



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: Penetration Device for Bulkhead and Deck Firetight and Watertight Penetrations

Model(s): Roxtec R Series Frames

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	24-0079709-PDA-DUP	19-DEC-2024	18-DEC-2029
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 pipe and cable penetrations in Class H-60/-120 bulkheads and decks. Penetrations of watertight and gastight steel bulkheads and decks up to the specified pressure.

Description

Roxtec sealing system with multidiameter technology: R-series (Steel division). The R-Series sealing system consists of a rubber frame that is filled with Roxtec RM modules of different sizes depending on number/diameter of the cable and pipe. It is available in standard and EMC versions depending on application. The R-seal is installed into a steel sleeve that is welded, bolted onto the steel division.

Ratings

H-60/120 Decks for R50 - R200 with Steel Pipes, Bundle Pipes, Titanium Pipes and Cables

H-60/120 Bulkheads for R50 - R200 with Steel Pipes and Cables

H-60/120 Deck for SL-Series sleeve R50 - R200 with Steel Pipes and Cables

Watertight test pressure 6 bar (except bolted versions test pressure at 3.75 bar)

Gastight test pressure 4 bar (except bolted versions test pressure at 1.5 bar)

Service Restrictions

a) For deck installation maximum tested Marine cable diameter: 88 mm, maximum tested steel pipe outside diameter: 54 mm, Bundle pipe outside diameter: 50 mm, Titanium pipe outside diameter: 27 mm.

b) For bulkhead installation maximum tested Marine cable diameter: 90 mm and tested steel pipe

outside diameter 30 mm.

c) Maximum frame size tested: Size 200

d) Minimum frame size tested: Size 50

e) Not to be used in tank boundaries.

f) Tested with Marine Power/ Instrumentation/Control Cables.

g) Insulation material is to be H-60/-120 approved type and installed in accordance with the manufacturer's ABS approved installation drawings S1601395 Rev B , S1601396 Rev B, S1601659 Rev B, S1601660 Rev B, S1610728 Rev A, S1610730 Rev A (as applicable to the division) 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) All seal type should be installed in accordance with the manufacturers instructions and ABS approved installation drawings.

b) 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.

c) 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 (Consolidated Edition 2024). 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 2024).

d) The product or packing is to be marked with name of manufacturer, type designation and fire rating.

e) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Test Reports:

CTO Fire Test Report Numbers RS-19-B-036-E & RS-19-B-037-E, dated 21 March 2019

CTO Fire Test Report Number RS-24/B-335/E, dated 08 October 2024

SWRI Fire Test Report Number 01.24214.01.002, dated 14 February 2019

DBI Fire Test Report Number PGB10120A, dated 17 December 2021

DBI Fire Test Report Number PGB10215A, dated 04 May 2023

DBI Fire Test Report Number PGB10344A, dated 13 May 2024

DNV Inspection Report Nos.:

MLM 010238, dated 30 August 2001,

MLM 010247, dated 28 September 2001,

N1429Y4V, dated 23 February 2022

N142G50V, dated 11 November 2022

N142JK51, dated 27 February 2023

Insulation/Installation drawings:

Drawing No. S1601660, Revision: B - Deck/ Bulkhead H-120, Cables

Drawing No. S1601396, Revision: B - Deck/ Bulkhead H-60, Cables

Drawing No. S1601395, Revision: B - Deck/ Bulkhead H-60, Pipes

Drawing No. S1601659, Revision: B - Deck/ Bulkhead H-120, Pipes

Drawing No. S1610728, Revision: A - Deck H-60/H-120, Cables (SL Series)

Drawing No. S1610730, Revision: A - Deck H-60/H-120, Pipes (SL Series)

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 18/Dec/2029 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

2024 ABS Rules for Conditions of Classification: 1A-1-4/7.7, 1A-1-A3 and A4, which covers the following:

2024 ABS Rules for Building and Classing Marine Vessels: 4-6-2/9.7.1, 4-6-2/9.7.2, 4-8-4/21.13 and 4-8-4/29.15

2024 ABS Rules for Conditions of Classification - Offshore Units and Structures: 1B-1-4/9.7, 1B-1-A2, and 1B-1-A3 which covers the following:

2024 ABS Rules for Building and Classing Mobile Offshore Units: 4-2-1/11.15, 4-3-3/5.13, 5-1-1/3.5, and 5-1-1/3.19

2024 ABS Rules for Building and Classing Facilities on Offshore Installations: 3-8/9.13 and 3-8/9.15

International Standards

IMO 2010 FTP Code (2012 Edition), Annex 1, Part 3 with Norwegian Petroleum Directorate H Class and ISO 20902-1:2018 Annex B: Fire test procedures for divisional elements that are typically used in oil, gas and petrochemical industries temperature curves.

EU-MED Standards

NA

National Standards

Acts, Regulations and Provisions for the Petroleum Activities, Volume 2, Norwegian Petroleum Directorate, Issue June 1, 1999- For H Class Temperature Curve

Government Standards

The products comply with the following sections of the Canadian Vessel Fire Safety Regulations (SOR/2017-14): Part 2 - 209 & 227, Part 3 - 325 (1) and C.R.C., c. 1431 Canada Consolidation Hull Construction Regulations (Last amended 20 Dec. 2023), Part 1 / Section 14(7)(b), and when produced at a facility with an ABS manufacturing assessment (MA) is approved on behalf of the Minister of Transport in accordance with TP14612E - Procedures for Approval of Life-Saving Appliances and Fire Safety

Systems, Equipment and Products (4th Ed., Feb. 2019 - Ch. 2)

Other Standards

NA



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

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 24-Jan-2025 8:08

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.