

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00004JX
Revision No:
1

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)
UIAS - MES

Issued to
Undertun Industri AS
SKODJE, Norway

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.

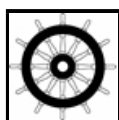
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-08-19**.

Issued at **Høvik** on **2023-08-20**

DNV local unit:
Mid-North Norway FiS

Approval Engineer:
Tessa Bieber



Notified Body
No.: **0575**



for **DNV AS**

Digitally Signed By:
Øyvind Hoff
Location: **DNV Høvik, Norway**
on behalf of

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

'UIAS – MES'

A Marine Evacuation System intended for use on ferries and high-speed light craft (HSLC). The system is mainly made of aluminium and glass fiber. Bolts, connecting- and strength parts are in stainless steel performance.

The MES consists of a frame that is attached to the hull and a door/walkway with a raft fixed to it at the end, by two shackles. When the door is lowered by its own hydraulic system, a gangway is created provided with a railing. The gangway has both a friction/walking path and a slide path. When the door is in horizontal position the liferaft is released and deployed and stays connected to the gangway. After the raft has been deployed the door/walkways motion is controlled by an accumulator giving the door upwards lift to stabilize the raft and absorb the motion between ship and raft at sea.

The MES has its own electrical control and power source. Connection to the ship is only for charging of the power source by 230VAC. The operation of the system is done from the bridge panel in wheelhouse or the control panel on the left side of the system on deck. The MES can be deployed manually or automatically.

The MES can be equipped with one of the following system liferafts:

1. Open reversible liferaft (OR) – 100 DKR+ and 150 DKR+ - (manufactured by Viking Life Saving Equipment AS – resp. 100 and 150 person capacity)
2. Self righting liferaft (SR) – 100 DKS U and 150 DKS U - (manufactured by Viking Life Saving Equipment AS – resp. 100 and 150 person capacity)

The MES can either be made:

1. In a short version with a modest outer measurement of 2684mm x 1629mm x 592mm (H x W x D), the weight without raft is 390 kg, a gangway length of 2,6 m.
2. In a long version with a modest outer measurement of 2913mm x 1629mm x 592mm (H x W x D), the weight without raft is 426 kg, a gangway length of 2,8 m.

This MES in combination with open reversible rafts is intended for installation on high-speed vessels/ferries trading in sheltered waters and suitable climatic conditions.

More details can be found in the user manual version dated 03 October 2011 and in the drawings as listed under Type Examination documentation.

Application/Limitation

The system is subject to acceptance by the Flag Administration.

The system is approved for max. installation height of 2.5m.

Maximum angle for the different paths:

- Angle of slide path: max. 35-55°
- Angle of walking path: max. 38°

Maximum evacuation capacity for UIAS MES in combination with SR/OR: 150 persons in 17 min. 40 sec./30 min. according to HSC Code.

Open reversible liferafts shall be accepted by the Flag Administration.

The main/system liferafts shall have separate MED Approval and bearing the MED Mark of Conformity (wheelmark).

The open reversible liferaft shall be equipped with HSC - pack.

Maximum evacuation capacity for UIAS MES in combination with SR/OR:

150 persons in 17 min. 40 sec./30 min. according to HSC Code.

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

Gas cylinders and components in the pressure gas systems for inflatable LSA equipment (liferaft + slide) shall be approved type iaw ISO 15738:2019 or equivalent standard.

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 bowing 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 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, pressurized and hydraulic components are only assessed as integrated parts of this MES system 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.

Type Examination documentation

Drawing No. (datafile)	Date
07081901 – Undertun MES – Overview complete system open	2007-08-07
07081702 – Undertun MES – Assembly stainless frame for ferry	2007-08-17
07070203 – Undertun MES – Assembly frame	2007-07-02
07062904 – Undertun MES – Overview door parts	2007-06-29
07121201 – Undertun MES – Overview complete system closed	2007-12-12
08010301 – Undertun MES – Overview outer dimension	2008-01-03
Test reports	
Prototype test reports for UIAS MES with 150 SR iaw LSA Code part 1 witnessed by See-BG	2007-04-22~24 2007-05-08~10 2007-09-03~05 2007-12-12
Timed evacuation test iaw LSA Code Part 1 item 12.6.1, witnessed by DNV GL (test with SR liferaft)	2015-03-17
Timed evacuation test iaw LSA Code Part 1 item 12.6.1, witnessed by See-BG (test with SR liferaft)	2015-07-01
Timed evacuation test iaw LSA Code Part 1 item 12.6.1, witnessed by See-BG (test with OR liferaft)	2015-08-27
Heavy weather sea trial test phase 1-4 iaw LSA Code Part 1 §12.6, including Report of wave conditions, R.1277 (10 pages)	2007-09-03
Calculations	
Strength Calculations sandwich panels used in door/gangway	2008-03-20
Manuals:	
	Date
User manual UIAS MES, version 03.10.11	2011-10-03
Installation manual UIAS MES version 22.03.11	2011-03-22
Final assembly and Service manual – UIAS MES – edition 1	July 2017

Tests carried out

Test documentation in accordance with recommendation on testing of Lifesaving Appliances, IMO Res. MSC 81(70), part 1 as listed under Type Examination documentation above.



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Marking

The product is to be indelibly marked with name and address of the manufacturer, type designation, dimensions and date of manufacture. The marking shall be according to LSA Code, item 6.2.4 and 6.2.5, and 2000 HSC Code, Annex 11, Ch. 4.2 and 5.