



Certificate No:
TAS000038K

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Slewing Bearing

with type designation(s)

Issued to

thyssenkrupp rothe erde Germany GmbH
Lippstadt, Nordrhein-Westfalen, Germany

is found to comply with

DNV standard DNV-ST-0378 – Standard for offshore and platform lifting appliances

DNV GL standard DNVGL-ST-0358 – Certification of offshore gangways for personnel transfer

Application :

Slewing bearing intended for offshore gangway - Uptime International AS

Issued at **Høvik** on **2021-11-23**

This Certificate is valid until **2026-11-22**.

DNV local station: **Essen**

for **DNV**

Approval Engineer: **Khurram Saeed Khaliq**

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Aldo Matteucci
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.



Form code: TA 251

Revision: 2021-03

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Product description

Pitch diameter	Bearing material	Bolts – outer ring	Bolt – inner ring
2002	42CrMo4V	80 x M30 – 10.9	80 x M30 – 10.9

Application/Limitation

The slewing bearing, with drawing no. 192.36.2000.000.64.150D rev.A, has been evaluated and found to comply with respect to structural strength to DNVGL-ST-0378 and DNVGL-ST-0358.

Design temperature: -20°C

Slewing bearing is approved for the loads specified below which are including all dynamic and safety factors, including SF1 given in 8.2.2.4, as specified in DNVGL-ST-0378, Section 8.

Load case	Axial load Fa [kN]	Radial load* Fr [kN]	Overturning moment [kNm]
1.	372.8	118.5	3269.7
2.	334.5	118.5	2649
3.	546	102	2637.6
4.	274	260	300

The slewing ring and slewing ring fastener material needs to be delivered with 3.2 material certificate, documenting compliance with DNV material requirements.

Each slewing bearing being marked/sold as “type approved by DNV” is to be certified by DNV surveyors as outlined in DNVGL-ST-0378. A Product Certificate endorsed or issued by DNV surveyor is to accompany each slewing bearing/delivery.

Flanges and adjacent structure have not been evaluated nor covered by this type approval.

It is the end user's responsibility that design parameters are not exceeded in practice.

Type Approval documentation

<u>Drawing No.</u>	<u>Rev.</u>	<u>Title</u>
192.36.2000.000.64.150D 20267_00	A 00	Roller bearing slewing ring Technical Data Sheet

Tests carried out

Separate test of slewing bearing is not required. The slewing bearing is to be tested together with offshore gangway.

Marking of product

Slewing bearing is to be marked with manufacturers trademark, type designation and serial number. The surveyor shall stamp each unit with VL mark and with the DNV Product Certificate number or reference to Type approval.

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 DNVGL-CP-0338.