



Design Appraisal Document

Lloyd's Register EMEA
UK&I Technical Support Office
Southampton Boldrewood Innovation Campus
Burgess Road
Southampton
SO16 7QF United Kingdom

Date
10 October 2019

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THE LR TYPE APPROVAL SYSTEM, 2002
ISSUED TO: TRELLEBORG INDUSTRIAL AVS
for: ANTI-VIBRATION CHOCKS, ANTI-SHOCK AND ANTI-VIBRATION MOUNTS

Valid until 11 August 2021

This design appraisal document supersedes document ENG 8173129 issue 2, dated 12 August 2016

1. The Document(s) listed in paragraph 1 of the appendix have been examined for compliance with: Part 5, Chapter 8, Section 2 of the Rules and Regulations for the Classification of Ships, July 2011 and are assigned an appraisal status, as indicated, subject to the following conditions and comments.

2. Products

Cushyfloat (including HD, HT)
Cushymount (including K, XK)
Cushyfoot S, K
Sandwich Mount
D-, DX- and Super D-series
Equifrequency Mounts

3. Conditions of Approval

3.1 The attending surveyor is to be satisfied by the Firm that the QA procedure in operation ensures the repeatability of the elastic properties of the mounts from batch to batch and that the correct grade of rubber mix is always uniquely identified. AQS

3.2 Applications of these mounts in LR classed installations are to comply with the remaining requirements of the Rules for Ships, Part 5, Chapter 1, Section 4.3 or the Rules for the Classification of Special Service Craft Part 9, Chapter 1, Section 5.3 so far as applicable. AQS

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3.3 Final approval of LR classed installations is also subject to the mounts being installed under survey and the machinery tested under full working conditions all to the attending surveyor's satisfaction who will ensure that excessive movements do not occur during start up and shut down. AQS

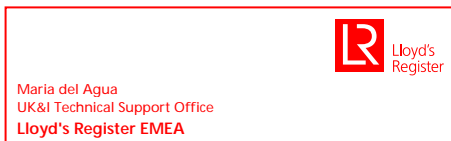
3.4 All mounts are to be fitted with protective shields and are not to be used where they would be permanently immersed in oil. AQS

3.5 Each installation is to be fitted with collision chocks or buffer to ensure that the manufacturers' maximum deflection limits are not exceeded. AQS

3.6 In marine main or auxiliary propulsion/steering installations, appropriate means are to be provided to accommodate propeller thrust. AQS

4. General Comments

4.1 The attending surveyor is to be satisfied by the Firm that the QA procedure in operation ensures the repeatability of the elastic properties of the mounts from batch to batch and that the correct grade of rubber mix is always uniquely identified.



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Appendix

1. The documents listed below have been examined

Document No.	Rev.	Title	Status	Date
17/1601/5	5	Mounting – D type	SI	11th January 2012
17/1601/7	1	Mounting – D type	SI	11th January 2012
17/1601/8	3	Mounting – D type	SI	11th January 2012
17/1601/9	2	Mounting – D type	SI	11th January 2012
17/1602	6	Mounting – D type	SI	11th January 2012
17/1602/1	9	Mounting – D type	SI	11th January 2012
17/1602/2	7	Mounting – D type	SI	11th January 2012
17/1603	6	Mounting – D type	SI	11th January 2012
17/1603/1	10	Mounting – D type	SI	11th January 2012
17/1603/2	4	Mounting – D type	SI	11th January 2012
17/1603/3	5	Mounting – D type	SI	11th January 2012
17/1609/1	16	Mounting - Cushyfloat	SI	11th January 2012
17/1609/10	3	Mounting - Cushyfloat	SI	11th January 2012
17/1609/2	8	Mounting - Cushyfloat	SI	11th January 2012
17/1609/3	12	Mounting - Cushyfloat	SI	11th January 2012
17/1609/5	5	Mounting - Cushyfloat	SI	11th January 2012
17/1609/8	6	Mounting - Cushyfloat	SI	11th January 2012
17/1654	9	Mounting - Rectangular	SI	11th January 2012
17/1657/1	11	Mounting - Cushyfloat	SI	11th January 2012
17/1657/2	8	Mounting - Cushyfloat	SI	11th January 2012
17/1657/3	7	Mounting - Cushyfloat	SI	11th January 2012
17/1657/4	4	Mounting - Cushyfloat	SI	11th January 2012
17/1657/5	5	Mounting - Cushyfloat	SI	11th January 2012
17/1661	11	Mounting – Super D	SI	11th January 2012
17/1662	13	Mounting – Super D	SI	11th January 2012
17/1663	16	Mounting – Super D	SI	12th August 2016
17/1663/1	6	Mounting – Super D	SI	11th January 2012
17/1669	3	Metalastik Cushymount	SI	11th January 2012
17/1716	9	Mounting – Rectangular	SI	11th January 2012
17/1732/1	3	Metalastik Cushymount	SI	11th January 2012
17/1734	9	Mounting – Offset Rectangular	SI	11th January 2012

