



DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2002/75/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-B-4968

This Certificate consists of 4 pages

This is to certify that the product

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

with the type designation(s)

Roxtec sealing system with multidiameter technology: SE PPS S-series (steel)

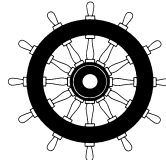
Manufactured by

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 FTP Code

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

Place and date
Høvik, 2008-12-03
for DET NORSKE VERITAS AS



This Certificate is valid until
2013-12-03

Notified Body No. 0575

Kristen Ulveseter
Manager, MTPNO370
Department Systems & Components

Rolf Emilsen
Surveyor

DNV local office:
DNV Malmö



Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.

The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.

Cert. No.: MED-B-4968
Job Id.: 344.1-000153-14
File No.: A1/3.26B

Product description

“Roxtec sealing system with multidiameter technology: SE PPS S-series (steel)” consisting of Roxtec S-series steel frames (S, SO, SF, SFO, SR, SK, SRC r20 and SRC r40) in sizes 2-6, and combinations thereof up to x4, to be used together with SE PPS extension frames, bolted or welded to the steel sections. The extension frame is equipped with intumescent material strips. The S frame is filled with Roxtec (standard or EMC) halogen free RM modules. Assembled with Roxtec Wedge kit or Roxtec EMC Wedge kit.

Application/Limitation

Approved for use as a penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks for approved pipes and cables as follows:

Type of Pipe	Dia. pipe [mm]	S-series size	Deck/Bulkhead
Thermoplastic (PP, PVC, PB, ABS, HDPE, PVDF)	16-99	2-6	Deck/Bulkhead
PE/Alu flexi pipe	16-99	2-6	Deck/Bulkhead
Copper and steel pipes	10-54	2-6	Deck
Approved ships cables	Up to 60	1-6	Deck/Bulkhead

Deck or bulkhead to be insulated with approved insulation according to classification covering the edge of the steel frame. See insulation drawing specified in the Type Approval 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 use.

Type Approval documentation

Test Reports No. 103070.27A (A-60 bulkhead) and 103070.27B (A-60 deck) dated 4 July 2003 from SINTEF, Norway and No.10027 (A-60 bulkhead, SRC r20 and SRC r40) from Roxtec International AB, approved by DNV 20 November 2000.

Test Report No. P701755 dated 12 June 2007 from SP, Sweden.

Assessment No.103201.33 dated 11 September 2003 from SINTEF, Norway.

Drawing No. S1015479 dated 3 November 2008 from Roxtec International AB.


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

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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/or USCG approval number (see below).

Mark of conformity

The manufacturer is allowed to affix the Mark of Conformity  according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

- Module D: The quality system for production and testing shall be approved by the Notified Body.
- Module E: The quality system for inspection and testing shall be approved by the Notified Body.
- Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

USCG Approval

An 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.

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

Product description

“Roxtec sealing system with multidiameter technology: SE PPS S-series (steel)”
consisting of Roxtec S-series steel frames (S, SO, SF, SFO, SR, SK, SRC r20 and SRC r40) in sizes 2-6, and combinations thereof up to x4, to be used together with PPSE extension frames, bolted or welded to the steel sections. The extension frame is equipped with intumescent material strips. The S frame is filled with Roxtec (standard or EMC) halogen free RM modules. Assembled with Roxtec Wedge kit or Roxtec EMC Wedge kit.

Application/Limitation

Approved for penetration of plastic pipes and cables in steel bulkheads or decks and for copper and steel pipes in steel deck 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 3.3 bar watertightness and 1.7 bar gastightness.

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

When requested to be used in watertight bulkheads on passenger ships and Special Purpose Ships (SPS), the penetration system has to comply with the requirements given in SOLAS Ch. II-1 Reg. 13.2.3 (2009 issue). Penetrations passing through watertight bulkheads are subject for separate examination and approval by actual flag administration.

Type Approval documentation

Test reports No. MLM 020401 dated 25 March 2002 from DNV Malmö (screws), MLM020133 dated 26 February 2002 (steel pipes), MLM0504010 dated 20 May 2005 (Copper pipes) from DNV Malmø and No. SKM-04-4088 dated 16 June 2004 from DNV Stockholm.

Inspection report No. MLM 020408 dated 3 June 2002 from DNV Malmö.

Tests carried out

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

Place and date

Høvik, 2011-08-29

Rolf Emilsen
Surveyor
END OF CERTIFICATE