES is not part of the design appraisal or certificate and to be of the satisfaction of the Flag Administration.

The following is to be submitted to the Flag Administration in each case, either by the yard, owner or equipment manufacturer:

- Plan showing the MES system fully deployed on the specific vessel in side-view and cross-sectional view under required unfavourable conditions of trim and list as the type approval does not cover the requirements to installation covered by LSA Code Ch. 6.2.2.1.4 and SOLAS Ch. III. Details shall be shown.
- Plan showing the arrangement of the MES on board any vessel, including the passageway and embarkation areas, to ensure that the flow rate as stated above can be maintained throughout the total evacuation of the number of persons for which the MES is certified for.

It shall be verified that the ship on which the MES is installed is equipped with a sufficient number of rescue boats or lifeboats to satisfactory marshal and support the bowsing and tow away, as applicable, of all the associated life rafts within the times allowed for embarkation as per SOLAS Reg. III/21.1.3 and 31.1.5.

Installation tests to be carried out in accordance with IMO Res. MSC.81(70), Part 2, item 7 and to be documented by the manufacturer. This does not preclude any further testing to additional requirements of the Flag Administration or those acting on their behalf.

Inflatable components or sections of the marine evacuation systems are to be service at intervals not exceeding twelve months by a person suitably qualified and authorized by the manufacturer.

Any electrical, pressurised and hydraulic components are only assessed as integrated parts of the VEMC but are not assessed individually. The electrical, pressurised and hydraulic components shall be designed to codes of practice to the satisfaction of the Flag Administration having regards to their locations and maximum ambient temperatures expected in service.

A full set of manuals and associated documents are to be provided onboard for use on all operations involved in the inspections, maintenance and resetting of the MES and associated equipment.

Type Examination documentation

This certificate replaces MEDB000002XK Rev.7.

Drawing No.	**Date**
ENG-20155227 Rev.0 - General arrangement VEMC 1.16T	2023-02-08
ENG-20155230 Rev.0 - General arrangement VEMC 1.16T trim/list	2023-02-08
ENG-20155232 Rev.0 - Launching sequence VEMC 1.16T	2023-02-08
ENG-20155228 Rev.0 - Float free arrangement	2023-02-08
ENG-20155229 Rev.0 - Float free sequence VEMC 1.16T	2023-02-08
ENG-20155231 Rev.0 - VEMC 1.16T - stowed	2023-02-08
ENG-20122771 Rev.0 - VEMC Chute with traffic light	2022-02-22
ENG-20122477 Rev.0 - Funnel – VEMC / VEC	2022-05-17
ENG-20118414 Rev.0 - Funnel	2022-01-03
ENG-20111928 Rev.0 - Funnel long	2022-09-02
ENG-20109341 Rev.0 - Funnel – VEDC / VEMC	2021-10-12
ENG-20115159 Rev.0 - Funnel	2021-12-07
ENG-20105067 Rev.0 - Funnel short	2021-09-03
ENG-20122985 Rev.0 - Line arrangement	2022-02-22
ENG-20115092 Rev.0 - Bowsing system split	2021-12-01
Prototype test reports witnessed by DNV	**Date**
Test report No. 667	2006-02-10
Test report No. 799	2007-02-11
Test report No. 800	2007-02-11
Test report No. 809	2007-03-31
Test report No. 810	2007-03-31
Test report No. 859	2007-06-21
Test report No. 1417	2010-01-29
Test report No. 1688	2011-11-22
Test report No. 1730	2012-01-09
Test report No. 1732	2011-12-12
Test report No. 2098	2001-08-31
Test report No. Proto 1	2003-08-14
Test report No. 2099	2001-09-21
Test report No. 2106	2002-12-18
Test report No. 2664	2017-02-01
Test report No. 2665	2017-11-02
Test report No. 4295	2023-02-07
Test report No. 4298	2023-02-08
Other	
Operational Manual - VEMC 1.16T	Jan 2023
Material and Component Overview, Rev.1	2023-02-08

Tests carried out

Documentation of tests in accordance with Recommendation on Testing of Lifesaving Appliances, IMO Res. MSC.81(70), part 1.

Marking

The product is to be indelibly marked with name and address of manufacturer, type designation, dimensions and date of manufacture, the MED Mark of Conformity and USCG Approval Number (see first page)

The marking shall be according to LSA Code, item 6.2.4 and 6.2.5.