



## 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.

<b>Manufacturer</b>	Roxtec International AB
<b>Address</b>	Box 540 S-371 23 Karlskrona Sweden
<b>Type</b>	<b>PIPE PENETRATION (STANDARD FIRE TEST)</b>
<b>Description</b>	Fire Resisting Pipe Penetration Seals – Type: “RS and RS OMD” for applications in Aluminium Bulkheads and Decks
<b>Specified Standard</b>	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 F160063	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 12 February 2016	Quote this reference on all future communications MTES/SFS/TA/BG/WP24838242
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### ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. SAS F160063

This Design Appraisal Document forms part of the Certificate.

#### APPROVAL DOCUMENTATION

SINTEF Norwegian Fire Research Laboratory, Fire Test Report Nos. 103070.03B and 103070.03A both dated 15 March 2001, No: 103070.33A dated 15 November 2004; SP Fire Test Laboratory, Boras, Sweden, Fire Test Report No. P403634, dated 30 December 2004.

Roxtec drawings no: S1002247 Rev. A dated 11 March 2011, S1002249 Rev. B dated 11 March 2011 and S1007913 dated 24 May 2005.

#### 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 an approved A-60 system
2. Insulation arrangements for penetrations in aluminium divisions are to be in accordance with Roxtec drawings no: S1002247 Rev. A dated 11 March 2011, S1002249 Rev B dated 11 March 2011 and S1007913 dated 24 May 2005
3. Consists of: Roxtec Seal frame types: RS/RS OMD in sizes 23 to 150, fitted around pipes and enclosed in types: SLRS/SLXRS sleeves made of steel or aluminium that are bolted or welded to the aluminium division respectively. For deck applications, aluminium sleeves are to be fitted to the topside (non-fire exposed side) of the deck in all cases
4. Permissible copper pipe outside diameter range: 10mm to 118mm
5. Permissible steel pipe outside diameter range: 10mm to 114mm
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

#### NOTES

A Type RS-23/OMD and Type RS-150/OMD pipe penetrations were subjected to a hydrostatic test (6 bar) and gas-tightness test (4 bar) for 30 minutes without any leakage, as witnessed by an IACS Surveyor and as indicated in DNV Certificate No. MLM 020106 dated 19 December 2001.



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Register

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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).*