



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. M-11262

This Certificate consists of 3 pages

This is to certify that the

Elastic Couplings

with type designations

BoWex-Elastic, HE, HEW, Monolastic

Manufactured by

KTR Kupplungstechnik GmbH

RHEINE, Germany

is found to comply with

Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft

Application

The couplings are approved for auxiliary purpose.

Place and date

Høvik, 2009-08-06

for DET NORSKE VERITAS AS

Tomas Heber Tronstad
Head of Section



Local Office
DNV Essen

This Certificate is valid until

2013-06-30

Hans-Kristian Eriksen
Surveyor

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Cert. No.: M-11262
File No.: 714.30
Case No.: 262.1-007890

Product description

Highly flexible flange couplings

Application/Limitation

The couplings are approved for auxiliary purpose, for the nominal torques and maximum RPM's and with other characteristics according to the data given in general KTR catalogue 2009 chapter Bowex-Elastic- highly flexible flange couplings (page 69 to 98) with the following limitations:

T_{Kmax} is limited to $1.3 \times T_{KN}$ for couplings with shore hardness 40

T_{Kmax} is limited to $1.4 \times T_{KN}$ for couplings with shore hardness 45

T_{Kmax} is limited to $1.5 \times T_{KN}$ for couplings with shore hardness 50 and 65 (to size 100) and for shore hardness 70 (size 125 to 150)

Type Approval documentation

KTR Catalogue 03/2007 and other documentation submitted with letter from KTR dated 89-01-05 and test data for Monolastic 28 coupling.

Tests carried out

Test reports for size 80HE and 125 HE received with letter from DNV Essen dated 98-01-08 and for size 100HE received with letter from DNV Essen dated 01-12-03.

Test data for Monolastic 28 received with letter from DNV Essen dated 05-07-14.

Test report for Bowex Elastic 150 HE – 50 ShA dated 2007-10-08.

Test report for Bowex Elastic G125 HE – 50 ShA dated 2007-10-05

Marking of product

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

Certificate retention survey

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



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Other conditions

DNV product certificate is not required for power ratings up to 500 kW or rated torque less than 5 kNm for auxiliary duty where torsional vibration calculations is not required.

The type approval does not cover connection to external shaft.

Couplings used between diesel engines and generator to be inspected for wear each 1000 hours.

END OF CERTIFICATE