



Certificate no.:
TAM00001E5

TYPE APPROVAL CERTIFICATE

This is to certify:
that the Elastic Couplings

with type designation(s)
RUPEX RWS 450

issued to
Flender GmbH
Bocholt, Nordrhein-Westfalen, Germany

is found to comply with
DNV-OS-D101 – Marine and machinery systems and equipment, Edition July 2021
DNV-OS-E101 – Drilling facilities, Edition July 2024
DNV rules for classification – Ships
DNV rules for classification – High speed and light craft

Application:

Products approved by this certificate are accepted for installation on all vessels classed by DNV.

Issued at **Hamburg** on **2025-05-26**

This Certificate is valid until **2030-05-25**.

for **DNV**

DNV local unit: **Essen**

Approval Engineer: **Wolfgang Schütz**

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 USD 300 000.

Product description

Flexible Fail-Safe Couplings RWS 450

Application/Limitation

Flexible Fail-Safe Couplings RWS 450 acc. to drawing no. 6412687, 6412584 and 6412227 with following data:

Maximum nominal torque 80 Shore A:	18,5 kNm
Operation torque acc. to drawing:	14,5 kNm
Operation speed:	2000 rpm
Torsional stiffness at 50% capacity utilization for buffer type:	1600 kNm/rad

The approval is valid for auxiliary duty for drive shafts on electric motor and gearbox of drawworks. Coupling characteristics as given in Catalogue "Flender Couplings" chapter 8, RUPEX" (catalogue FLE 10.2, edition 2023.1 EN).

Type Approval documentation / Tests carried out

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

For retention of the Type Approval, a DNV surveyor shall perform an assessment after 2 years and after 3.5 years to verify that the conditions of the type approval are complied with. A renewal assessment will be performed at renewal of the certificate.

In cases where the Type Approved product is manufactured at other companies, the periodical assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore, periodical assessment shall be carried out randomly at these companies.

Other conditions

The tolerance field for dynamic stiffness to be mentioned in the DNV product certificate for each certified coupling.

The product certification may be waived for power ratings up to 500 kW and rated torque less than 5 kNm.

If not differently agreed, couplings have balancing quality G16.

END OF CERTIFICATE