

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00003HE**  
Revision No:  
**6**

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 & B Class divisions fire integrity: A class divisions.**

with type designation(s)  
**Class A-60 steel bulkhead - general application**

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) 2022/1157,  
**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.1434,1435; IMO MSC.1/Circ.1616, 1621**

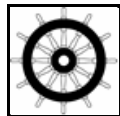
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2028-03-19**.

Issued at **Hamburg** on **2023-03-20**

DNV local unit:  
**Essen**

Approval Engineer:  
**Tessa Bieber**



Notified Body  
No.: **0098**

for **DNV GL SE**

**Christine Mydlak-Roeder**  
**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) 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 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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



## Product description

“Class A-60 steel bulkhead - general application”

Steel bulkheads with different insulation constructions as listed in enclosed Appendices.

## Application/Limitation

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

For further details regarding Applications/Limitations see Appendix A.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the MED 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 maintenance.

## Type Examination documentation

Test report No. PGA11203A dated 19 March 2018 from DBI, Hvidovre, Denmark.

Test report No. PGA11096A dated 12 October 2017 from DBI, Hvidovre, Denmark.

Test report No. PGA10226 dated 7 March 2013 from DBI, Hvidovre, Denmark.

Test report No. PGA10223 dated 23 July 2013 from DBI, Hvidovre, Denmark.

Test report No. PGA10454 dated 21 July 2014 from DBI, Hvidovre, Denmark.

Test report No. PHA11121A dated 8 October 2018 from DBI, Hvidovre, Denmark\*.

\*With assessment no. PHA11121A the validity of technical assessments nos. PHA10498c, PHA10498d, PHA10498e, PHA10498f and PHA10498g is prolonged and extended to cover test report no. PGA11203A)

Assessment report Nos.:

- PHA10498a Rev.2 (use of mats instead of slabs) dated 15 January 2020 from DBI, Hvidovre, Denmark (expires 31 January 2025).
- PHA10498b (alternative insulation on stiffeners) dated 09 December 2019 from DBI, Hvidovre, Denmark (expires 31 January 2024).
- PHA10498c (minimum thickness and density) dated 16 December 2019 from DBI, Hvidovre, Denmark (31 January 2024).
- PHA10498d (position of joints) dated 27 March 2020 from DBI, Hvidovre, Denmark (expires 31 January 2025).
- PHA10498e Rev.3 (mounting methods for insulation on stiffeners) dated 03 January 2022 from DBI, Hvidovre, Denmark (expires 3 January 2027).
- PHA10498f (washers diameters 30mm) dated 16 December 2019 from DBI, Hvidovre, Denmark (expires 31 January 2024).
- PHA10498g (pin pattern) dated 15 January 2020 from DBI, Hvidovre, Denmark (expires 31 January 2025).

Drawing No. AK2304 (4 pages) dated 11 December 2014 from SAINT-GOBAIN ISOVER G+H AG.

Drawing No. AK2400 dated 27 February 2018 from SAINT-GOBAIN ISOVER G+H AG.

## Tests carried out

Tested according to IMO 2010 FTP Code Part 3.

## Marking of product

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

**Appendix A to MEDB00003HE**  
**Alternative constructions:**

	Product Description	Application / Limitations	Type Examination Documentation
1	<p><b>“U SeaProtect 56/70 + 56/30”</b>            Composed of a stiffened steel bulkhead insulated on stiffened side with min. 70 mm mineral wool of type ‘U SeaProtect 56’ with density 56 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 30 mm ‘U SeaProtect 56’ is fitted around the stiffeners.</p> <p>The cavity of the stiffeners is fully filled with ‘U SeaProtect 56’.</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p> <p>See drawing in Appendix B for further details.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p>General application:            Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report no. PGA10223</p> <p>Assessment report Nos.:            PHA10498c            PHA10498d            PHA10498e Rev.3            PHA10498f            PHA10498g</p> <p>Drawing no. AK2304</p>
2	<p><b>“U SeaProtect 56/70 + 76/20”</b>            Composed of a stiffened steel bulkhead insulated on stiffened side with min. 70 mm mineral wool of type ‘U SeaProtect 56’ with density 56 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 20 mm ‘U SeaProtect 76’ with density 76 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.</p> <p>The cavity of the stiffeners is fully filled with ‘U SeaProtect 56’.</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p> <p>See drawing in Appendix B for further details.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p>General application:            Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report no. PGA10223</p> <p>Assessment report Nos.:            PHA10498b            PHA10498c            PHA10498d            PHA10498e Rev.3            PHA10498f            PHA10498g</p> <p>Drawing no. AK2304</p>
3	<p><b>“U SeaProtect 86/50 + 76/25”</b>            Composed of a stiffened steel bulkhead insulated on stiffened side with min. 50 mm mineral wool of type ‘U SeaProtect 86’ with density 86 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 25 mm ‘U SeaProtect 76’ with density 76 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.</p> <p>The cavity of the stiffeners is fully filled with ‘U SeaProtect 76’</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p> <p>See drawing in Appendix B for further details.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p>General application:            Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report no. PGA10454</p> <p>Assessment report Nos.:            PHA10498b            PHA10498c            PHA10498d            PHA10498e Rev.3            PHA10498g</p> <p>Drawing no. AK2304</p>

