



## 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>	<b>Rockwool International A/S</b>
<b>Address</b>	Hovedgaden 501, 2640 Hedehusene, Denmark
<b>Type</b>	A-60 Bulkhead
<b>Description</b>	Fire Resisting 'A' Class Bulkhead – Type: “A60 Bulkhead SeaRox FB 6040 / SeaRox FB 6050” steel bulkhead insulated on stiffened side with two types of rockwool insulation materials
<b>Trade Name</b>	“A60 Bulkhead SeaRox FB 6040 / SeaRox FB 6050”
<b>Specified Standard</b>	IMO Res. MSC.307(88) - (2010FTP Code) Annex 1 Part 3 IMO MSC.1/Circ.1435

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 North America, Inc. of any modification or changes to the equipment in order to obtain a valid Certificate.

The Design Appraisal Document and its supplementary Type Approval Terms and Conditions form 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.

**Bruce McDonald**

Technical Authority - Statutory to Lloyd's Register North America, Inc.  
A member of the Lloyd's Register group

1330 Enclave Parkway, Houston, Texas, 77077,  
United States

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**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR23133044SF**

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions, and this Design Appraisal Document forms part of the Certificate.

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This Certificate is a Renewal of Certificate Number SAS F170065.

**APPROVAL DOCUMENTATION**

Rockwool Technical Insulation Drawing No. R-010, dated 2015-04-09.

**TEST REPORTS**

Danish Institute of Fire and Security Technology, Jernholmen 12, DK-2650 Hvidovre, Denmark; Test Report No. PGA10661 dated 4<sup>th</sup> June 2015

**CONDITIONS OF CERTIFICATION**

1. When used in conjunction with an approved A Class bulkhead.
2. A-60 steel bulkhead insulation system 'A60 Bulkhead SeaRox FM 6040 / SeaRox FB 6050' consisting of: steel bulkhead insulated on stiffened side with one layer of rockwool insulation "SeaRox FB 6040" (70mm thick, 60 kg/m<sup>3</sup> density), manufactured by Rockwool Technical Insulation, applied on the steel plate, stiffeners insulated with two layers of rockwool insulation "SeaRox FB 6050" (30mm thick, 70kg/m<sup>3</sup> density) inside stiffeners and one layer of rockwool insulation "SeaRox FB 6050" (30mm thick, 70kg/m<sup>3</sup> density) surrounding the outside of the stiffener with 3 strips (parallel to stiffener side and top) of 65mm, 125mm and 65mm width. Total thickness of the insulation is 70mm.
3. Insulation on the steel plate retained by 3mm diameter steel pins and 30mm diameter washers at maximum 300mm horizontal, 500mm staggered vertical, 300mm diagonal centres and 150mm from insulation joints with 2 pin rows, 100mm from insulation joints with 1 pin rows. Insulation strip mounted on external face of stiffener parallel to bulkhead face retained with steel pins and washers at 300mm centres, and maximum distance from the insulation joint is 275mm.
4. Maximum width of insulation blankets following installation: 1000mm.
5. Insulation fixing method should be same as tested arrangement in all cases.
6. Composition and application of insulation material to be maintained in production and use in accordance with originally tested composition formula and method of application, and manufacturer's instructions.
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.



**DESIGN APPRAISAL DOCUMENT**

**ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR23133044SF**

8. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products, whether manufactured by themselves or their licensee manufacturers, if agreed by Lloyd's Register, are fully compliant with the relevant statutory regulations and Lloyd's Register Class rules as applicable and designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties.

**PLACES OF PRODUCTION**

<b>Rockwool A/S</b>	<b>Roxul Asia Sdn. Bhd.</b>	<b>Rockwool Hungary</b>
Moss	75450 Melaka	8300 Tapolca
Trondheim	Malaysia	Hungary
Norway		
<b>Rockwool BV</b>	<b>Rockwool Peninsular S.A.U.</b>	<b>Rockwool a.s.</b>
NL-6045 JG Roermond	E-31380 Caparroso	735 31 Bohumin 3
The Netherlands	Spain	Czech Republic
<b>Rockwool Ltd</b>	<b>Roxul Rockwool Insulation India Pvt. Ltd.</b>	<b>Deutsche Rockwool GmbH &amp; Co. OHG</b>
Pencoed	Plot - Z/4, Dahej SEZ, Dahej	Ruhrstrasse 13
Bridgend	District Bharuch - 392 130	DE-86633
Wales, CF35 6NY	Gujarat	Neuburg a.d. Donau
United Kingdom	India	Germany
<b>Rockwool A/S</b>	<b>Rockwool A/S</b>	
Rockwoolvej	Industrivej	
Ø Doense	DK-6580 Vamdrup	
DK-9500 Hobro	Denmark	
Denmark		

*Bruce McDonald*

Bruce McDonald  
 Technical Authority-Statutory  
 Lloyd's Register Americas

**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)*

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