DNV·GL

Certificate No:
TAM000005J

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Clutch and Friction Brake Coupling for Shaft

with type designation(s)
Pneumaflex clutches RDE 75426, Pneumastar clutches RDE 75431

Issued to
ZF Industrieantriebe Witten GmbH
Witten Nordrhein-Westfalen, Germany

is found to comply with
DNV GL rules for classification – Ships
DNV GL rules for classification – High speed and light craft

Application :

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

This Certificate is valid until **2021-02-07**.

Issued at **Hamburg** on **2016-02-08**

for **DNV GL**

DNV GL local station: **Essen**

Approval Engineer: **Stanislav Avanesov**

Frank Lutz
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.

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Product description

Air operated clutches

Application/Limitation

The approval is valid for propulsion and auxiliary duty.

The type approval is valid for clutches mentioned in catalogues:

Pneumaflex clutches RDE 75426 Dated 09.97
Pneumastar clutches RDE 75431 Dated 05/02

The following limitations apply for the flexible coupling part of the clutch i.e. the Spiroflex couplings of size KA (EJN):

Permissible maximum torque T_{Kmax1} for repetitive loads as start/stop or clutching in etc. for the couplings series:

Rubber hardness grade W : $T_{Kmax1} = 1.25\ T_{Kn}$
Rubber hardness grade MD : $T_{Kmax1} = 1.5\ T_{Kn}$

Permissible maximum torque range $\Delta\ T_{max}$ for repetitive loads as transient vibrations during start/stop or clutching in :

Rubber hardness grade W : $\Delta\ T_{max} = 1.5\ T_{Kn}$
Rubber hardness grade MD : $\Delta\ T_{max} = 1.8\ T_{Kn}$

Permissible maximum torque T_{Kmax2} for rare occasional peak loads: According to catalogue values.

Type Approval documentation

Tests carried out

Type tests for the flexible elements according to Type Approval Certificate M-9788.

Marking of product

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

Certificate retention survey

For retention of the Type Approval, a DNV surveyor shall perform a survey every second year and before the expiry date of this certificate to verify that the conditions of the type approval are complied with.

Different

This certificate replaced the previuos ones with the Certfificate .No. M-11915

END OF CERTIFICATE