



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: Cable, Deck and Bulkhead Penetration Sealings

Model(s): Roxtec R & RO Series Frames in steel divisions

Endorsements:

Certificate Type	Certificate Number	Issue Date	Expiry Date
Product Design Assessment (PDA)	20-1960435-PDA-DUP	05-JUL-2023	25-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 penetrations in Class A0, A15, A30 and A60 bulkheads and decks for ship or offshore applications . Penetrations of watertight and gastight bulkheads and decks up to the specified pressure.

Description

Roxtec sealing system with multi diameter technology: composed of a steel sleeve welded, bolted (incl. SL A), or attached through expansion (SLX sleeve, R X kit) to a steel section. Sleeve is fitted with a Roxtec R or RO frame (standard, Ex/ATEX or EMC) in sizes 50-200 (50-100 with SL A Sleeve) . The R or RO frame is filled with Roxtec (standard, Ex/ATEX or EMC) halogen free RM modules.

Ratings

Fire Rating : A0, A15, A30 and A60 for Bulkheads and Decks

Watertight test pressure

R series Seals, Welded SL, SLF Sleeve, SLX Sleeve: 6 bar

Bolted SLF Sleeve: 5 bar

SL A Sleeve: 4 bar

Gastight test pressure

R series Seals, Welded SL, SLF Sleeve, SLX Sleeve: 3 bar

Bolted SLF Sleeve: 2.5 bar

SL A Sleeve: 1.5 bar

Service Restrictions

- a) 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.
- b) Maximum cable diameter: 60 mm (with out SL A Sleeve) and 50 mm (with SL A Sleeve)
- c) Maximum frame size tested : Size 200 (Size 100 for SL A Sleeve)
- d) Minimum frame size tested: Size 50
- e) SL A sleeve is fitted unsymmetrically into the bulkhead (Unexposed side) and deck (exposed or unexposed side).
- f) Not to be used in tank boundaries.
- g) Insulation material is to be A-60 approved type and installed in accordance with the manufacturer's ABS approved installation drawings to the satisfaction of the Surveyor.
- h) For fire class 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.

Comments

- a) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.
- b) All seal type should be installed in accordance with the manufacturers instructions in accordance with ABS approved installation drawings.
- c) Watertight or fire rated bulkheads or decks for cable penetrations are to be examined and tested as per ABS Marine Vessel Rules 3-7-1/Table1 and 4-8-4/29.15.
- 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 given in SOLAS Ch. II -1 Reg. 13.2.3 (Consolidated Edition 2014). 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.
- e) The product or packing is to be marked with name of manufacturer, type designation and fire rating.

Notes, Drawings and Documentation

Report No. DNV40007647-1-2020-03-13, DNV Third Party Inspection Report, Dated 13 December 2011
Revision: -, Pages: 1

Report No. MLM010238-2020-03-13, DNV Third Party Inspection Report, Dated 30 August 2001,
Revision: -, Pages: 1

Report No. MLM020401 -2020-03-13, DNV Third Party Inspection Report, Dated 25 March 2002,
Revision: -, Pages: 1

Report No. MLM030473-1-2020-03-13, DNV Third Party Inspection Report, Dated 27 January 2003,
Revision: , Pages: 1
Report No. N141EX8Z-A0420629-revision2 -2020-03-13, DNV Third Party
Inspection Report, Dated 10 August 2017, Revision: -, Pages: 1

Report No. 6P02249, IMO test of pipe penetration seals in A60 steel deck, SP Technical Research
Institute of Sweden, Dated 17 August 2016 Revision: 0, Pages: 151

Report No. P600993, Fire test of cable transits in a steel bulkhead, SP Technical Research Institute of

Sweden, Dated 12 April 2006, Revision: -, Pages: 57

Report No. 4P06068, IMO test of penetration seals in A60 Steel Bulkhead, SP Technical Research Institute of Sweden, Dated 17 January 2015, Revision: -, Pages: 96

Report No. PGA10800A, Examination of the fire resistance performance of cable transits and pipe penetrations mounted in a class A60 steel deck, Danish Institute of Fire and Security Technology, dated 26 May 2016, Revision: -, Pages: 132

