

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Flexible Mounts for Propulsion or Auxiliary Machinery**

with type designation(s)

TSC size T1, T2, T3, T10, T20 and Marine Genflex size B & HD

Issued to

**Christie & Grey Limited
Kent, United Kingdom**

is found to comply with

Det Norske Veritas' Rules for Classification of Ships/High Speed and Light Craft**Application :****The TSC unit isolators are approved for mounting of machinery including diesel engines.**This Certificate is valid until **2017-12-31**.Issued at **Høvik** on **2015-03-25**DNV GL local station: **London**for **DNV GL**Approval Engineer: **Hans-Kristian Eriksen**

**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.

Certificate No: **M-12768**
File No: **702.60**
Job Id: **262.1-000755-5**

Product description

Model TSC : Combined Steel Spring and Rubber Spring Unit Isolators
Model B & HD : Rubber Mountings

Application/Limitation

The isolators are approved for mounting of machinery including diesel engines.

Size of isolators to be chosen according to the following data sheets :

T1 : DS 004 Issue 10
T2 : DS 005 Issue 15
T3 : DS 006 Issue 16
T10,T20 : DS 059 Issue 18
B : DS 063 Issue 7
HD : DS 063 Issue 7

Type Approval documentation

TSC Combined Steel Spring and Rubber Unit Isolators, Sizes T1, T2, T3 & T10 and the following drawings, data sheets and brochures:

Size	Drawing	Data sheet	Brochure
T1	S 048 Issue E	DS 004 Issue 10	PL057/1-2 Rev. A
T2	S 071 sht. 1 of 3, Issue D	DS 005 Issue 15	PL057/1-2 Rev. A
T3	S 001 Issue M	DS 006 Issue 16	PL058/1-2 Rev.A
T10	S 090 Issue G	DS 059 Issue 18	PL059/1-2 Rev.A
T20	S 221 Issue A (adjustable stopper)	DS 059 Issue 18	PL061/1-2 Rev.A

Brochure PL002/1- 2 October 2009 Rev.E Genflex Rubber Mountings , Sizes B & HD and the following drawings and data sheets :

Size	Drawing	Data sheet
B	S 139 Issue D	DS 063 Issue 7
HD	S 138 Issue F	DS 063 Issue 7

Test carried out

Isolator compression tests for B size 10.104.60, 10.104.70 and for HD size 10.103.60


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 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.

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:



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- 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.

Other conditions

No product certificate required.

Installation, maintenance and inspection of the mounts to be done according to the makers instructions.

END OF CERTIFICATE