

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00006FW
Revision No:
1

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-30

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) 2019/1397,**

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, IMO MSC.1/Circ.1435.

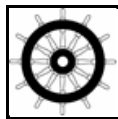
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2025-02-05**.

Issued at **Hamburg** on **2020-06-25**

DNV GL local station:
Augsburg

Approval Engineer:
Timo Linn



Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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, and amended by Decision No 1/2018 dated February 18th, 2019.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV GL AS, its parent companies and subsidiaries as well as their officers, directors and employees ("DNV GL") 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.



Job Id: **344.1-004262-23**
Certificate No: **MEDB00006FW**
Revision No: **1**

Product description

"Steel Bulkhead A-30"

Steel bulkheads with different insulation constructions are listed in the enclosed appendix.

Application/Limitation

Approved for use as vertical fire retarding division of class A-30. Applications/Limitations see Appendix.

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 maintenance.

Type Examination documentation

Test report nos. PGA10386 dated 20 January 2014, PGA10384 dated 17 January 2014, PGA10227 dated 10th of December 2018, all from Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

Assessment report nos.:

PHA10498d (position of joints) dated 27 March 2020,
PHA10498b (alternative insulation on stiffeners) dated 09 December 2019,
PHA10498a (insulation change from slabs to rolls) dated 15 January 2020,
PHA10498c (minimum thickness and density) dated 16 December 2019,
PHA10498e (mounting methods for insulation on stiffeners) dated 21 June 2016,
PHA10498f (washer diameter 30mm) dated 16 December 2019,
PHA10498g (pin pattern) dated 15 January 2020.
All from Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

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

Certificate has been renewed based on the MED B Certificate MED-B-9333.

Tests carried out

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

USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.108/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 and amended by Decision No.1/2018 dated February 18th, 2019.

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, MED Mark of Conformity (see page 1) and USCG approval number, if applicable.

Job Id: **344.1-004262-23**
 Certificate No: **MEDB00006FW**
 Revision No: **1**

Appendix A Rev. No. 0 to MEDB00006FW

Alternative constructions:

