



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 16/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): RS PPS and RS PPS/S series (steel divisions)

Presented to:

ROXTEC INTERNATIONAL AB
BOX 540
Sweden

Intended Service:

Single plastic pipe penetrations in Class A0, A15, A30 and A60 bulkheads and decks for ships and offshore application. Penetrations of watertight and gas tight bulkheads and decks up to the specified pressure

Description:

Roxtec plastic pipe sealing system with multi diameter technology RS PPS 31-400 Consisting of a steel sleeve, bolted or welded to a steel section. The sleeve is fitted at both ends with Roxtec RS seals (standard or EMC versions) including intumescent material in between. RS PPS/S 31-150 Consisting of a steel sleeve, bolted, welded or SLX-type sleeve attached through expansion, on to the steel sections. The sleeve is fitted with one single RS PPS/S seal with integrated intumescent material. Minimum thickness for steel sleeve is 1.5mm.

Tier:

3

Ratings:

Fire Rating: A0, A15, A30 and A60 for bulkheads and decks. Watertight test pressure 6 bar g. Gastight test pressure 4 bar g. A60 Steel bulkhead division (for watertight bulkhead division for Passenger Ships and Special Purpose Ships as per SOLAS II-1/13.2.3) RS PPS 300, 400 and RS PPS/S 31, 43, 75, 150 The transits are tested for Watertightness with 2 bar test pressure for 30 minutes after an A60 fire test.

Service Restrictions:

1) Maximum plastic pipe size 315 mm diameter (Pipe tested had a wall thickness of 28 mm) . 2) Not for use in tank boundaries. 3) 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:

1) All seal types should be installed in accordance with manufacturers ABS approved installation drawings. 2) Insulation material is to be A60 approved type and installed in accordance with manufacturers ABS approved installation drawings to the Surveyors satisfaction. 3) Watertight bulkheads or decks for pipe penetrations are to be tested as per ABS Steel Vessel Rules 3-7-1/ Table1. 4) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product. 5)) 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. 6) All seal types should be installed in accordance with manufacturer's ABS approved installation drawings.

Notes / Documentation:

1) Roxtec drawing no S1013503 rev.- for RS PPS/S seals, S1009194 rev.1 for PPS RS seals, S1009195 rev.1 for PPS RS seals 2) Roxtec drawing no S1023338 rev.B for RS PPS/S seals and S1035080 rev.A for RS PPS seals for application to Passenger Ships and Special Purpose Ships. 3) SINTEF Reports 103070.10A, 103070.27B, 103070.29B, 103070.31B, 103070.13A, 103070.27A, 103070.29A and 103070.31A, SP Swedish National Testing and Research Institute fire test report numbers P502922, P502921. Roxtec-Fire Test Report: 10608, Roxtec-Water and Gas Tightness Test Report: 10539. SP Technical Research Institute of Sweden Fire Test Report: P605253, P701755, Roxtec Fire resistance and water tightness test report; 101108, 101198, 011199, 101636, 101822 witnessed by DNV Surveyor

Term of Validity:

This Product Design Assessment (PDA) Certificate 15-LD1307368-PDA, dated 17/Feb/2015 remains valid until 16/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 Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-6-3/7.11; 2015 Mobile Offshore Drilling Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-2-2/7.7.4, 2015 Rules for Offshore Units and Structures 1-1-4/9.7, 1-1-A2,1-1-A3

National Standards:

International Standards:

SOLAS (2014 Consolidated Edition) Ch. II-2, Reg. 9.3.1, Ch. II-1, Part B-2, Reg. 13.2.3; 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-LD1307368-PDA

03/MAR/2015

16/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.