



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 S Series Frames in Steel Divisions

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	24-0131674-PDA-DUP	20-DEC-2024	19-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/cable (armoured or non-armoured) penetrations in Class H-0/ H-60/ H-120 bulkheads and decks as per corresponding rating. Penetrations of watertight and gastight steel bulkheads and decks up to the specified pressure.

Description

"Roxtec pipe and cable sealing system with Multidiameter" consisting of Roxtec S series frames (S, S Ex, SF, SFHM, SO, SFO, SFOH, SR/T, SR/S, SRC r20, r40 and r60 and BTB) in height 1-8 and width 60-120, and combinations within the minimum and maximum tested frames as indicated in service restrictions, welded or bolted to the steel sections. S-series is also including the subgroup of SKseries frames with a single barrier with a depth of more than 60 mm (SK, SK Ex, SFK, SFOK, SFOHK, SRCK r20, SRCK r40, SRCK r60) and a subgroup SBTB-series frames with two barriers (SBTB, SBTB Ex, SFBTB, SRBTB, SRCBTB r20, SRCBTB r40, SRCBTB r60).

The S-series (including subgroups) is filled with Roxtec halogen free RM modules. Assembled with Roxtec Wedge, Roxtec ES Wedge, Roxtec Ex Wedge or Roxtec ES Ex Wedge and corresponding stayplates.

Ratings

Fire resistance:

Cables: H-60 / H120 for Bulkheads and H0/ H60 / H120 for Decks

Pipes: H-60/ H120 for 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

1. H-60 Bulkhead: Maximum marine cable outside diameter up to 90 mm and maximum CLX cable outside diameter up to 103 mm.
2. H-60 (Restricted) Bulkhead: Maximum marine cable outside diameter up to 88mm and maximum CLX cable outside diameter 17mm.
3. H-120 (Restricted) Bulkhead: Maximum marine cable outside diameter up to 88mm.
4. H-60 Deck: Maximum marine cable outside diameter up to 90mm, maximum SS bundle pipe diameter up to 50 mm, maximum steel pipe diameter up to 54mm and maximum titanium pipe diameter up to 27mm.
5. H-120 Deck: Maximum marine cable outside diameter up to 90mm and maximum CLX cable outside diameter up to 98mm.
6. H-0 Deck: Maximum marine cable outside diameter up to 89mm.
7. For H-120 Decks with BG/BGM Module, maximum marine cable outside diameter up to 82mm, maximum CLX cables outside diameter up to 98mm.
8. Maximum combination frame size tested for cables penetrations: 8+8x5 for Bulkheads and 8+8x10 for Decks.
9. Maximum combination frame size for pipes: 8+8x10 for Decks.
10. EMC Modules types BG and BGB are approved to use only on steel deck penetrations.
11. Not for use in tank boundaries
12. Unit Certification is not required for this product. If the manufacturer or purchasers 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 types should be installed in accordance with manufacturer's ABS approved installation drawings.
- b) Insulation material is to be H-60/ H-120 approved type and properly installed to the satisfaction of the Surveyors. (Insulation drawing No.: S1607030 Revision A. and S1607046 Revision A. for CLX Cable and S1607029 Revision A. for cables).
- c) Refer to ABS approved drawing number S1607077 Revision A. for pipes.
- d) 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.
- e) 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 1974 (Consolidated Edition 2024).
- f) The product or packing is to be marked with name of manufacturer, type designation and fire rating.
- g) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes, Drawings and Documentation

Insulation/Installation Drawings:

Drawing No. Certificate drawing, S1607030, Revision B, Pages: 1

Drawing No. Certificate drawing, S1607029, Revision B, Pages: 1

Drawing No. Certificate drawing, S1607077, Revision B, Pages: 1

Drawing No. Certificate drawing, S1607046, Revision B, Pages: 1

Test Reports:

DBI Fire and Security, PGB10344A_test report, Revision: 0, Pages: 128, dated 13 May 2024

SP Fire Test Report, PX07235, Revision 1, Pages: 80, dated 15 December 2010

SP Fire Test Report, 4P02192, Revision 1, Pages: 34, dated 30 June 2014

SP Fire Test Report, 6P02536 Report, Revision 1, Pages: 35, dated 12 July 2016

DBI Fire and Security, PGB10216A_Test report, Revision 0, Pages: 87, dated 13 March 2023

DBI Fire and Security, PGB10215A_Test report, Revision 0, Pages: 83, dated 14 March 2023

PCA Fire Report, RS_19_B_036_E, Revision 1, Pages: 60, dated 21 March 2019

SP Fire Report, 3P04210, Revision 1, Pages: 86, dated 24 September 2013

PCA Fire Report, RS_19_B_037_E, Revision 1, Pages: 60, dated 21 March 2019

SwRI Fire Report, R24214.01.001, Revision 1, Pages: 134, dated 11 February 2019

SwRI Fire Report, R23234.01.301[1], Revision 1, Pages: 196, dated 13 April 2018

PCA Fire Report, RS-22_B-396_E, Revision 1, Pages: 43, dated 28 November 2022

DBI Fire and Security, PGB10170A, Revision 0, Pages: 57, dated 02 May 2022

DBI Fire and Security, PGB10171A, Revision 0, Pages: 58, dated 04 May 2022

N142VXZX, Tightness report, Revision B, Pages: 24, dated 09 December 2023

SKM-04-4088, Tightness report, Revision -, Pages: 38, dated 16 June 2004

MLM020408, Tightness report, Revision -, Pages: 5, dated 31 May 2002

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 19/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 Marine Vessels Rules 1A-1-4/7.7, 1A-1-A3, 1A-1-A4, 4-6-2/9.7, 4-8-4/21.13.1

2024 ABS Mobile Offshore Units Rules 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, 4-2-1/11.15, 4-3-3/5.13

2024 ABS Rules for Building and Classing Facilities on Offshore Installations 1B-1-4/9.7, 1B-1-A2, 1B-1-A3, 3-8/9.13.

International Standards

IMO FTP Code 2010 (2012 Edition), Annex 1, Part 3 with Norwegian Petroleum Directorate H Class Temperature Curve

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

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

Other Standards

NA



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

Corporate ABS Programs
American Bureau of Shipping
Print Date and Time: 07-Jan-2025 7:41

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.