DNV·GL

Certificate No:
MEDB000010T

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive (EU) 2015/559, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate.
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 Marine evacuation systems

with type designation(s)
Viking Evacuation Liferaft System with SOLAS Mini Slide VELS + SMS

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

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/1.27 and Annex B, Module B in the Directive; 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 **2021-04-25**.

Issued at **Høvik** on **2016-09-17**

DNV GL local station:
Fredericia

Approval Engineer:
Tessa Biever

Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body

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Product description

Marine Evacuation System consisting of inflatable slide and automatically selfrighting liferaft or open reversible liferaft restrained by bowsing system:

Length of slides integrated with 1 x 150 DKS	3.3, 4.5, 5.5m
Length of slides integrated with 1 x 150 DKR	3.3, 4.5, 5.5, 6.5 m
Number of persons, max	501
Max stowage height of liferaft	18 m
Slide chamber materials	Conti-Tech NK205/2 and Phoenix Art. 029
Max weight of system with SOLAS B-pack	882 kg
Integrated liferaft SOLAS version	1 x Viking 150 DKS VELS 1.1
Integrated liferaft HSC version	1 x Viking 150 DKR+ VELS 2.1
Associated liferafts SOLAS version	Viking 150, 100, 50 or 25 DKS
Associated liferafts HSC version	Viking 150, 100 or 50 DKR+
Container material	GRP

Application/Limitation

The system is approved for evacuation heights of :

- 1.5-2.4 metres (3.3 m slide)
- 2.5-3.1 metres (4.5 m slide)
- 3.2-3.7 metres (5.5 m slide)
- 3.7-4.2 metres (6.5 m slide)

For the shortest slides the minimum angle of 30° is not met for the lowest evacuation heights. Each installation is subject to acceptance by the flag Administration.

Associated liferafts shall have separate MED Approval and be wheelmarked.

Gas bottles and components in the pressure gas systems shall be of an approved type.

Components in the gas inflation system should be approved according to ISO 15738:2002.

The arrangement of the MES onboard any vessel, including the passageway and embarkation areas, are subject to approval by the administration 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 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 Ch.III/Reg.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.

<u>The following is to be submitted to the flag administration in each case, either by the yard, owner or equipment manufacturer:</u>
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.

Evacuation time in general: *(139 seconds includes preparation of system and cut free of last liferaft.)*	specified evacuation time - 139 seconds 2,7 seconds/person
Example: 10 min =>	(600-139)/2,7 = 170 persons
Max limits on evacuation capacities based on all relevant MES criteria and liferaft sizes.	102 persons in 7 minutes and 40 seconds 303 persons in 17 minutes and 40 seconds 501 persons in 30 minutes

Type Examination documentation

This certificate replaces MED-B-7808.

The following documentation is basis for the DNV GL approval:

- Approved technical documentation as listed in our letter of 2006-05-05 and 2012-06-06.
- Reports from prototype tests as listed in our letter of 2006-05-05.
- Calculation Report VIKING Project 2046, Kapacitetstest 31/5-2002.
- Report from heavy weather seatrial of 2006-02-10.
- DHI Wave measurement report of 2006-02-24.

Tests carried out

Test documentation in accordance with Recommendation on Testing of Lifesaving Appliances, IMO Res. MSC 81(70), part 1, as reflected in Type Examination Documentation specified above.

Marking of product

The product is to be indelibly marked with name of manufacturer, type designation, dimensions and date of manufacture. The marking shall be according to LSA Code, item 6.2.4 and 6.2.5. The HSC approved version shall be marked according to 2000 HSC Code, Annex 11, items 4 and 5.