DNV·GL

Certificate No:
TAM00000EK

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Elastic Couplings

with type designation(s)
HTB-GS

Issued to
Renold Hi-Tec Couplings
Halifax West Yorkshire, United Kingdom

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

Application :

The approval is valid for propulsion and auxiliary duty.

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

Issued at **Høvik** on **2017-02-03**
This Certificate is valid until **2021-06-30**.
DNV GL local station: **Manchester**

for **DNV GL**

Approval Engineer: **Nadine Grace Mosteiro Halvorsen**

Oddvar Deinboll
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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Job Id: **262.1-012877-2**
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Product description

Torsionally Elastic Coupling

Application/Limitation

Technical Data according to HTB-GS catalogue E4-05-158 Rev.100

The permissible damping power and other coupling characteristics have to be adjusted for the actual application according to guidelines given in HTB-GS catalogue page 6/7.

Permissible heat load: 70 % of catalogue values.

Maximum ambient temperature: 70° C for rubber and 100° C for silicone couplings.

Tolerance on dynamic stiffness data in catalogue: +/- 20 %

The connection to driven member is not covered by the approval and details have to be submitted for approval in each separate case.

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 GL 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.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval Certificate was issued. The main scope of the Periodical Assessment will normally include:

· Verification of the Type Approval applicant's production and quality system w.r.t. ensuring continued consistent production of the Type Approved products at the Type Approval applicant's own premises and at other companies that are given the responsibility for manufacturing of the products.
· Review of the Type Approval documentation and that this is still used as basis for the production
· Review of possible changes to the design, the material and the performance of the product
· Verification of the product marking.

- END OF CERTIFICATE -