



## ***Confirmation of Product Type Approval 28/APR/2011***

Please refer to the "Service Restrictions" shown below to determine if Unit Certification is required for this product.

This is to certify that, 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 03/DEC/2013. 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 02/MAR/2014 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.

### **Roxtec International AB**

#### **Model Name(s): Roxtec S Series Frames for steel divisions**

**Presented to:**

Roxtec International AB  
Rombvagen 2  
Box 540  
Karlskrona  
Sweden

**Intended Service:**

Multi and single cable penetrations in Class A0, A15, A30 and A60 steel bulkheads and decks. Penetrations of watertight and gastight bulkheads and decks up to the specified pressure.

**Description:**

Roxtec Sealing System with multidiameter technology consisting of Roxtec S series frames (different versions or combination of versions approved with the following extensions or combination of extensions -O, -F, -K, -R, -RC, -BTB) in sizes 1-8 and combinations thereof, bolted or welded onto the steel sections, filled with Roxtec (standard or EMC) halogen free insert modules (which consist of two halves of EPDM based rubber, with removable layers to handle cables of different sizes), and assembled with Roxtec Wedge Kit or Roxtec EMC Wedge Kit.

**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) Maximum cable size: 102 mm outside diameter. b) Maximum cable size of CLX cables: 103mm outside diameter. c) Not for use in tank boundaries d) 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 types should be installed with the manufacturer's instructions in accordance with approved drawing (drawing number S1010926 for bulkheads and

S1010966 for decks; drawing number S1022545 for deck and bulkhead penetrations for metal clad cables). b) Insulation material is to be A-60 approved type and installed in accordance with the approved drawing (drawing number S1010926 for bulkheads and S1010966 for decks; drawing number S1015567 for deck and bulkhead penetrations for metal clad cables) to the satisfaction of the Surveyors.

**Notes / Documentation:** Approval of the arrangements and materials based on SINTEF Test Reports 22N007.16A, 103070.10A, 103070.13A, 103070.13B, 103070.23B, 103070.29B and 103070.14B; SP Technical Research Institute of Sweden report numbers P600993, PX05454 and P605253; Southwest Research Institute Test Report 01.06061.01.117A.

**Term of Validity:** This Product Design Assessment (PDA) Certificate 02-LD323667B/5-PDA, dated 18/Apr/2011 remains valid until 02/Mar/2014 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:** 2009 Steel Vessel Rules 1-1-4/7.7 & 4-8-4/21.13

**National Standards:**

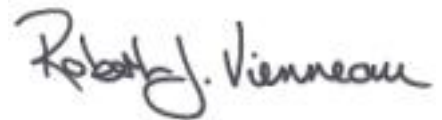
**International Standards:** SOLAS Ch. II-2, Reg. 9.3.1 (2000 Amendments); IMO Resolution A.754 (18)

**Government Authority:** This PDA conforms to Transport of Canada requirements.

**EUMED:**

**Others:**

| Model Certificate | Model Certificate No | Issue Date  | Expiry Date |
|-------------------|----------------------|-------------|-------------|
| PDA               | 02-LD323667B/5-PDA   | 18/APR/2011 | 02/MAR/2014 |



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.