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Document No.	Rev.	Title	Status	Date
17/1736	12	Mounting – Super D	SI	11th January 2012
17/1736/1	4	Mounting – Super D	SI	11th January 2012
17/1737	11	Mounting – Super D	SI	12th August 2016
17/1737/1	1	Mounting – Super D	SI	11th January 2012
17/1738	18	Mounting – Super D	SI	12th August 2016
17/1758	6	Cushymount	SI	11th January 2012
17/1770	3	Metalastik Cushymount	SI	11th January 2012
17/1783	9	Mounting – Rectangular	SI	12th August 2016
17/1790	8	Metalastik 'O' Series Mounting	SI	12th August 2016
17/1841/2	7	Mounting – Cushyfloat	SI	11th January 2012
17/1871	9	Mounting – Super D	SI	11th January 2012
17/1872	9	Mounting – Cushymount – Buffered	SI	11th January 2012
17/1912	8	Mounting – Rectangular	SI	11th January 2012
17/1921	10	Mounting – Cushymount – Buffered	SI	11th January 2012
17/1973	8	Mounting – Rectangular	SI	12th August 2016
17/2092	5	Mounting – Super D	SI	11th January 2012
17/2266	6	Mounting – Super D	SI	11th January 2012
17/2267	3	Mounting – Super D	SI	11th January 2012
17/2310/1	1	Mounting – Cushyfloat	SI	11th January 2012
17/0645	26	Mounting – Cushyfoot S	SI	11th January 2012
17/645/1	3	Metalstik – Cushyfoot S Mounting	SI	11th January 2012
17/1472	6	Equipfrequency Mounting	SI	11th January 2012
17/1472/1	17	Mounting - Equipfrequency	SI	12th August 2016
17/1544	11	Mounting – Equipfrequency	SI	12th August 2016
17/1544/1	6	Mounting – Equipfrequency	SI	11th January 2012
17/2026	3	Mounting – D type	SI	11th January 2012
17/2026/1	3	Mounting – D type	SI	11th January 2012
17/2199	6	Mounting – Super D	SI	11th January 2012
17/2198	5	Mounting – Super D	SI	11th January 2012
17/2357	2	Mounting – Super D	SI	12th August 2016
17/5001	4	Mounting – Super D	SI	10th October 2019
17/5001/1	2	Mounting – Super D	SI	24th February 2014
17/5002	3	Mounting – Super D	SI	24th February 2014

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Document No.	Rev.	Title	Status	Date
17/5002/1	2	Mounting – Super D	SI	24th February 2014

2. The documents listed below have been considered together with the submitted documents in the appraisal

Document No.	Rev.	Title
-	-	Installation Guide for Cushyfloat Anti-Vibration Mounts

3. Documents not mentioned above are not required for appraisal or as supporting documentation and have not been retained.

Appraisal Status Key

AQS	Details to be submitted by the client to the local surveyor's Office responsible for surveying the building and the arrangements verified in accordance with the Rule/Regulations requirements by the surveyor.
SI	Retained as supporting documentation for information only

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