



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	Saint-Gobain ISOVER G+H AG
Address	Buergermeister-Gruenzweig-Strasse 1, D-67059 Ludwigshafen, Germany
Type	A-30 Bulkhead
Description	Fire Resisting 'A' Class Aluminium Bulkhead – Restricted Application – Type “U SeaProtect 66”
Trade Name	“U Seaprotect 66 – A-30 4MM Aluminium Bulkhead”
Specified Standard	IMO Res. MSC.307(88) – (2010 FTP 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 EMEA 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.

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Keith Taylor

Technical Safety, Electrical & Control Team
Lead to Lloyd's Register EMEA
A member of the Lloyd's Register group

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ATTACHMENT TO CERTIFICATE OF TYPE APPROVAL No. LR23165765SF

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.

This Design Appraisal Document forms part of the Certificate.

This Certificate Supersedes and is a Renewal of Certificate Number: SAS F170259

APPROVAL DOCUMENTATION

1. Danish Institute of Fire and Security Technology, DBI; Jernholmen 12, DK-2650 Hvidovre, Denmark. Fire Test Report No PGA11048A dated 20th July 2017 & Fire Test Report Supplement PGA11048A.

CONDITIONS OF CERTIFICATION

1. Bulkhead shall be constructed of aluminium insulated on the stiffened side on the plating and around stiffeners with one layer of "ISOVER U SeaProtect Slab 66" mineral wool produced by SAINT-GOBAIN ISOVER G+H AG (Nominal Thickness 50mm, Nominal Density 66kg/m³). Inside the cavity of the stiffeners two layers of "ISOVER U SeaProtect 66" mineral wool shall be applied. The insulation was fixed to the plating 3mm aluminium-tipped steel pins & 38mm steel washers with horizontal & vertical centres not exceeding 300mm or 150mm from insulation joints. Arrangement of steel pins on the plates shall be in accordance with the referenced fire test reports and supplement to fire test report.
2. Approved for Restricted Application where the fire hazard has been identified as being from the insulated side only.
3. The insulation system was tested on a 4mm aluminium core and met all insulation and integrity criteria for a aluminium bulkhead of required fire rating; therefore, it could be considered for use as an aluminium bulkhead of a thickness of 4mm or greater.
4. 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.
5. The Certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products 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.



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Places of Production

Saint-Gobain ISOVER G+H AG Plant Luebz
Industriestrasse 1
D-19386 Luebz
Germany

Keith Taylor
Team Lead - Technical Safety, Electrical & Control
Global Technical Support Office, Marine & Offshore
Lloyd's Register

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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