



CERTIFICATE OF FIRE APPROVAL


This is to certify that

The product detailed below will be accepted for compliance with the applicable Lloyd's Register Rules and Regulations and with the International Convention for the Safety of Life at Sea, (SOLAS), 1974, as amended, for use on ships and offshore installations classed with Lloyd's Register, and for use on ships and offshore installations when authorised by contracting governments to issue the relevant certificates, licences, permits etc.

Manufacturer	Roxtec International AB
Address	Box 540 S-371 23 Karlskrona Sweden
Type	CABLE PENETRATION (STANDARD FIRE TEST)
Description	Fire Resisting Single/Multiple Cable Penetrations – Type: "R-Series" for applications in aluminium bulkheads and decks
Specified Standard	IMO Res. MSC.61 (67)- (FTP Code) Annex 1 Part 3 IMO MSC/Circ.1120 IMO Res. MSC.307 (88)-(2010 FTP Code) Section 8

The attached Design Appraisal Document forms part of this certificate.

This certificate remains valid unless cancelled or revoked, provided the conditions in the attached Design Appraisal Document are complied with and the equipment remains satisfactory in service.

Date of issue	15 December 2015	Expiry date	14 December 2020
Certificate No.	SAS F160064	Signed	
Sheet No	1 of 3	Name	B. Geary Surveyor to Lloyd's Register EMEA A Member of the Lloyd's Register Group

Note:

This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Lloyd's Register of any modification or changes to the equipment in order to obtain a valid Certificate.

Lloyd's Register Group Limited, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.



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DESIGN APPRAISAL DOCUMENT

Date	Quote this reference on all future communications
12 February 2016	MTES/SFS/TA/BG/WP24838242

ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F160064

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

Norwegian Fire Research Laboratory (SINTEF), Trondheim, Norway, Test Report No. 103070.33A, dated 15 November 2004.

SP Swedish National Testing and Research Institute (SP), Boras, Sweden, Test Report No. P403634, dated 30 December 2004 and No: PG11898 dated 17 April 2009.

CONDITIONS OF CERTIFICATION

1. When used in conjunction A-60 aluminium bulkheads and decks with approved insulation arrangements. Aluminium bulkheads and decks in all cases must be insulated with an approved system to prevent the core temperature exceeding 200°C and all penetrations fitted to such divisions must also be insulated with either the same system or another approved A-60 system.
2. For all applications, an additional A-60 insulation collar is to be fitted for a minimum distance of 200mm around the cable penetration (in addition to any insulation on penetration and cables), on the fire exposed side (underside) of the decks and on all fire risk sides of bulkheads and insulation should be extended to cover the full side(s) and the face(s) of the steel frame, with an overlap of at least 20mm
3. Penetration seals consist of: Roxtec mild steel or aluminium sleeves type: SLX R (55mm deep, 5.6mm to 8.8mm thick), with "R" Rubber seal frames which hold the 60mm thick RM modules. The aluminium and steel sleeves are to be welded and bolted to the aluminium divisions respectively and fully insulated as described in condition no: 2 above
4. Tested Roxtec Rubber Seal Frame types: R and R EMC
5. Tested steel or aluminium sleeve/frame sizes: SLX R 70 up to SLX R 200
6. Production items are to be manufactured in accordance with a quality control system which shall be maintained to ensure that items are of the same standard as the approved prototype

NOTE

The penetration seals were subjected to a gastight pressure at 4 bar for 30 minutes with no leakage and a hydrostatic pressure of 6 bar for a period of 30 minutes as detailed in report No. MLM020106.



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PLACE OF PRODUCTION

Roxtec International AB
Box 540
371 23 Karlskrona
Sweden



Ben Geary
Technical Manager
Statutory Fire & Safety
Marine Technology and Engineering Services
Lloyd's Register EMEA

Supplementary Type Approval Terms and Conditions

This certificate and Design Appraisal Document relates to type approval, it certifies that the prototype(s) of the product(s) referred to herein has/have been found to meet the applicable design criteria for the use specified herein, it does not mean or imply approval for any other use, nor approval of any products designed or manufactured otherwise than in strict conformity with the said prototype(s).