



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 16-FEB-2020. 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 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: Cable, Deck and Bulkhead Penetration Sealings
Model Name(s): Roxtec R & RO Series Frames in steel divisions

Presented to:

ROXTEC INTERNATIONAL AB
ROMBVAGEN 2
SE 371 65
Sweden

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.

Tier:

3

Ratings:

Fire Rating : A0, A15, A30 and A60 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:

a) Maximum cable diameter: 60 mm (with out SL A Sleeve) and 50 mm (with SL A Sleeve) b) Maximum frame size tested : Size 200 (Size 100 for SL A Sleeve) c) Minimum frame size tested: Size 50 d) SL A sleeve is fitted unsymmetrically into the bulkhead (Unexposed side) and deck (exposed or unexposed side). e) Not to be used in tank boundaries. f) Tested with Marine Power/ Instrumentation/Control Cables. g) Insulation material is to be A-60 approved type and installed in accordance with the manufacturer's ABS approved installation drawings S1500429 rev A or S1531344 Rev B or S1531345 Rev B (as applicable to the division) to the

satisfaction of the Surveyor. h) For fire class A-0, 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. i) 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 in accordance with ABS approved installation drawings. b) Watertight or fire rated bulkheads or decks for cable penetrations are to be examined and tested as per ABS SVR 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 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. 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 / Documentation:

Test Reports a) SINTEF Test Reports 103070.10A dated 7 December 2001, 103070.23A dated 11 December 2003, 103070.23B Dated 11 December 2003, 103070.29A Dated 28 October 2003 b) SP Technical Research Institute of Sweden, fire test report no. P600993 dated 12 April 2006, P701755 dated 12 June 2007, PX05454 rev1 dated 08 September 2011, 4P06068 Dated 17 January 2015, 6P02249 Dated 17 August 2016 c) Danish Institute of Fire and Security Technology test report PGA10025 dated 22-12-2011, PGA 10800A Dated 26 May 2016. Drawings a) Drawing no. S1500429 rev A, R- Frame W Cable Steel Deck/ Blkhd A15- A60 b) Drawing no. S1531344 Rev B, A-60 Class Certificate Drawing for SL A Sleeve. c) Drawing No. S1531345, Rev B, A-0 Class Certificate Drawing d) Drawing No. S1509319, Rev C, SL A 25-100, Information Drawing. Miscellaneous a) Document Number DOC-000949 rev C, Installation Instructions

Term of Validity:

This Product Design Assessment (PDA) Certificate 15-LD1307351-1-PDA, dated 29/Jun/2018 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:

1) 2015 ABS Steel Vessel Rules 1-1-4/7.7, 1-1-A3, 1-1-A4, 4-8-4/21.13, 4-8-4/29.15; 2) 2015 Mobile Offshore Drilling Units Rules 1-1-4/9.7, 1-1-A2, 1-1-A3, 4-3-3/5.13

National Standards:**International Standards:**

SOLAS Ch. II-2, Reg. 9.3.1 (2014 consolidated edition), IMO Resolution A.754 (18): 1993 IMO FTP Code 2010 (2012 Edition)

Government Authority:

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


EUMED:**Others:****Model Certificate****Model Certificate No****Issue Date****Expiry Date**

PDA

15-LD1307351-1-PDA

02-JUL-2018

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.