EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MEDB00008FC

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 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)
WGS ES

issued to
Roxtec International AB
Karlskrona, Sweden

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2023/1667,**
item No. MED/3.26a. SOLAS 74 as amended, Regulation II-2/9, 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 **2029-04-22**.

Issued at **Høvik** on **2024-04-23**

DNV local unit:
Denmark CMC

Approval Engineer:
Marcin Tobiasz

Notified Body
No.: **0575**

for **DNV AS**

Digitally Signed By:
Tessa Biever
Location: DNV Høvik, Norway
on behalf of

Mydlak-Röder, Christine
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, and amended by Decision No 1/2023 dated August 21st, 2023.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Product description

"WGS ES"
is designed for routing non-metallic fiber optic cables into a shielded enclosure with maintaining the enclosure's electromagnetic integrity.
The Roxtec WGS ES are available in both welded and bolted version and could be installed with single, multiple or without any cables.

For more details, see drawings listed under Type Examination documentation below.

Application/Limitation

Approved for use as empty, single or multiple cable penetration system in A-60 steel bulkheads/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 cable penetration in A-60 steel bulkhead.

Size	Seal Type	Cable type	Max. cable diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation
25 - 70	WGS ES	Fiber optic	12	87 - 130	N/A	Either	Fully insulated. (S1590970 Rev. A)

Table 2: Approved cable penetration in A-60 steel deck.

Size	Seal Type	Cable type	Max. cable diameter (OD) [mm]	Sleeve length [mm]	Sleeve thickness [mm]	Sleeve position	Sleeve insulation
25 - 70	WGS ES	Fiber optic	12	87 - 130	N/A	Top side	Fully insulated. (S1590970 Rev. B)

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 Examination documentation

Test report No. PGB10174A dated 13 July 2022 from DBI, Hvidovre, Denmark.
Test report No. RS-22/B-338/E dated 28 October 2022 from CTO, Gdansk, Poland.

Drawing No. S1590970 Rev. A dated 25 April 2023 from maker.
Drawing No. S1574166 Rev. A dated 17 December 2021 from maker.
Drawing No. S1574122 Rev. A dated 17 December 2021 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, MED Mark of Conformity and USCG approval number if applicable (see first page).

Appendix

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

Product description

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is designed for routing non-metallic fiber optic cables into a shielded enclosure with maintaining the enclosure's electromagnetic integrity.
The Roxtec WGS ES are available in both welded and bolted version and could be installed with single, multiple or without any cables.

Application/Limitation

Approved for penetration in steel bulkheads or decks limited to a pressure of 2.5 bar watertightness and 0.67 bar gastightness.

For bolted versions the pressure are limited to 1 bar watertightness and 0.67 bar gastightness.

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

Type Examination documentation

Test report No. N142G51R dated 11 November 2022 from DNV, Sweden.
Test report No. N142G5DF dated 14 November 2022 from DNV, Sweden.
Test report No. N142VRRD dated 29 February 2024 from DNV, Sweden.

Tests carried out

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