



## ***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 08/JAN/2019. 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 26/FEB/2020 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 RS / RS OMD / RS OC Seals in Steel Divisions**

**Presented to:**

ROXTEC INTERNATIONAL AB  
BOX 540  
Sweden

**Intended Service:**

Single pipe penetrations in Class A0, A15, A30 and A60 bulkheads and decks for Marine and Offshore Application. Penetrations of watertight and gastight steel bulkheads and decks up to the specified pressure.

**Description:**

"Roxtec pipe sealing system with multi diameter technology" composed of steel sleeves (welded or bolted to a steel section or sleeves of SLX-RS type) with RS, RS OMD type (EMC versions included) halogen free rubber sealing's in size 23-644 and RS OC halogen free rubber in sizes 75-400 mounted in steel decks or bulkheads. RSX kits consist of SLX RS type sleeves including a RS seal.

**Tier:**

3

**Ratings:**

A0, A15, A30 and A60 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) Outside diameter 10 to 558 mm for steel pipes for bulkhead and 6 to 558 mm for steel pipes for deck, with Roxtec sealing Range RS/RS OMD 23 to 644 b) Outside diameter 6 to 108 mm for copper pipes for bulkhead, and 8 to 108 mm for copper pipes for deck, with Roxtec sealing Range RS/RS OMD 23 to 150. c) Bundle pipes/ multi core tubes (in stainless steel and copper versions) up to 50 mm outside diameter, with Roxtec sealing Range RS/RS OMD 43 to 100. d) Fibreglass composite pipes up to 275 mm outside diameter, with Roxtec Sealing Range from

RS/RS OMD 68 to 350. e) Outside diameter 10 to 273 mm for steel pipes for deck, with Roxtec Sealing Range from RS 75 OC to RS 400 OC. f) Larger sizes have been tested and will be approved on a case by case basis. g) Not for use in tank boundaries. h) Watertight bulkheads or decks are to be examined and tested as per ABS SVR 3-7-1/Table1 . i) 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 (2009 or latest issue). 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 as amended. j) Unit Certification is not required for this product. If the manufacturer or purchaser's 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 A-60 approved type and properly installed to the satisfaction of the Surveyors. c) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes / Documentation:**

a) SINTEF Test Reports: 22N007.18D, 103070.13B&C, 103070.23A&B, 103070.25A&B, 103070.27 A&B, 103070.29A b) SINTEF assessment report; 103200.94 c) DNV Survey Report No. SKM-04-4088 d) DNV Third Party Inspection Report; MLM 010247, MLM 020401 MLM 030473-1 e) Roxtec International AB Fire Test witnessed by DNV on 8 Jul '02, report; 10166-3 f) Roxtec International AB Fire Test witnessed by ABS on 15 Oct '09, report; GB1741567. g) SP Technical Research Institute of Sweden fire test report; P602999, P603000, PX05454, P701755, P603000 h) Japan Ship Machinery Quality Control Association Test report; 09-346E, 09-345E i) Danish Institute of Fire and Security Technology Test report; PGA10141 j) Roxtec drawings; S1027474 rev.A, S1027475 rev.A, S1027476 rev.A, S1040656 rev.B, S1040652 rev.C, S1040653 rev.A, S1040668 rev.B, S1011020 rev.-, S1004735 rev.-, S1011023 rev.-, S1011042 rev.-, S1018777 rev.-.

**Term of Validity:**

This Product Design Assessment (PDA) Certificate 15-LD1307356-PDA, dated 27/Feb/2015 remains valid until 26/Feb/2020 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:**

The Rules applicable to this assessment are: 2015 ABS Steel Vessel Rules 1-1-4/7.7, 1-1-A3 , 1-1-A4, & 4-6-2/9.7, 4-6-3/7.11, 2015 Rules for Building and Classing Facilities on Offshore Installations 1-1-A2,1-1-A3, 1-1-4/9.7, 3-8/9.13, 4-8/9.13, 2015 Mobile Offshore Drilling Units Rules 1-1-A2, 1-1-A3, 1-1-4/9.7, 4-2-1/11.15

**National Standards:  
International Standards:**

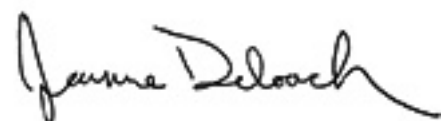
SOLAS Ch. II-2, Reg. 9.3.1 (2014 Consolidated Edition); IMO Resolution A.754 (18)

**Government Authority:**

This PDA conforms to Transport of Canada requirements

**EUMED:  
Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	15-LD1307356-PDA	03/MAR/2015	26/FEB/2020



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.