

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Penetrations through "A" class divisions: electric cable transits

with type designation(s)

Roxtec sealing system with multidiameter technology: RS-series (AI)

Issued to

Roxtec International AB
KARLSKRONA, Sweden

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2017/306,**

item No. MED/3.26a. SOLAS 74 as amended, Regulation II-2/9 and IMO 2010 FTP Code

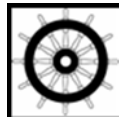
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-01-23.**

Issued at **Høvik** on **2018-01-24**

DNV GL local station:
Malmö

Approval Engineer:
Ivar Bull



Notified Body
No.: **0575**

for **DNV GL AS**

.....
Roald Vårheim
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 Directive 2014/90/EU.

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. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

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: **344.1-000153-70**
Certificate No: **MEDB00002SD**

Product description

"Roxtec sealing system with multidiameter technology: RS-series (Al)"
consisting of an aluminium sleeve, bolted or welded to an aluminium section. Sleeve is filled with a Roxtec RS or RS OMD seal (standard or EMC) in sizes 23-125.

Application/Limitation

Approved for use as single cable penetration system in class A-0, A-15, A-30 and A-60 aluminium bulkheads and decks for approved ship cables. Other applications are subject to case-by-case approval.

Deck or bulkhead to be fully insulated on exposed and unexposed side with approved insulation according to classification.

For deck penetrations sleeve shall be located on unexposed side.

See insulation drawing specified in the Type Approval Documentation. For fire class A-0, A-15 and A-30, the sleeve are to be insulated as for class A-60 for a distance of 200mm around transit.

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

Each product is to be supplied with its manual for installation, use and maintenance.

Type Examination documentation

Test reports

P501943 (A-60 bulkhead) dated 2005-05-18 from SP, Sweden

P501943B (A-60 bulkhead) dated 2005-05-24 from SP, Sweden

P403634 (A-60 deck) dated 2004-12-30 from SP, Sweden

Drawings:

S1506616 Rev Bdated 2015-09-22 from Roxtec International AB.

Tests carried out

Tested according to IMO FTP Code Part 3 (IMO Res. A.754(18)) 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.

Appendix Rev. No. 1 (2013-01-09)

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

Product description

"Roxtec sealing system with multidiameter technology: RS-series (Al)"
consisting of a aluminium sleeve, bolted, welded or attached through expansion (RS X) to an aluminium section. Sleeve is filled with a Roxtec RS or RS OMD seal (standard or EMC) in sizes 23-150.

Application/Limitation

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

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 from DNV Malmö:

No. MLM 010235 dated 21 August 2001

No. MLM 010133 dated 26 February 2002

No. MLM 020408 dated 3 June 2002

No. MLM 030473-1 (RS X) dated 27 January 2003.

Tests carried out

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