

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00001Y7
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: S-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 **2022-03-05.**

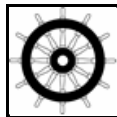
Issued at **Høvik** on **2018-01-09**

DNV GL local station:

Malmö

Approval Engineer:

Ivar Bull



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



Job Id: **344.1-000153-72**
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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 Ex, EMC, PE, ES, BG, BGB) halogen free RM modules.
Assembled with Roxtec Wedge kit or Roxtec EMC Wedge kit.

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.

A-0 penetrations in bulkheads and decks to be uninsulated.
A-15, A-30 and A-60 penetrations in decks to be partially insulated.
A-15, A-30 and A-60 penetrations in bulkheads to be partially insulated.
CLX-type cable penetrations to be fully insulated or fitted with extension frame.
For more details, 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 28 May 2014 from DBI, Denmark
No. 4P07023 (A-60 steel deck) dated 4 February 2015 from SP, Sweden
No. 6P02249 (A-60 steel deck) dated 17 August 2016 from SP, Sweden
No. PGA 10871A Rev.1 dated 31 October 2016 from DBI, Denmark
No. P701755 dated 12 June 2007 from SP, Sweden
No 09-344(E) dated 11 December 2009 from Japan Research Institute of Marine Engineering

Drawings: (All from Roxtec International AB)

No. S1006195 Rev.B (A-0 bulkhead and deck)
No. S1516823 Rev.B (A-15, A-30 and A-60 bulkhead)
No. S1006193 Rev.B (A-15, A-30 and A-60 deck)
No. S1022509 Rev.C (A-60 MC/CLX/TECH-type cables bulkhead and deck)

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.



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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).

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Appendix

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

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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.