TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MERB00008WS
Revision No:
0

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: TB-series (Steel divisions)”

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 **2029-07-09**.

Issued at **London** on **2024-07-25**

for **DNV UK Ltd.**

DNV local unit:
Denmark CMC

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: TB-series (Steel divisions)"
Consisting of a steel sleeve welded into a steel division which is containing Roxtec rubber seals with two half circle metallic front fitting plates. These are locked into a groove in the sleeve and are fixed with four axial compression bolts. TB-sealing with multidiameter technology has peelable layers making the center adaptable to single pipe.

Application/Limitation

Approved for use as a single 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.

Class A-0, A-15 and A-30 shall be insulated as A-60 and in addition the division is to be insulated at least 200 mm around the penetration.

Table 1: Approved pipe penetration in A-60 steel bulkheads

Type	Size	Pipe material	Pipe diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
TB	65	Steel	8	90	5	Symmetric	Fully insulated + 310 mm along pipe on one side (S1601624 ID1)
TB	65 – 105	Steel	8 – 54	90	5 – 7	Symmetric	Fully insulated + 310 mm along pipe on one side (S1601624 ID2)

Table 2: Approved pipe penetration in A-60 steel decks

Type	Size	Pipe material	Pipe diameter [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Penetration insulation
TB	65 – 105	Steel	10 – 54	90	5 – 7	Symmetric	Fully insulated + 310 mm along pipe on the underside (S1601624 ID3)

The insulation materials used have 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. RS-22/B-153/E dated 4 May 2022 from CTO, Gdansk, Poland.
Test report No. RS-23/B-225/E dated 30 August 2023 from CTO, Gdansk, Poland.
Test report No. PGB10218A dated 10 July 2023 from DBI, Hvidovre, Denmark.

Drawing No. S1601624 Rev.B dated 5 July 2024 from maker.
Drawing No. S1601625 Rev.B dated 5 July 2024 from maker.

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, UK Mark of Conformity (see first page).

Appendix

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

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"Roxtec sealing system with multidiameter technology: TB-series (Steel divisions)"
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Application/Limitation

Approved for penetration in steel bulkheads or decks limited to a pressure of 11 bar watertightness (tested pressure 16.5 bar) and 2 bar gas tightness (tested pressure 3 bar).

Penetration systems are generally not to be used for penetrating boundaries of tanks. When a penetration system is requested for penetrating tanks, an approval may be given on a case-by-case basis.

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

Type Approval documentation

Statement No N141Z9F4 dated 2020-04-29 from DNV Sweden
Statement No N141ZEM3 dated 2020-05-15 from DNV Sweden

Tests carried out

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