

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00000NX**  
Revision No:  
**1**

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2014/93/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL AS under the authority of the Government of the Kingdom of Norway.

## This is to certify:

**That the Penetrations through "A" class divisions: pipe, duct, trunk, etc penetrations**

with type designation(s)

**Roxtec sealing system with Multidiameter, RS PPS and RS PPS/S (AL)**

Issued to

**Roxtec International AB**  
**KARLSKRONA, Sweden**

is found to comply with the requirements in the following Regulations/Standards:

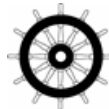
**Annex A.1, item No. A.1/3.26b and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1276 and IMO 2010 FTP Code**

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-03-14**.

Issued at **Høvik** on **2016-04-14**

DNV GL local station:  
**Station Gothenburg**



for **DNV GL AS**

Approval Engineer:  
**Piotr Orzechowski**

Notified Body  
No.: **0575**

**Vidar Dolonen**  
**Head of Notified Body**

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Job Id: **344.1-000153-58**  
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## Product description

"Roxtec sealing system with Multidiameter™, RS PPS and RS PPS/S (Al)"

### RS PPS 31-200

consisting of an aluminium sleeve, bolted or welded to an aluminium 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 an aluminium sleeve, bolted or welded (including SLX-type sleeve) to an aluminium section. The sleeve is fitted in with Roxtec RS PPS/S seal (standard or EMC versions) with integrated intumescent material.

## Application/Limitation

Approved for use as single plastic pipe penetration system in class A-0, A-15, A-30 and A-60 aluminium bulkhead and deck for approved thermoplastic pipes as follows:

PPS system size:	Pipe outer diam.:	Type of pipe:	Deck/Bulkhead:
RS PPS 31-200	16 -160 mm	Thermoplastic *	Deck/Bulkhead
RS PPS 31 -150	16 - 110 mm	PE/Alu Flexi pipe	Deck/Bulkhead
RS PPS 31 - 125	16- 98 mm including Armaflex insulation	Multiple pipes	Deck/Bulkhead
RS PPS/S 31-150	16 - 110 mm	Thermoplastic *	Deck/Bulkhead

\* PP, PVC, PB, ABS, HDPE, PVDF

Deck or bulkhead to be insulated with approved insulation according to classification covering the edge of the aluminium frame. See insulation drawing specified in the Type Approval Documentation. For fire class A-0, A-15 and A-30, the sleeve and pipes are to be insulated as for class A-60.

The pipe penetrations are not approved for use in watertight bulkheads on passenger ships and special purpose ships (SPS).

The penetration system shall not be used for penetrating boundaries of tanks.

The insulation material used has to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

Each product shall be supplied with its manual for installation and maintenance.

## Type Examination documentation

Test Reports No. 103070.03A (A-60 deck) and No. 103070.03B (A-60 bulkhead) dated 15 March 2001 from SINTEF, Norway.

Test Reports No. PG11898 Serial No. 11923 and PG11955 Serial No. 11979 both dated 17 April 2009 from DIFT, Denmark.

Assessment No. 103201.89 (A-60 bulkhead/deck) dated 4 August 2004 from SINTEF, Norway.

Drawing Nos. from Roxtec International AB:

- S1017153 dated 30 April 2009 (Insulation).

- S1001239 Rev. A dated 27 June 2000 (insulation).

## Tests carried out

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8.

## Marking of product

The product or packing is to be marked with name of manufacturer, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number if applicable.

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## **Additional application/information for Watertightness/gastightness (Not part of the Marine Equipment Directive requirement)**

### **Product description**

" Roxtec sealing system with Multidiameter™, RS PPS and RS PPS/S(AI) "

RS PPS 31-200

consisting of an aluminium sleeve, bolted or welded to an aluminium 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 an aluminium sleeve, bolted or welded (including SLX-type sleeve) to an aluminium section. The sleeve is fitted in with Roxtec RS PPS/S seal (standard or EMC versions) with integrated intumescent material.

### **Application/Limitation**

Approved for penetration in aluminium bulkheads or decks limited to a pressure of 4 bar watertightness and 2.67 bar gastightness.

The pipe penetrations are not approved for use in watertight bulkheads on passenger ships and special purpose ships (SPS).

For bolted versions with gasket and self tapping screws the pressure is limited to 3.33 bar watertightness and 1.67 bar gastightness.

The penetration system is not to be used for penetrating boundaries of tanks.

### **Type Approval documentation**

Test reports No. MLM 020106 dated 19 December 2001, No. 020133 dated 26 February 2002, No. MLM 020401 dated 25 March 2002, No. MLM 020408 dated 3 June 2002 and MLM070656 dated 18 April 2007 from DNV Malmö and No. SKM-04-4088 dated 16 June 2004 from DNV Stockholm.

### **Tests carried out**

Pressure tests with water and Helium according to DNV Type Approval Programme 8.471.19-1