DNV·GL

Certificate No:
MEDB00002SG

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: R-series (Al)

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 **2023-03-11**.

Issued at **Høvik** on **2018-03-12**

DNV GL local station:
Malmö

Approval Engineer:
Helge Bjørnarå

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

NORWEGIAN ACCREDITATION PROD 019

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Product description

"Roxtec sealing system with multidiameter technology: R-series (Al)" consisting of an aluminium sleeve, bolted, welded or attached through expansion (R X) to an aluminium section.
Sleeve is fitted with a Roxtec R frame (standard or EMC) in sizes 70-200.
The R-frame is filled with Roxtec (standard or EMC) halogen free RM modules.

Application/Limitation

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

Bulkhead penetration is to be fully insulated, not between cables, on one side and partially insulated on the opposite side. For bulkheads, the fully insulated side is the one with majority of the sleeve.

Deck penetration is to be fully insulated, but not between cables, on the underside.

For fire class A-0, A-15 and A-30, the sleeve is to be insulated as for class A-60.

The insulation material used has 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 use.

Please note Installation instruction for Roxtec R X attached through expansion: Aperture irregularities are acceptable within min and max diameters (Max Ø = Min Ø + 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.:

- 103070.33A (A-60 bulkhead) (R X) dated 15 November 2004 from SINTEF, Norway
- P403634 (A-60 deck) (R X) dated 30 December 2004 from SP, Borås, Sweden
- PG11898 (A-60 bulkhead) dated 17 April 2009 from DIFT, Denmark

Drawing Nos.:

- S1022005 Rev B dated 8 February 2018 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 and address of manufacturer, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number (see page 1).

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

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Application/Limitation

Approved for penetration in steel bulkheads or decks limited to a pressure of 4.00 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 report Nos.:

- MLM 010238 dated 30 August 2001
- MLM 020408 dated 3 June 2001
- MLM 030473-1 (R X) dated 27 January 2003

from DNV Malmö.

Tests carried out

Pressure tests with water and Helium according to Class Programme DNVGL-CP-0165.