Certificate no.:
TALB000004T

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Marine evacuation systems

with type designation(s)
Viking Evacuation Slide - VES-DD

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

is found to comply with
SOLAS 74 as amended, Regulation III/4 & III/34. IMO Res. MSC 48(66) - Life-Saving Appliance Code. Tested to IMO Res. MSC 81(70).
TP14475E Ed.2 (2023-12) Canadian life saving appliance standard

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

This certificate is recognized by Transport Canada.

Issued at **Høvik** on **2026-02-10**
This Certificate is valid until **2031-02-09**.
DNV local unit: **Denmark CMC**

for **DNV**

Approval Engineer: **Tessa Biever**

Product description

'Viking Evacuation Slide, VES-DD',
is a Marine Evacuation System with dual track inclined inflatable slide, fitted with inflatable platform with the following four (4) type designations:

1. VES-DD 3.3: Steel Box, Thanner inflation system and three variants; Free on deck, standard and low coarning.
2. VES-DD 4.1: Steel Box, Leafield inflation system and three variants; Free on deck, standard and low coarning.
3. VES-DD-ALU 2: Built in with side hinged door and Thanner inflation system.
4. VES-DD-ALU 4: Built in with side hinged door and Leafield inflation system.

Slide chamber materials: Conti-Tech NK205/2, NK205/2 New Gen. and Phoenix Art. 029.

Application/Limitation

Max. stowage height and evacuation capacity as follows:

Available lengths of slide [m]	Max stowage height [m]
25.5	15.0
22.5	13.2
20	11.8
18	10.7
16	9.5
15	8.9
14	8.4
12	7.2
Evacuation capacity:	
Number of persons, max in 30 min.:	With max 7 pcs. Liferaft units*: 657
Number of persons, max in 17 min, 40 sec.:	With max 4 pcs. Liferaft units**: 386
Platform:	
Diameter of platform:	8 m

* If additional liferafts will be used beside the 7 units, the evacuation capacity of the total number of persons within 30 minutes will be reduced by 34 persons for each additional liferaft.
** If additional liferafts will be used beside the 4 units, the evacuation capacity of the total number of persons within 17 minutes and 40 seconds will be reduced by 34 persons for each additional liferaft.

The associated liferafts used shall be of an approved type. Alternatively on ships where Transport Canada approval is required, the associated liferafts shall have separate Transport Canada approval.

Accepted with 100 DKS or 100 DKR as main dropdown liferafts and one of Viking 25 DKR, 25 DKS, 39 DKS, 39 DKSN, 50 DKR or 50 DKS dropdown liferafts.

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

Components in the pressure gas systems for inflating the slides shall be in accordance with ISO 15738 or equivalent standard. On ships where Transport Canada is required gas cylinders shall have separate Transport Canada approval.

The on-board arrangements and installation of this MES are 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 unfavorable conditions of trim and list as the type approval does not cover the requirements to installation covered by LSA Code 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 serviced at intervals not exceeding twelve months by a person suitably qualified and authorized by the manufacturer.

Any electrical, pressurized, and hydraulic components are only assessed as integrated parts of the VES-DD but are not assessed individually. The electrical, pressurized, 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.

Each MES and liferaft to be supplied with instruction labels, operating and training information suitable for insertion into the ship's on-board training manual in English and French as per Transport Canada TP14475E (2nd edition December 2023) Ch.1.2.

Type Approval documentation

Test reports	**Date**
Test report 2166 – Deployed by one person - witnessed by DNV	2014-10-15
Test report 005187 – Deployed by one person - witnessed by DNV	2025-10-10
Test report 5611.1293-11 - Static load 2.2 times the maximum of 30 minutes equivalent to 3 knots – witnessed by DMA	1996-06-12
Test report 5611.1293-8 – Container hose test – witnessed by DMA	1996-05-23
Test report – External doors 5 dry release operations – witnessed by DMA	1995-08-04
Test report – Dry deployments to simulate trim 10 degrees and list – witnessed by FORCE	1995-11-27
Test report 005188 – Passage load test – witnessed by DNV	2025-10-10
Test report – Sliding test – witnessed by Dantest	1996-12-06
Test report E0191 – Reduced pressure test – witnessed by DMA	1994-09-14
Test report 5611.1293-11 – Load test – witnessed by DMA	1996-06-12
Test report E0191 – Wet sliding test – witnessed by DMA	1996-09-14
Test report E0191 – Cold inflation test – witnessed by DMA	1996-09-13
Test report E0191 – Hot inflation test – witnessed by DMA	1996-09-14
Test report E0191 – 3 x pressure test – witnessed by DMA	1996-11-22
Test report 004680 – 3 x pressure test – witnessed by DNV	2025-08-07
Test report – Damage test (platform) – witnessed by DMA	1996-06-18
Test report – Self draining test (platform) – witnessed by DMA	1997-03-10
Test report 952 – Associated liferaft tests + performance test witnessed by DNV	2007-11-27
Test report MS 3/67/011, DOC123 – HWST phase 1~4 – witnessed by MSA	1995-03-10
Test report 5611.1293-11 – HWST phase 1~4 – witnessed by DMA	1996-03-13
Test report 96-CPN 394 – HWST phase 1~4 – witnessed by RINA	1996-03-20
General arrangement drawings for MES container	**Date**
14080021 – General arrangement VES DD	2000-11-23
ENG-20182180 – VES DD ALU arr. With door (L)	2023-08-09
ENG-20189055 – VES DD ALU arr. With door (R)	2023-09-14
ENG-20138492 Rev.1 – Cassette 4.1 Build in-Wide Frame (L) VES DD Steel	2022-07-26
ENG-20140299 Rev.1 – Cassette 4.1 Build in-Wide Frame (R) VES DD Steel	2022-07-25
ENG-20140948 Rev.1 – Cassette 4.1 Build in (L), VES DD	2022-07-26
ENG-20139391 Rev.1 – Cassette 4.1 Build in (R), VES DD	2022-07-25
ENG-20144222 Rev.1 – Cassette 4.1 Free on Deck (L), VES DD Steel	2022-07-26
ENG-20142835 Rev.1 – Cassette 4.1 Free on Deck (R), VES DD Steel	2022-07-25
General arrangement drawings for Slides	**Date**
ENG-20146588 Rev.2 – VES DD 25.5 m slide	2023-05-19
ENG-20126058 Rev.1 – VES DD 22.5 m slide	2023-05-19
ENG-20140812 Rev.2 – VES DD 20 m slide	2023-05-19
ENG-20126064 Rev.1 – VES DD 18 m slide	2023-05-19
ENG-20123378 Rev.1 – VES DD 16 m slide	2023-05-19
ENG-20133815 Rev.1 – VES DD 15 m slide	2023-05-19
ENG-20118377 Rev.1 – VES DD 14 m slide	2023-05-19
ENG-20150368 Rev.1 – VES DD 12 m slide	2023-05-19

