Certificate No:
TAS00003TA

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gangway

with type designation(s)
12m telescopic accomodation ladder

Issued to
Undertun Industri AS
SKODJE, **Norway**

is found to comply with
ISO 5488 Shipbuilding - Accommodation ladders
IMO SOLAS 1974 Convention, including 1996 Amendments

Application :

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

Issued at **Høvik** on **2023-05-03**
This Certificate is valid until **2028-05-02**.
DNV local unit: **Mid-North Norway FiS**

Approval Engineer: **Paulo Correia**

for **DNV**

Per Esvall
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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

The drawings for the ship to shore gangway are approved with respect to structural strength and material in accordance with ISO 5488:2015(E) Accommodation Ladder and IMO Res. MSC.256(84), SOLAS Reg.II 1/3 9 and MSC/Circ.1331.

Type **:	Accommodation ladder supported at both ends with controlled flow of people
Configuration:	Three sections telescopic gangway
Live Load (LL):	240kg (2 persons)
Gangway length can vary between*:	6000mm to 11668mm (ref. doc. 23020701) plus 720mm Pilot platform
Max. working angle (from horizontal):	20 to 45 degrees
Max. telescopic stroke:	3.59m
Minimum Design Temperature:	-20°C
Self-weight of gangway bridge:	983kg (ref. doc. 22110301_B)
Max, load on one step:	87.5kg (731mm·12N/mm2 ref Report 2014-40-00 page 5 and 34)

*) measured between pivoting hinges. Minimum overlap between telescopic parts 710mm.
**) gangway bridge in other supported modes such as cantilever is not covered by this approval.

Application/Limitation

- This certificate (design assessment) is a verification of the design towards the listed rules/requirements. The assessment does not waive requirements for certification of the equipment when necessary.
- Connection and support to the ship's deck structure as well as Davit used to suspend gangway tip wires is not covered by this approval.
- If a DNV product certificate is required to be obtained, the following will apply:
  - all materials shall be delivered with material certificates equal to minimum EN-10204:2005 3.1.
  - all welding is to be carried out by qualified welders. Reference is given to DNV standard DNV-ST-0358.
  - Individual test is to be performed according to ISO 7061:2015 (E) 9 Acceptance tests witnessed by a DNV surveyor.
- Non-compliance ISO 5488:2015(E): gangway is not found in line with the following paragraph:
  - 5.1: The range of nominal lengths is not by 0,6 m increments between 3,6 m to 18 m.
  - 5.2: Effective width of the gangway narrower than the minimum required (600mm).
- Doors or any supporting platform and components pertaining luffing system and telescoping system, or slewing system are not covered by this approval and must be approved separately.

The gangway might be DNV product certified according to ISO 5488:2015(E) with above mentioned exception if the customer is informed about and agrees to the non-compliance.

Type Approval documentation

22110301	B	Design basis tilt accommodation ladder	FI For Inf.
Drawing list	04.11.2022	Drawing list	FI For Inf.
	18.11.2022	Installation manual 12m tilt Accomodation ladder_en	FI For Inf.
22110218	02.11.2022	Teleskop - Alu-profil-01_Accommodation ladder	AP Approved
22110222	02.11.2022	Handrail-02	FI For Inf.
22102702	27.10.2022	Diamond plate for platform-02	FI For Inf.
22110221	02.11.2022	Telescope assembly_Accommodation ladder	AP Approved
22110219	02.11.2022	Teleskop - Alu-profil-01_Accommodation ladder_mir	AP Approved
22110220	02.11.2022	Teleskop-01_Accomonation ladder	AP Approved
22110211	02.11.2022	Teleskop-02_Accommodation ladder	AP Approved
22110223	02.11.2022	Handrail-02_mir	FI For Inf.
22102706	27.10.2022	Stiffener plate under platform	FI For Inf.
22102705	27.10.2022	End plate on platform	FI For Inf.
22102704	27.10.2022	Diamond plate for platform-01	FI For Inf.
22102707	27.10.2022	Connecting hoop platform	FI For Inf.
22102711	27.10.2022	Platform - welding	FI For Inf.
22102708	27.10.2022	Handrail on platform-01	FI For Inf.
22102710	27.10.2022	Handrail on platform	FI For Inf.
22102713	27.10.2022	Platform - assembly	AP Approved
22102709	27.10.2022	Handrail on platform-02	FI For Inf.
22102718	27.10.2022	Handrail-03 assembly_Accommodation ladder	FI For Inf.
22102714	27.10.2022	Shaft for platform	FI For Inf.

22102717	27.10.2022	Handrail-03_02	FI For Inf.
22102719	27.10.2022	Fixing plate for wire to platform	FI For Inf.
22102712	27.10.2022	Polytylen plate on end of platform	FI For Inf.
22110201	02.11.2022	Walkway profiles-03 - welding_Accomodation ladder	FI For Inf.
22110202	02.11.2022	Reinforcement angle tele-03_Accommodation ladder	FI For Inf.
22110204	02.11.2022	Suspension plate	FI For Inf.
22110203	02.11.2022	Reinforcement angle tele-03_Accommodation ladder_mir	FI For Inf.
22102720	27.10.2022	Parking eye for platform	FI For Inf.
22102701	27.10.2022	Hinge profile on platform	FI For Inf.
22110207	02.11.2022	Suspension plate assembly	FI For Inf.
22110209	02.11.2022	Teleskop-03_Accomodation ladder	AP Approved
22110206	02.11.2022	Wheel bolt	FI For Inf.
22110208	02.11.2022	Suspension plate assembly_mir	FI For Inf.
22102703	27.10.2022	Stiffener plate to platform	FI For Inf.
22110205	02.11.2022	Connecting hoop	FI For Inf.
22102715	27.10.2022	Handrail-03	FI For Inf.
22110210	02.11.2022	Teleskop-03_Accomodation ladder with platform	AP Approved
19051401	14.05.2019	Hinge arm lower foundation	FI For Inf.
19051406	A	Foundation plate lower-welding	FI For Inf.
13011505	G	Hinge plates on deck	FI For Inf.
13011604	G	Foundation plate lower assembly	AP Approved
13012801	E	Stiffener hinge bolt	FI For Inf.
13020101	D	Cylinder mount on bottom plate	FI For Inf.
13020102	D	Cylinder mount in channel	FI For Inf.
14062501	D	Foundation for telescope on upper plate	FI For Inf.
15011305	C	Upper foundation assembly	AP Approved
16062714	27.06.2016	Bush for Hinge profile UIN5109_0115_0116	FI For Inf.
16081852	18.08.2016	Wheel 1 Tele-03 Right Welding	FI For Inf.
16081855	18.08.2016	Wheel 1 Tele-03 Left Welding	FI For Inf.
17032302	23.03.2017	Hinge telescope profile-01	FI For Inf.
19020506	05.02.2019	Hinge bolt on foundation	FI For Inf.
23020701	0	Strength calculations 12m accommodation ladder	FI For Inf.

Tests carried out

Type test has been carried out according to requirements in ISO7061:2015 (E) with satisfactory result at 2023-03-14.

Each gangway shall be tested in accordance with DNV-ST-0358 Section 7 in presence of a DNV surveyor.

If a DNV product certificate is required, telescopic system shall be delivered with DNV type approval or product certificate.

Marking of product

Marking in accordance with DNV-ST-0358 section 7.5. and ISO7061:2015(E)

Periodical assessment

For retention of the Type Approval, a DNV Surveyor shall perform periodical assessment after two years (+/- 90 days) and after 3.5 years (+/- 90 days) to verify that the conditions for the approval are complied with. Reference is made to DNV-CP-0338.

End of certificate