

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00002SA
Revision No:
1

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 (steel)

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 **2022-07-02.**

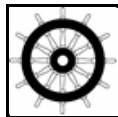
Issued at **Høvik** on **2017-08-24**

DNV GL local station:

Site Office Malmö

Approval Engineer:

Ivar Bull



Notified Body
No.: **0575**

for **DNV GL AS**

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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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: **344.1-000153-75**
Certificate No: **MEDB00002SA**
Revision No: **1**

Product description

Roxtec sealing system with multidiameter technology: RS-series (steel) consisting of a steel sleeve bolted, welded, attached through expansion (RS X) or attached with nut (SL A) to a steel section.

The sleeve is filled with a Roxtec RS or RS OMD seal (standard, ATEX/Ex or EMC) in sizes 23-150 (25-75 for SL A).

Application/Limitation

Approved for use as a single cable penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks for approved ship cables.

Deck or bulkhead to be insulated with approved insulation according to classification covering the edge of the steel frame. A-0 RS X or SL A penetrations are to be insulated as for class A-60. See insulation drawings specified in the Type Examination documentation.

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 and maintenance.

Please note Installation instruction for Roxtec RS X attached through expansion: Aperture irregularities are acceptable within min and max diameters (Max \varnothing = Min \varnothing + 2 mm).

Penetrations through structural divisions should not impair the structural strength of the division. Special consideration should be given to bulkheads and decks with high stress locations (IMO MSC.1/Circ.1488).

Type Examination documentation

Test Report Nos.

103070.14B (A-60 bulkhead) dated 4 July 2002 from SINTEF, Norway.
103070.13A (A-60 bulkhead) dated 23 April 2003 from SINTEF, Norway.
103070.13B (A-60 deck) dated 23 April 2003 from SINTEF, Norway.
103070.23A (A-60 bulkhead) dated 11 December 2003 from SINTEF, Norway.
103070.23B (A-60 deck) dated 11 December 2003 from SINTEF, Norway.
P600993 (A-60 bulkhead) dated 12 April 2006 from SP, Sweden.
P605253 (A-60 bulkhead) dated 9 February 2007 from SP, Sweden.
P701755 (A-60 deck) dated 17 June 2007 from SP, Sweden.
6P02249 (A-60 deck) dated 17 August 2016 from SP, Sweden.
PGA10800A (A-60 deck (SL A)) dated 26 May 2016 from DBI, Denmark.
PGA10871A (A-60 deck (SL A)) dated 31 October 2016 from DBI, Denmark.
PGA10870A (A-60 bulkhead (SL A)) dated 1 November 2016 from DBI, Denmark.
6P10024 (A-60 bulkhead (SL A)) dated 31 January 2017 from SP, Sweden.


Installation Drawing Nos.

S1006155 Rev. 0 (A-0)
S1012927 Rev. 0 (A-15, A-30 and A-60)
S1004586 Rev. 0 (A-15, A-30 and A-60 (RS X))
S1520995 Rev. A SL A sleeve with RS-seal and cable in A-60 class steel deck/bulkhead
S1521017 Rev. A SL A sleeve with RS-seal and cable in A-15 and A-30 class steel deck/bulkhead
S1521032 Rev. A SL A sleeve with RS-seal and cable in A-0 class steel deck/bulkhead

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, and in accordance with IMO 2010 FTP Code Part 3."

Marking of product



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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.

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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 technology: RS-series (steel)"
consisting of a steel sleeve, bolted, welded or attached through expansion (RS X) or SLA (sizes 25-75) to a steel section. The sleeve is filled with a Roxtec RS or RS OMD seal (standard or EMC) in sizes 23-150.

Application/Limitation

Approved for penetration in steel 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.

For SLA sleeves the pressure is limited to 2.67 bar watertightness and 1 bar gastightness.

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

Type Approval documentation

Test reports from DNV Malmö.:
MLM 010235 dated 21 August 2001,
MLM 010133 dated 26 February 2002,
MLM 020408 dated 3 June 2002,
MLM 020133 dated 26 February 2002
MLM 030473-1 (RS X) dated 27 January 2003
N141EX8Z Rev. 2 (SLA) dated 2017-08-10.

Tests carried out

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