Report No. P701755, Fire test of pipe penetrations and cable transits in a steel deck, SP Technical Research Institute of Sweden, Dated 12 June 2007, Revision: -, Pages: 132

Report No. 7P02167, IMO test of pipe penetration seals in A60 steel deck, RISE Research Institutes of Sweden AB, Dated 07 August 2017, Revision: -, Pages: 73

Report No. PX05454 rev1, Fire test of cable transits and pipe penetrations, SP Technical Research Institute of Sweden, Dated 08 September 2011, Revision: 1, Pages: 76

Report No. 8P07094 (rev 1), IMO test of pipe penetration seals in A60 steel bulkhead, RISE Research Institutes of Sweden AB, Dated 16 January 2020, Revision: 1, Pages: 1

Report No. PGA10025, Examination of the fire-resistance of a steel deck containing pipe penetrations and cable transits, Danish Institute of Fire and Security Technology, Dated 22 December 2011, Revision: -, Pages: 126

Report No. PGA10724A, Examination of the fire resistance performance of cable transits and pipe penetrations mounted in a class A0 steel bulkhead, Danish Institute of Fire and Security Technology, Dated 15 December 2015, Revision: -, Pages: 63

Report No. PGA10871A, standard fire test complying with the International Code for Application of Fire Test Procedures, 2010 Resolution MSC.307(88), 2010 FTP Code, Annex 1 Part 3, Test for "A", "B" and "F" Class Divisions., Dated 16 January 2018, Revision: 1, Pages: 125

Report No. RS-18/B-484/E, Test on fire resistance of pipe penetrations and cable transits installed in A60 class steel deck made according to technical documentation No. TST-000939, CENTRUM TECHNIKI OKRETOWEJ S.A., Dated 10 December 2018, Revision: -, Pages: 76

Report No. RS-18/B-485/E, Test on fire resistance of pipe penetrations and cable transits installed in A60 class steel deck made according to technical documentation No. TST-000932, CENTRUM TECHNIKI OKRETOWEJ S.A., Dated 10 December 2018, Revision: -, Pages: 66

Report No. RS-19/B-255/E, Test on fire resistance of pipe penetrations and cable transits installed in A60 class steel deck made according to technical documentation No. TST-001117, CENTRUM TECHNIKI OKRETOWEJ S.A., Dated 20 August 2019, Revision: -, Pages: 42

Drawing No. S1552538, Certificate Drawing, Revision: A, Pages: 1

Drawing No. S1552540, Certificate Drawing, Revision: A, Pages: 1

Drawing No. S1509319 rev C, Revision: C, Pages: 1

Drawing No. S1531345 rev B, Revision: B, Pages: 1

Drawing No. S1531344 rev B, Revision: B, Pages: 1

Term of Validity

This Product Design Assessment (PDA) Certificate remains valid until 25/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, 1-1-A4, which covers the following:

ABS Rules for Building and Classing Marine Vessels 2020: 4-8-4/21.13, 4-8-4/29.15,

ABS Rules for Building and Classing High Speed Craft 2020: 4-6-3/5.13

ABS Rules for Building and Classing Steel Vessels for Service on Rivers and Intracoastal Waterways 2020: 4-5-3/5.13

2020 Rules for Conditions of Classification - Offshore Units and Structures 1-1-4/9.7, 1-1-A2, 1-1-A3, which cover

the following:

ABS Rules for Building and Classing Mobile Offshore Units 2020: 4-3-3/5.13

ABS Rules for Building and Classing Facilities on Offshore Installations 2020: 3-8/9.13, 4-8/9.13

International Standards

SOLAS Ch. II-2, Reg. 9.3.1 (2014 consolidated edition)

IMO Resolution A.754 (18) adopted on 4 November 1993 as amended by MSC.61(67) adopted on 5 December 1996

2010 FTP Code, Annex1, part 3 (IMO Resolution MSC.307 (88) adopted on 3 December 2010)

EU-MED Standards

NA

National Standards

NA

Government Standards

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

Other Standards

NA



A handwritten signature in blue ink, appearing to read 'Joseph W. ...', is written over the printed text below.

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.