

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB0000452
Revision No:
1

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

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

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 **MSN 1874 Amendment 9,**

item No. UK/3.26b. SOLAS 74 as amended, Regulation II-2/9, IMO MSC.1/Circ.1276, IMO 2010 FTP Code and IMO MSC.1/1488

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

This Certificate is valid until **2028-08-08**.

Issued at **London** on **2024-11-22**

DNV local unit:
Denmark CMC



for **DNV UK Ltd.**

Approval Engineer:
Karolina Kusmider

Approved Body No.: **0097**

Mydlak-Röder, Christine
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

“Roxtec sealing system with multidiameter technology: S-series (steel)” consists of Roxtec S-series frames with a depth of 60 mm (S, SF, SFHM, SO, SFO, SFOH, SR/T, SR/S, SRC r20, SRC r40, SRC r60) in size 2-6 and width 60-120, and combinations thereof up to x4, welded or bolted to the steel sections, to be used together with SE PPS extension frame. The extension frame is equipped with intumescent material strips. The S-series is filled with Roxtec halogen free RM modules (Standard RM, RM Ex). Assembled with Roxtec Wedge and corresponding stayplates.

Application/Limitation

Approved for use as single or multiple pipe penetration system in class A-0, A-15, A-30 and A-60 steel bulkheads and decks. Other applications are subject to case-by-case approval.

Approved for use in class A-0, A-15 and A-30 when the penetration system is insulated as A-60 and in addition the division is to be insulated with A-60 insulation at least 200 mm around the penetration.

Table 1 Approved pipe penetration in A-60 steel bulkhead

Frame type	Size	Pipe type	Pipe diameter (OD) [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation
S-series frames ¹⁾	2 - 6	PP, PE, PB, ABS	16 - 50	60	10	Symmetric	Partially insulated S1590856 No. 1

¹⁾ together with SE PPS extension frame with RM modules

Table 2 Approved pipe penetration in A-60 steel deck

Frame type	Size	Pipe type	Pipe diameter (OD) [mm]	Frame length [mm]	Frame thickness [mm]	Frame position	Frame insulation
S-series frames ¹⁾	2 – 6x4	PP, PE, PB, ABS	16 - 50	60	10	Symmetric, unexposed	Partially insulated S1590856; No. 2

¹⁾ together with SE PPS extension frame with RM modules

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

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

Type Examination documentation

Test report No. PGB10111A dated 20 September 2021 from DBI, Hvidovre, Denmark.

Test report No. PGB10112A dated 20 September 2021 from DBI, Hvidovre, Denmark.

Test report No. PGB10113A dated 23 July 2021 from DBI, Hvidovre, Denmark.

Drawing No. S1590856 Rev.A dated 11 April 2023 from manufacturer.

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 and address of manufacturer, type designation, fire-technical rating, Mark of Conformity (see first page).

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

Product description

"Roxtec sealing system with multidiameter technology: S-series (steel)"
consists of Roxtec S-series frames with a depth of 60 mm (S, SF, SFHM, SO, SFO, SFOH, SR/T, SR/S, SRC r20, SRC r40, SRC r60) in size 2-6 and width 60-120, and combinations thereof up to x4, welded or bolted to the steel sections, to be used together with SE PPS extension frame. The extension frame is equipped with intumescent material strips. The S-series is filled with Roxtec halogen free RM modules (Standard RM, RM Ex). Assembled with Roxtec Wedge and corresponding stayplates.

Application/Limitation

Approved for penetration of plastic pipes in steel bulkheads 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 not to be used for penetrating boundaries of tanks.

Type Approval documentation

Test report No. MLM 020401 dated 25 March 2002 from DNV Malmö (screws).

Test report No. SKM-04-4088 dated 16 June 2004 from DNV Stockholm.

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

Tests carried out

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