

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 the Kingdom 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: S-series (steel)

Issued to

Roxtec International AB
KARLSKRONA, Sweden

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,**

Annex A.1, item No. A.1/3.26a and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/9, IMO MSC/Circ.1276 and IMO 2010 FTP Code

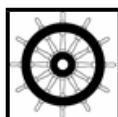
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-03-05**.

Issued at **Høvik** on **2017-03-06**

DNV GL local station:
Malmö

Approval Engineer:
Ivar Bull



Notified Body
No.: **0575**

for **DNV GL AS**

Vidar Dolonen
Head of Notified Body



Product description

"Roxtec sealing system with multidiameter technology: S-series (steel)"
consisting of Roxtec S-series steel frames (S, SO, SF, SFO, SR, SK, SRC r20, SRC r40 and SBTB) in sizes 1-8, and combinations thereof, bolted or welded to a steel section.

The S frame is filled with Roxtec (standard or EMC, PE, ES, BG, BGB) halogen free RM modules.
Assembled with Roxtec Wedge kit or Roxtec EMC Wedge kit.

For insulation see drawings mentioned under Type Examination documentation below.

Application/Limitation

Approved for use as single or multiple cable penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks for approved ship cables, inc. continuously welded aluminium clad cables (e.g. CLX type). Other applications are subject to case-by-case approval.

Deck or bulkhead to be insulated with approved insulation according to classification.
Partially insulated penetrations shall be insulated with insulation covering the sleeve.
See insulation drawings specified in the Type Examination documentation below.

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.

Maximum approved cable diameter: Ø 82 mm.

Type Examination documentation

Test reports:

No. 22N007.23C (A-60 bulkhead, bolted frames) dated 30 October 2005, from SINTEF, Norway
No. 22N007.16A (A-60 bulkhead) dated 25 January 2005, from SINTEF, Norway
No. 103070.13B (A-60 deck) dated 23 April 2002 from SINTEF, Norway
No. 103070.14B (A-60 bulkhead) dated 4 July 2002 from SINTEF, Norway
No. 103070.29B (A-60 deck) dated 28 October 2005 from SINTEF, Norway
No. PX05454(A-60 bulkhead, CLX type) dated 15 December 2010 from SP Sweden
No. PGA10024 (A-60 bulkhead BG,BGB) dated 21 December 2011 from DBI, Denmark
No. PGA10025 (A-60 deck BG, BGB) dated 22 December 2011 from DBI, Denmark
No. PGA10452 (A-60 steel deck) dated 2014-05-28 from DBI, Denmark
No. 4P07023 (A-60 steel deck) dated 2015-02-04 from SP, Sweden
No. 6P02249 (A-60 steel deck) dated 2016-08-17 from SP, Sweden
No. PGA 10871 A rev1 dated 2016-10-31 from DBI, Denmark
No. P701755 dated 2007-06-12 from SP, Sweden

Drawings: (All from from Roxtec International AB)

No. S1006195 Rev.B (A-0)
No. S1006193 Rev.B (A-15, A-30 and A-60 deck)
No. S1006194 Rev.C (A-15, A-30 and A-60 bulkhead)
No. S1022509 Rev.C (A-60 MC/CLX/TECH-type cables)

Tests carried out

Tested according to IMO FTPC Part 3 and in compliance with IMO 2010 FTP Code Ch. 8 and according to IMO 2010 FTP Code part 3.

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 if applicable (Page 1).

Appendix

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

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"Roxtec sealing system with multidiameter technology: S-series (steel)"
consisting of Roxtec S-series steel frames (S, SO, SF, SFO, SR, SK, SRC r20, SRC r40 and SBTB) in sizes 1-8, and combinations thereof, bolted or welded to a steel section.

The S frame is filled with Roxtec (standard or EMC, PE, ES, BG, BGB) halogen free RM modules.
Assembled with Roxtec Wedge kit or Roxtec EMC Wedge kit.

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.

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

Type Approval documentation

Test reports (MLM=DNVGL Malmö, SKM =DNVGL Stockholm)
No. MLM 020106 dated 2001-12-19,
No. MLM 020133 dated 2002-02-26
No. MLM 020408 (bolted) dated 2002-06-03
No. SKM-04-4088 dated 2004-06-16 (CLX cables)

Tests carried out

Pressure tests with water and helium according to DNVGL-CP-0165 Sec. 2 Ch. 4.