4	<p><b>“U SeaProtect 46/30 both sides + 46/30”</b>          Composed of a stiffened steel bulkhead insulated on stiffened side with min. 30 mm mineral wool of type ‘U SeaProtect 46’ with density 46 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 30 mm ‘U SeaProtect 46’ is fitted around the stiffeners.</p> <p>The cavity of the stiffeners is fully filled with ‘U SeaProtect 46’.</p> <p>In addition the bulkhead is insulated with min. 30 mm ‘U SeaProtect 46’ on non-stiffened side.</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p> <p>See drawing in Appendix B for further details.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p>General application:          Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report no. PGA10226</p> <p>Assessment report Nos.:          PHA10498c          PHA10498d          PHA10498e Rev.3          PHA10498f          PHA10498g</p> <p>Drawing no. AK2304</p>
5	<p><b>“U SeaProtect 56/60 + 76/20”</b>          Composed of a stiffened steel bulkhead insulated on stiffened side with min. 60 mm mineral wool type ‘U SeaProtect 56’ with density 56 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 20 mm ‘U SeaProtect 76’ with density 76 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p><b>Approved for use as a A-60 Class Bulkhead.</b></p> <p>General application:          Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report PGA11096A</p> <p>Assessment report Nos.:          PHA10498b          PHA10498c          PHA10498d          PHA10498e Rev.3          PHA10498f          PHA10498g</p> <p>Drawing no. AK2304</p>
6	<p><b>“U SeaProtect 50/60 + 76/20”</b>          Composed of a stiffened steel bulkhead insulated on stiffened side with min. 60 mm mineral wool type ‘U SeaProtect 50’ with density 50 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 20 mm ‘U SeaProtect 76’ with density 76 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p><b>Approved for use as a A-60 Class Bulkhead.</b></p> <p>General application:          Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report PGA11203A</p> <p>ISOVER U SeaProtect Slab 50 may be applied in form of mats instead of slabs acc. to assessment no. PHA10498a Rev.2</p> <p>Alternative arrangements acc. to assessment no. PHA1121A (with reference to further assessments as stated below):          PHA10498c          PHA10498d          PHA10498e Rev.3          PHA10498f          PHA10498g</p> <p>Drawing no. AK2400</p>
7	<p><b>“U SeaProtect 56/60 + 56/30”</b>          Composed of a stiffened steel bulkhead insulated on stiffened side with min. 60 mm mineral wool type ‘U SeaProtect 56’ with density 56 kg/m<sup>3</sup> from SAINT-GOBAIN ISOVER G+H AG.</p> <p>Min. 30 mm ‘U SeaProtect 56’ with density 56 kg/m<sup>3</sup> is fitted around the stiffeners.</p> <p>The insulation is fixed with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p><b>Approved for use as a A-60 Class Bulkhead.</b></p> <p>General application:          Fire against either side.</p> <p>Insulation of same type ‘U SeaProtect’ from SAINT-GOBAIN ISOVER G+H A with density up to 86 kg/m<sup>3</sup> may be used.</p>	<p>Test report PGA11096A.</p> <p>Assessment report Nos.:          PHA10498b          PHA10498c          PHA10498d          PHA10498e Rev.3          PHA10498f          PHA10498g</p> <p>Drawing no. AK2304</p>

Appendix B to MEDB00003HE

