

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: pipe, duct, trunk, etc penetrations

with type designation(s)

Roxtec sealing system: Roxtec SPM seal series (Aluminium divisions)

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/3.26b. SOLAS 74 as amended, Regulation II-2/9, IMO MSC.1/Circ.1276 and IMO 2010 FTP Code

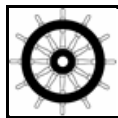
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-12-06.**

Issued at **Høvik** on **2017-12-07**

DNV GL local station:
Malmö

Approval Engineer:
Marius Mørner



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Product description

"Roxtec sealing system: Roxtec SPM seal series (Aluminium divisions)"
Consisting of Roxtec SPM rubber seals in size 39-279 attached to expansion to Aluminium sections.

Application/Limitation

Approved for use as a single pipe penetration system in class A-60 Aluminium bulkheads and decks as follows:

- a) Steel pipes
With diameter 8 – 222 mm for bulkhead and deck
- b) Copper pipes
With diameter 8 – 110 mm for bulkhead and deck

Other applications are subject to case-by-case approval.

For A-0, A-15 and A-30 applications, the penetration shall be insulated as for A-60 and the division is to be fitted with A-60 insulation for a minimum distance of 200 mm around the penetration.
For detail information about insulation please see drawings specified in the Type Examination Documentation.

All seals shall be installed in accordance with Roxtec's SPM seal Installation Instructions, including aperture dimensions and tolerances, tightening torque, etc.

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).

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

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

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

Type Examination documentation

Test Reports, both from Centrum Techniki Okretowej, Gdansk, Poland:

- RS-17/B-209/E, dated 2017-06-02 (A-60 bulkhead)
- RS-17/B-210/E, dated 2017-06-02 (A-60 deck)

Drawings, from Roxtec, dated 2017-12-01:

- S1524426 rev. B (Steel pipe for A-60 deck)
- S1524427 rev. B (Copper pipe for A-60 deck)
- S1524431 rev. B (Steel pipe for A-60 bulkhead)
- S1524433 rev. B (Copper pipe for A-60 bulkhead)

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

The product or packing is to be marked with name of manufacturer and address, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number if applicable (see page 1).

Job Id: **344.1-007416-1**
Certificate No: **MEDB0000368**

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

Product description

"Roxtec sealing system: Roxtec SPM seal series (Aluminium divisions)"
consisting of Roxtec SPM rubber seals in size 39-279 attached to expansion to Aluminium sections.

Application/Limitation

Approved for penetration in steel bulkheads or decks limited to a pressure of 1 bar watertightness and 0.67 bar gastightness.

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

Type Approval documentation

Survey Report no. N1419WS4 dated 2016-06-22.
Survey Report no. N141805A dated 2016-12-20.

Tests carried out

Tested according to Class Programme DNVGL-CP-0165 Chapter 4, October 2017.