

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)
Steel Bulkhead A-120

Issued to

Saint-Gobain Isover G+H AG
Ludwigshafen am Rhein, Rheinland-Pfalz, Germany

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP
Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434

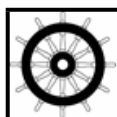
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2023-06-24**.

Issued at **Hamburg** on **2018-06-25**

DNV GL local station:
Augsburg

Approval Engineer:
Timo Linn



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudzus
Head of Notified Body

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F), as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



Product description

"Steel Bulkhead A-120"

The "Steel Bulkhead A-120" consisting of a 4.5 mm steel deck suitable stiffened.

Insulation deck:

The steel plate was insulated with one layer of 100 mm thick Ultimate U SeaProtect Slab 56, (Density: 56 kg/m³). The distance from the joints to the pins on the surface insulation was approx. 150 mm on both sides of the joint. All the insulation slabs were mounted tightly together along the joints.

Insulation stiffeners:

The cavity inside the stiffeners was filled out with one layer of compressed 70 mm thick Ultimate U SeaProtect Slab 56, (Density: 56 kg/m³). The stiffeners were insulated with 70 mm thick Ultimate U SeaProtect Slab 56, slabs were mounted along the sides of the stiffeners.

The insulation was kept in place by the slabs mounted on the steel plate between the stiffeners.

The outer flange was insulated with 70 mm thick Ultimate U SeaProtect Slab 56.

Fixing:

The insulation was fixed to the steel core using steel pins and washers:

- ø 3 mm steel pins, c/c horizontal = 300 mm
- c/c vertical = 300 mm
- ø 38 mm steel washers to secure the insulation.

The pins on the surface were mounted with a distance of approx. 150 mm from the insulation joints on both sides.

The pins on the stiffener flange were mounted directly in the insulation joints

Insulation materials:

ISOVER U SeaProtect Slab 56

Manufacturer: Saint-Gobain Isover G+H AG;

Density: 56 kg/m³

For further details, including spacing of welded pins and pinning in connection with joints, see test report listed under Type Approval documentation below.

Application/Limitation

Approved for use as a vertical fire retarding division of Class A-60.

The bulkhead has been successfully tested for extended test period of 120 minutes.

A-60 steel bulkhead approved for "general application".

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

Each product is to be supplied with its manual for installation and use.

Type Examination documentation

Test report No. PGA11201A dated 13th of March 2018 from DBI (Danish Institute of Fire and Security Technology).

Drawing No. AK2401 dated 2018-02-16 issued by SAINT-GOBAIN ISOVER

Tests carried out

IMO Resolution MSC.307(88) – 2010 FTP Code Annex 1, Part 3



Job Id: **344.1-008171-1**
Certificate No: **MEDB0000434**

Marking of product

This product has been assigned a U.S. Coast Guard Module B number 164.107/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004.