



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	PIPE PENETRATION (STANDARD FIRE TEST)
Description	Fire Resisting Plastic Pipe Penetration Seals - Type: "PPSE Series" for aluminium bulkhead and deck applications
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 F160065	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.



Page	2 of 3
Document number	SAS F160065
Issue number	1

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 F160065

This Design Appraisal Document forms part of the Certificate.

APPROVAL DOCUMENTATION

SP Swedish National Testing and Research Institute (SP), Boras, Sweden, Test Report Nos. P403634, dated 30 December 2004 and P501943, dated 18 May 2005.

Roxtec Drawing No. S1007932.

CONDITIONS OF CERTIFICATION

1. When used in conjunction A-60 aluminium bulkheads and decks with approved insulation arrangements as tested. 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. Frame sizes: 2-6 and combinations up to x 4
3. For use with polypropylene (PP), polyvinylidene fluoride (PVDF), Acrylonitrile Butadiene Styrene (ABS) and PVC pipe diameters: 16mm - 50mm
4. The PPSE seal system consists of plastic pipes fitted in Roxtec RM Modules in an aluminium transit frame. A steel PPS extension frame is fitted either side (on the underside only for decks) of a penetration seal. The extension frame incorporates 4/5 layers of 25mm x 2mm Kuhn roku intumescent strips
5. In all cases, the bulkhead/deck insulation must be extended at least 20mm to fully cover the face of the aluminium sleeve on both sides in a bulkhead and at least on the fire exposed side (underside) in decks, in order to prevent the ingress of heat along the sleeve to the aluminium division
6. Restricted for applications in aluminium decks with the aluminium sleeve fitted to the non-fire exposed side (topside) aluminium decks. No restrictions with regard to the positions of penetrations are applicable for aluminium bulkhead applications
7. 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



Lloyd's
Register

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Page	3 of 3
Document number	SAS F160065
Issue number	1

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PLACE OF PRODUCTION

Roxtec International AB
PO Box 540
S-37123 Karlskona
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).