



Confirmation of Product Type Approval

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product. This certificate reflects the information on the product in the ABS Records as of the date and time the certificate is printed.

Pursuant to the Rules of the American Bureau of Shipping (ABS), the manufacturer of the below listed product held a valid Manufacturing Assessment (MA) with expiration date of 02-JUN-2024. The continued validity of the Manufacturing Assessment is dependent on completion of satisfactory audits as required by the ABS Rules.

And; a Product Design Assessment (PDA) valid until subject to continued compliance with the Rules or standards used in the evaluation of the product.

The above entitle the product to be called Product Type Approved.

The Product Design Assessment is valid for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

ABS makes no representations regarding Type Approval of the Product for use on vessels, MODUs or facilities built after the date of the ABS Rules used for this evaluation.

Due to wide variety of specifications used in the products ABS has evaluated for Type Approval, it is part of our contract that; whether the standard is an ABS Rule or a non-ABS Rule, the Client has full responsibility for continued compliance with the standard.

Product Name: Penetration Device for Pipe Deck and Bulkhead Penetration Sealing

Model Name(s): Roxtec R Series Frames in Steel Divisions

Presented to:

ROXTEC INTERNATIONAL AB
ROMBVAGEN 2
SE 371 65
Sweden

Intended Service:

Multi and single pipe penetrations in Class A0, A15, A30 and A60 bulkheads and decks for ship or offshore applications. Penetrations of watertight and gastight steel bulkheads and decks up to the specified pressure.

Description:

"Roxtec pipe sealing system with multidiameter technology" composed of a steel sleeve welded, bolted or attached through expansion (SLX sleeve, R X kit) to a steel section. Sleeve is fitted with a Roxtec R frame (standard, Ex/ATEX or EMC) in sizes 50-200. The R frame is filled with Roxtec (standard, Ex/ATEX or EMC) halogen free RM modules.

Tier:

3

Ratings:

A-0, A-15, A-30 and A-60 Bulkheads and Decks Watertight test pressure 6 bar (except bolted versions test pressure at 5 bar) Gastight test pressure 4 bar (except bolted versions test pressure at 2.5 bar)

Service Restrictions:

a) Minimum and maximum pipe outside diameter- 6mm and 54 mm for steel and copper pipes for bulkheads. b) Minimum and maximum pipe outside diameter- 6mm and 95 mm for steel pipes for decks. c) Minimum and maximum frame sizes tested are size 50 and size 200 d) Not for use in tank boundaries. e) For fire class A-0, A-15 and A-30, sleeves are to be insulated as for class A-60 and in addition the division is to be insulated at least 200 mm around the penetration, except for

Comments:

sizes that are approved with out insulation. f) Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. g) The scope of Type Approval is to comply with MSC.1/Circ.1221 dated 11 December 2006

a) All seal type should be installed in accordance with the manufacturers instructions in accordance with ABS approved installation drawings. b) Insulation material is to be A-60 approved type and properly installed in accordance with ABS approved drawings to the satisfaction of the Surveyors. c) Watertight bulkheads or decks are to be tested as per ABS Marine Vessels Rules 3-7-1/Table 1. d) When requested to be used in watertight bulkheads on passenger ships or special purpose ships, the penetration system has to comply with the requirements give in SOLAS Ch. 11-1 Reg. 13.2.3 (2014 Consolidated Edition), as amended. e) This approval of penetrations passing through watertight bulkhead is not to be construed as a substitute for flag Administration's approval for the purpose of SOLAS (2014 Consolidated Edition), as amended. f) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes / Documentation:

Test Reports DBI Fire Test Reports PGA 11302 A Dated 16 January 2019, PGA 11301 A Dated 22 November 2018, PGA10800A Dated 26 May 2016, PGA10799A Dated 24 May 2016, PGA10724A Dated 05 February 2016, PGA10723A dated 04 February 2016, PGA 10025 Dated 22 December 2011 SP Fire Test Report Numbers 8P04040 Dated 13 August 2018, 8P04039 dated 06 August 2018, 6P10022 Dated 07 March 2017, 6P07563 Dated 20 December 2016, 6P02249 17 August 2016, 4P08662 Dated 08 June 2015, P603000 Dated 23 January 2007, P602999 Dated 23 January 2007 DNV Pressure Test Report Numbers MLM 010247 Dated 28 Sept. 2001, MLM 030473-1 Dated 27 January 2003 Drawings: Drawing No. S1534086 Revision: B- A-60 Deck with Steel Pipes Drawing No. S1534092 Revision: B - A-60 Bulkhead with Steel Pipes Drawing No. S1534107 Revision: B- A-0 Deck with Steel Pipes Drawing No. S1534145 ,Revision: B- A-0 Bulkhead with Steel Pipes Drawing No. S1534131,Revision: B- A-60 Deck/ Bulkhead with Copper Pipes Drawing No. S1534132 Revision: A- A-0 Deck/ Bulkhead with Copper Pipes Drawing No. S1534109,Revision: B- A-60 Deck/ Bulkhead with Steel Pipes, (Expansion Type Sleeve) Drawing No. S1534111 Revision: A- A-0 Deck/ Bulkhead with Steel Pipes, (Expansion Type Sleeve)

Term of Validity:

This Product Design Assessment (PDA) Certificate 19-LD1787572-PDA, dated 03/Jun/2019 remains valid until 02/Jun/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first). This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product. Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA. Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

ABS Rules:

2019 ABS Marine Vessels Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-2/9.7 2019 ABS Mobile Offshore Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-1/11.15

**National Standards:
International Standards:**

Regulation II-2/ 9.3.1 of SOLAS (2014 Consolidated Edition) IMO Resolution MSC.307(88) - (2010 FTP Code), Annex I: Part 3, adopted on 3 December 2010

Government Authority:

This PDA conforms to Transport of Canada requirements as per Transport Canada Policy Letter A8706-1 RDIMS#1961446 dated 15 November 2006

**EUMED:
Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	19-LD1787572-PDA	10-JUN-2019	02-JUN-2024



ABS Programs

ABS has used due diligence in the preparation of this certificate and it represents the information on the product in the ABS Records as of the date and time the certificate was printed. Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. Limited circumstances may allow only Prototype Testing to satisfy Type Approval. The approvals of Drawings and Products remain valid as long as the ABS Rule, to which they were assessed, remains valid. ABS cautions manufacturers to review and maintain compliance with all other specifications to which the product may have been assessed. Further, unless it is specifically indicated in the description of the product; Type Approval does not necessarily waive witnessed inspection or survey procedures (where otherwise required) for products to be used in a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS. Questions regarding the validity of ABS Rules or the need for supplemental testing or inspection of such products should, in all cases, be addressed to ABS.