



## *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 08/AUG/2021 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:** Fire Stop System

**Model Name(s):** Roxtec RS Seals, for Jet fire steel divisions (Bulkhead/Deck)

**Presented to:**

ROXTEC INTERNATIONAL AB  
BOX 540  
Sweden

**Intended Service:**

Structural steel jet fire protection system: pipe penetration sealing system in Jet fire resisting bulkhead and deck divisions. For Offshore Applications Only

**Description:**

"Roxtec pipe sealing system with multidiameter technology" composed of steel sleeves (welded or bolted) with RS- type (EMC versions included) halogen free rubber sealings. Frame size 23-400 for steel pipe services, and filled with Roxtec halogen free insert modules, mounted in steel bulkheads and decks.

**Ratings:**

Jet Fire rating J30: RS-, Roxtec modules installed back to back; between the ends the space between the pipe and the flange filled with 100mm ceramic fibre; Pipes - Maximum pipe outside diameter up to 323 mm. Watertight test pressure 6 bar g. (except bolted versions test pressure at 5 bar g.); Gastight test pressures 4 bar g. (except bolted versions test pressure at 2.5 bar g.).

**Service Restrictions:**

1) Not for use in tank boundaries. 2) Applications in each case to be approved by ABS at the design stage. 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 manufacturer's ABS approved installation drawing number S1023312 rev A. 2) Insulation material is to be H class approved type and properly installed to the satisfaction of the Surveyors. 3) Although the jet fire resistance test has been designed to reproduce conditions similar to those found in large-scale jet fires resulting from realistic

releases of hydrocarbons, it cannot guarantee a specific degree of protection from the myriad of possible jet fires. The Jet Fire Resistance Test, or indeed large-scale demonstrations, cannot therefore be used to confer a universal fire resistance rating for a specified time in the way that a standard furnace test confers a hydrocarbon rating. Hence this test does not give a rating analogous to the "H" rating derived from the hydrocarbon fire resistance test as detailed in ISO 834. This test is not intended to replace the hydrocarbon fire resistance test but is seen as a complementary test. 4) Although the method specified for jet-fire resistance test has been designed to simulate some of the conditions which occur in an actual jet fire, it cannot reproduce them all exactly. The results of this test do not guarantee safety but may be used as elements of a fire risk assessment for structures or plant. This should also take into account all the other factors which are pertinent to an assessment of the fire hazard for a particular end use. 5) The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

**Notes / Documentation:**

1) Sintef test report no. NBL F10106 dated 13 October 2010. 2) SINTEF/SP assessment report no. F15 20119-1 dated 29 January 2015. 3) Drawing number S1023312 rev A.

**Term of Validity:**

This Product Design Assessment (PDA) Certificate 16-LD1538675-PDA, dated 09/Aug/2016 remains valid until 08/Aug/2021 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:**

2016 Rules for Offshore Units and Structures, 1-1-4/9.7, 1-1-A2, 1-1-A3, which covers the following: 2016 Rules for Building and Classing Mobile Offshore Drilling Units, 4-2-1/11.15 2016 Rules for Building and Classing Facilities on Offshore Installations, 3-8/9.13, 4-8/9.13

**National Standards:**

**International Standards:**

ISO 22899-1: 2007 "Determination of the resistance to jet fires of passive fire protection materials"

**Government Authority:**

**EUMED:**

**Others:**

Model Certificate	Model Certificate No	Issue Date	Expiry Date
PDA	16-LD1538675-PDA	09/AUG/2016	08/AUG/2021



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.