Other	Date
Operation Manual – ALU/ Steel	January 2026

Tests carried out
Test documentation in accordance with Recommendation on Testing of Lifesaving Appliances, IMO Res. MSC 81(70), Part 1 as amended and complying with Transport Canada TP14475E (2nd edition December 2023).

Transport Canada Approval
Based on the procedures laid down in the Transport Canada Publication entitled “Procedures for Approval of Life-Saving Appliances, Fire Safety Systems, Equipment and Products (TP14612E)”, DNV confirms that the product/s listed in this certificate is/are in accordance with Transport Canada's requirements.

Marking of product
The product is to be indelibly marked with name and address of manufacturer, type designation, dimensions and date of Manufacture. The marking shall be according to LSA Code Ch. 6.2.4 and 6.2.5.

All instructions and markings accompanying the MES, shall be in both French and English according to Transport Canada TP14475E (2nd edition December 2023) Ch. 1.2.

Periodical assessment
DNV’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 DNV-CP-0338, Section 4.

Manufactured by:
Viking Life-Saving Equipment A/S, Esbjerg V, Denmark.

Appendix

Overview Design Changes:

Design changes	Date
Design change DC10055 – 100 DKS together with VES-DD	1999-04-28
Design change DC10082 – Thanner inflation system	2000-09-28
Design change DC10110 – Securing system for external door	2001-10-02
Design change DC10119 – Lock for tiltable yoke VES-DD ALU	2002-03-04
Design change DC10124 – New type of piston seal for top cylinder VES-DD Steel	2002-04-15
Design change DC10143 – Fittings for inflation system	2003-02-24
Design change DC10173 – Packing procedure for 14 m slide VES-DD	2004-05-26
DC10437 + DC10439 - use of alternative hardener 'Beyond' + supporting documentation. Test report Nos.: - 2905, 2914, 2915 (3x over pressure test) - 2920 (davit launched strength test) - 2880, 2881, 2882, 2883, 2884, 2885 (seam strength tests) Viking report: Comparison of strength in existing and alternative hardener	2018-12-10/11
DC10438 - Alternative hardener 'TM-93' + supporting test reports: - 2868, 2869, 2870, 2871, 2872, 2873, 2876, 2877, 2878 (seam strength tests) - 2988, 2989, 2990 (3 x overpressure tests) - 3017, 3019 (davit launched strength tests)	2019-04-23
DC10446 – use of alternative hardener for MES system liferafts and slides – TM-93 + supporting documentation: - Report – Strength of 'TM-93' - Design review – Use of 'Beyond'	2019-03-19
DC10447 (extension of DC 10437, DC10438, DC10439, DC 10446)– Alternative hardener on patches for all liferaft and slide production – 'Beyond' and 'TM-93'+ supporting documentation: - Report – Strength of 'Beyond' - Report – Strength of 'TM-93' - Report – Use of Alternative hardener on MES patches - Design review – Use of 'Beyond'	2019-03-19
DC10482 (39DKS as drop down liferaft) - Risk analysis (D-FMEA) version 1 dated 2020-10-21 - Drawing Nos.: 43002560.001/002/003 dated 2019-04-04	2020-10-21
DC10517 (39DKSN as drop down liferaft) + supporting documentation: - Risk analysis (D-FMEA) version 1 dated 2022-04-07 - Drawing No. ENG-20127883 (sheet 1/4) - Drawing No. ENG-20121564 (sheet 1/5, 2/5, 3/5) - Drawing No. ENG-20121564 (sheet 4/5, 5/5) – parts list	2022-04-08
DC10531 (extra fixing points for main cord – all length of VES-DD slides) + supporting documentation: - Test report No. 4251	2023-05-30
DC10552 (all VES-DD slides manufactured in fabric NK 205 New Gen.) + supporting documentation: - Test report No. 004680 – 3 x WP pressure test, witnessed by DNV - Test report No. 005187 – Deployment, witnessed by DNV - Test report No. 005188 – Passage load test, witnessed by DNV - Material test report Nos.: 004755, 004756, 004757, 004764, 004766, 004768, 004770 witnessed by DNV.	2025-12-15 2025-08-07 2025-10-10 2025-10-10 2024-05-08