

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)

A-60 Steel Corrugated Bulkhead – 4.5 mm – U SP 56 / 70

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) 2017/306,**

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 **2022-04-26**.

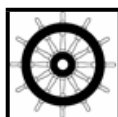
Issued at **Hamburg** on **2017-04-27**

DNV GL local station:

Augsburg

Approval Engineer:

Timo Linn



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudsus
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Job Id: **344.1-006208-2**
Certificate No: **MEDB00002TH**

Product description

"A-60 Steel Corrugated Bulkhead – 4.5 mm – U SP 56 / 70"

The A-60 bulkhead consisted of a 4,5 mm thick corrugated steel plate (distance between flanks 105mm), insulated with two layers of mineral wool slabs mounted from one side between and on top of the corrugated profile as follows:

One layer of 100 mm thick ISOVER U SeaProtect 56 slabs were formed to fit inside at the bottom of the corrugated profile. The second layer consisted of 70 mm thick ISOVER U Sea Protect 56 slabs mounted to cover the top of the corrugated profile.

Total thickness of bulkhead: 175mm

The insulation was mounted at the unexposed side of the test specimen.

The insulation was fixed to the corrugated steel plate with one row of Ø 3 mm steel pins and Ø 38 mm steel washers. The pins were positioned with a distance of 300 mm vertically and 150 mm horizontally at the bottom of the corrugated profile.

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

Insulation materials:

ISOVER U SeaProtect 56

Manufacturer: Saint-Gobain Isover G+H AG;

Nominal Density: 56 kg/m³

Application/Limitation

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

A-60 steel bulkead 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. PGA10840A dated 09 June 2016 from DBI (Danish Institute of Fire and Security Technology).

Tests carried out

IMO Res. MSC.307 (88) - (2010 FTP Code), Part 3

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire technical rating, MED Mark of Conformity and USCG approval number if applicable (see first page).