



Confirmation of Product Type Approval

Company Name: ROXTEC SEALING SYSTEM (SHANGHAI) CO LTD

Address: GROUND FLOOR, BUILDING A, NO 875 QIUXIN ROADLINGANG NICHENG INDUSTRIAL AREA, PUDONG DISTRICT SHANGHAI China

Product: Watertight and Fire Resistant Penetration Device

Model(s): Roxtec R Series Frames in aluminum divisions

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-1952251-1-PDA-DUP	05-JUL-2023	05-MAR-2025
Manufacturing Assessment (MA)	23-6047656	28-SEP-2023	27-SEP-2028
Product Quality Assurance (PQA)	NA	NA	NA

Tier

3 - Type Approved, unit certification not required

Intended Service

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

Description

Roxtec cable and pipe sealing system with multidiameter technology composed of aluminium sleeves (welded or bolted), sleeves of SLX-R type or SL A type with with R type (EMC versions included) halogen free rubber frames in size 70-200 (50 - 100 with SL A Sleeve), and filled with Roxtec insert modules, mounted in aluminium decks or bulkheads. RX Kit consists of SLX R type sleeves including an R Frame.

Ratings

A0, A15, A30 and A60 Bulkheads and Decks

R-frame seal in welded or in SLX type sleeves:

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)

R-frame seal in SL A Type sleeves:

Watertight test pressure 4 bar

Gastight test pressure 1.5 bar

Service Restrictions

- a) Maximum cable size 62 mm (50 mm with SL A) for bulkheads and decks. Type of cable tested: Marine.
- b) Maximum steel pipe outside diameter up to 54 mm for bulkheads and decks. Not applicable for SL A.
- c) Maximum copper pipe outside diameter up to 54 mm for bulkheads and 57 mm for decks. Not applicable for SL A.
- d) Maximum frame size tested: Size 200 (Size 100 for SL A)
- e) Minimum frame size tested: Size 50
- f) Not for use in tank boundaries
- g) Insulation material is to be A-60 approved type and installed in accordance with the attached drawings to the satisfaction of the Surveyor.
- h) 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.

Comments

- a) Watertight or fire rated bulkheads or decks for cable penetrations are to be examined and tested as per ABS Marine Vessels Rules 3-7-1/Table1 and 4-8-4/29.15.
- b) When requested to be used in watertight bulkheads on passenger ships or special purpose ships, the penetration system has to comply with the requirements given in SOLAS Ch. II -1 Reg. 13.2.3 (2020 Consolidated Edition). 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 (Consolidated Edition 2014), as amended.
- c) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- d) All seal types should be installed with the manufacturer's instructions in accordance with approved drawings S1554368 for R frames with cables, S1019810 for R Series frames with steel/cooper pipes, and S1554370 for SL A type sleeve with R-frames with cables.
- e) The product or packing is to be marked with name of manufacturer, type designation and fire rating.

Notes, Drawings and Documentation

Test Report number P603001 dated 23 January 2007 / SP Technical Research Institute of Sweden, Boras

Test Report number P11898 dated 10 September 2008 / Danish Institute of Fire and Security Technology, Hvidovre

Test Report number P11955 dated 11 September 2008 / Danish Institute of Fire and Security Technology, Hvidovre

Test Report number RS-19/B-224/E dated 01 Ago 2019 / CTO - Centrum Techniki Okretowej S.A., Gdansk, Poland

Test Report number PGA11370A dated 20 February 2019 / Danish Institute of Fire and Security Technology, Hvidovre

Test Report number PGA11371A dated 20 February 2019 / Danish Institute of Fire and Security Technology, Hvidovre

Test Report number RS-17/B-210/E dated 02 June 2020 / CTO - Centrum Techniki Okretowej S.A., Gdansk, Poland

Test Report number RS-18/B-179/E dated 25 June 2020 / CTO - Centrum Techniki Okretowej S.A., Gdansk, Poland

Test Report number RS-20/B-082/E dated 21 April 2020 / CTO - Centrum Techniki Okretowej S.A., Gdansk, Poland

DNV Third Party Inspection Report number MLM010238, dated 30 Sep 2001

DNV Third Party Inspection, Witness of Pressure Testing - ROXTEC SLA Sleeve, Report number N141EX8Z, Revision 2, dated 10 Aug 2017

Drawings:

Drawing No. S1019810, R-Frames W St/CU Pipes A-Class Alu. Deck/Bulkhead, Sheet 1 of 1, Revision - , dated 1 March 2010

Drawing No. S1554368, R-Frames W Cables A-60 Class Alu. Deck/Bulkhead, Sheet 1 of 1, Revision A, dated 25 June 2020

Drawing No. S1554370, SL A Sleeve with R-Frame and Cable A-60 Class Steel Deck/Blkhd, Sheet 1 of 1, Revision A , dated 08 April 2020

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 05/Mar/2025 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

ABS Rules

2020 Rules for Conditions of Classification: 1-1-4/7.7, 1-1-A3 and A4, which covers the following:

2020 Rules for Building and Classing Marine Vessels: 4-6-2/9.7, 4-8-2/7.7, 4-8-4/21.13.1, 4-8-4/29.15

2020 Rules for Conditions of Classification – Offshore Units and Structures: 1-1-4/9.7, 1-1-A2 and A3, which covers the following:

2020 Rules for Building and Classing Mobile Offshore Units: 4-2-1/11.15, 4-3-3/5.13.1

International Standards

SOLAS (Consolidated edition 2020) Chapter II-2, Reg. 9.3.1

IMO FTP Code 2010, Annex I: Part 3 and Part 11. 2012 Edition.

EU-MED Standards

NA

National Standards

NA

Government Standards

This PDA conforms to Transport of Canada requirements as per TC Letter A8710-1 RDIMS-#7077969

dated 19-Oct-2011.

Other Standards

NA



A handwritten signature in black ink, appearing to read "James W. White".

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 17-Nov-2023 4:29

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 is printed.

If the Rules and/or standards used in the PDA evaluation are revised or if there is a design modification (whichever occurs first), a PDA revalidation may be necessary.

The continued validity of the MA is dependent on completion of satisfactory audits as required by the ABS Rules. The validity of both PDA and MA entitles the product to receive a **Confirmation of Product Type Approval**.

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or prior to the effective date of the ABS Rules and standards applied at the time of PDA issuance. 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.

Type Approval requires Drawing Assessment, Prototype Testing and assessment of the manufacturer's quality assurance and quality control arrangements. The manufacturer is responsible to maintain compliance with all specifications applicable to the product design assessment. Unless specifically indicated in the description of the product, certification under type approval does not waive requirements for witnessed inspection or additional survey for product use on a vessel, MODU or facility intended to be ABS classed or that is presently in class with ABS.

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.

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.