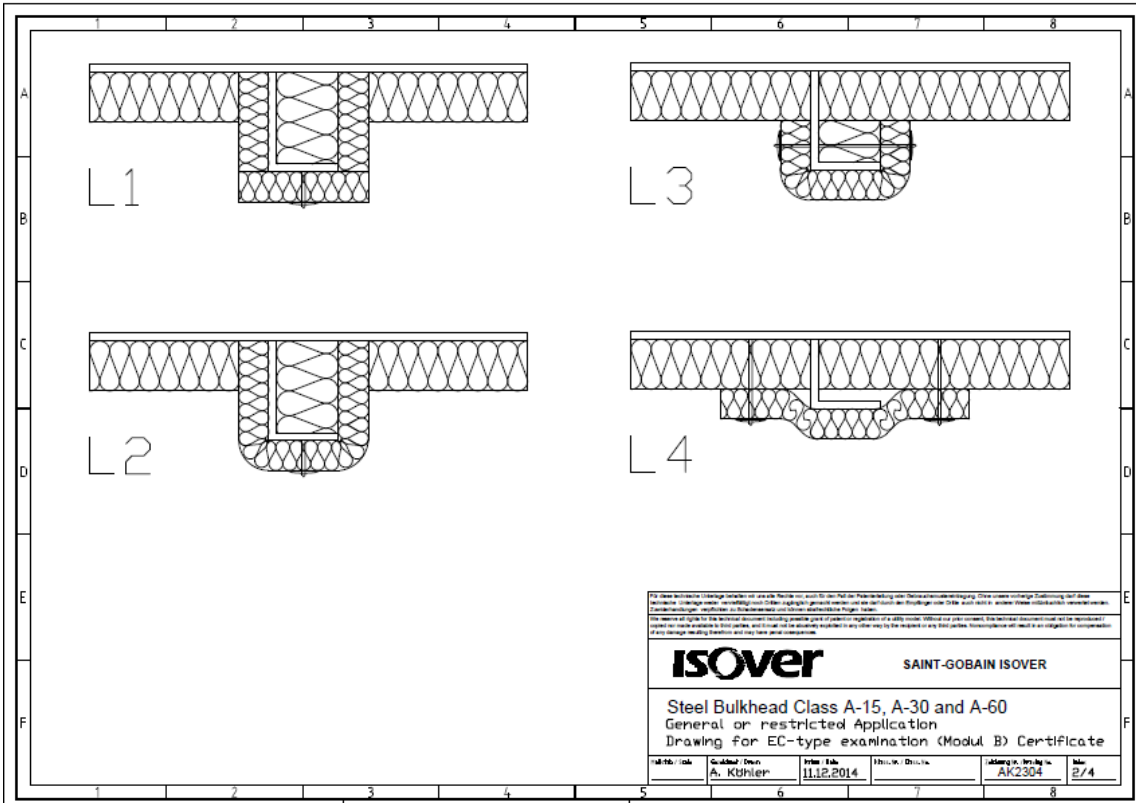
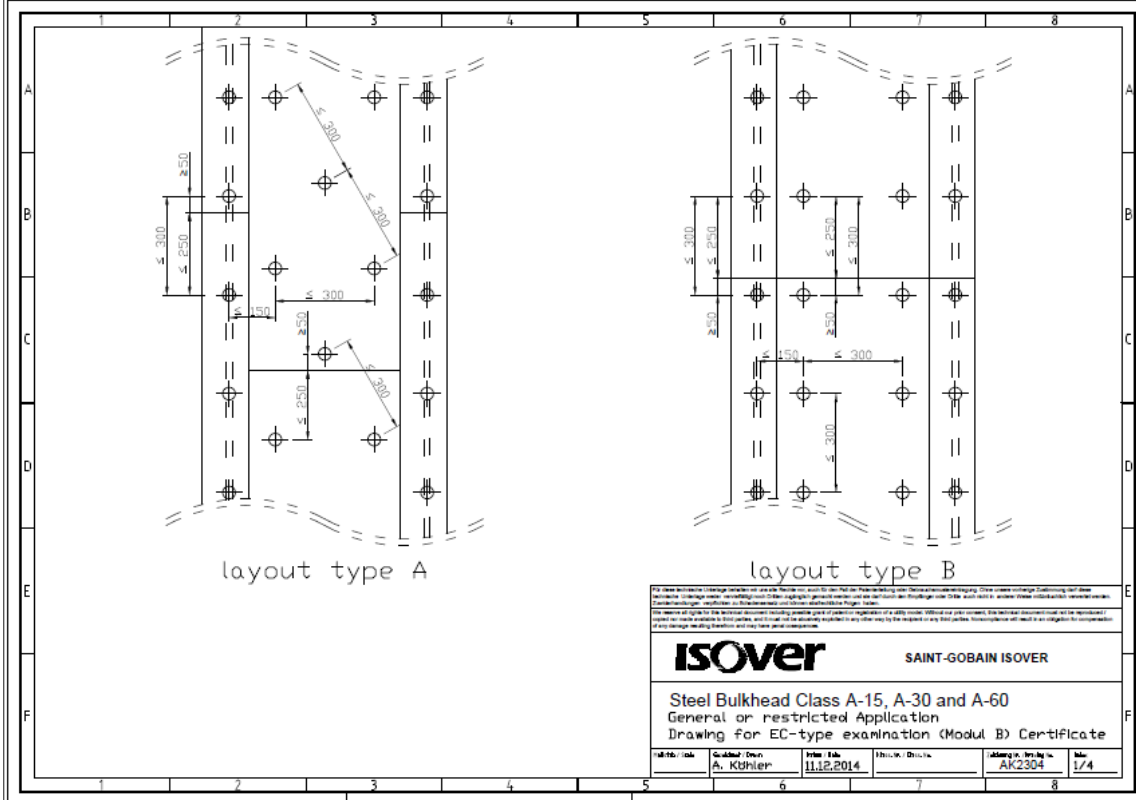
	Product Description	Application / Limitations	Type Examination Documentation
1	<p>"U SeaProtect 36/70 + 76/20" Composed of a stiffened steel bulkhead insulated on stiffened side with min. 70 mm mineral wool of type U SeaProtect 36 (density 36 kg/m³) from SAINT-GOBAIN ISOVER G+H AG. Min. 20 mm U SeaProtect 76 (density 76 kg/m³) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners. Insulation (U SeaProtect) is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten 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>Approved for use as a Class A-30 Bulkhead.</p> <p>General application: Fire against either side.</p> <p>Insulation of same type (U SeaProtect from SAINT-GOBAIN ISOVER G+H AG) with density up to 86 kg/m³ may be used.</p>	<p>Test report no. PGA10384</p> <p>Assessment report nos. PHA10498b (alternative insulation on stiffeners) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2304</p>
2	<p>"U SeaProtect 36/70 + 36/70" Composed of a stiffened steel bulkhead insulated on stiffened side with min. 70 mm mineral wool of type U SeaProtect 36 (density 36 kg/m³) from SAINT-GOBAIN ISOVER G+H AG. Min. 70 mm U SeaProtect 36 is fitted around the stiffeners. Insulation (U SeaProtect 36) is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten 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>Approved for use as a Class A-30 Bulkhead.</p> <p>General application: Fire against either side.</p> <p>Insulation of same type (U SeaProtect from SAINT-GOBAIN ISOVER G+H AG) with density up to 86 kg/m³ may be used.</p>	<p>Test report no. PGA10384</p> <p>Assessment report nos. PHA10498b (alternative insulation on stiffeners) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2304</p>
3	<p>"U SeaProtect 36/70 + 56/30" Composed of a stiffened steel bulkhead insulated on stiffened side with min. 70 mm mineral wool of type U SeaProtect 36 (density 36 kg/m³) from SAINT-GOBAIN ISOVER G+H AG. Min. 30 mm U SeaProtect 56 (density 56 kg/m³) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners. Insulation (U SeaProtect) is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten 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>Approved for use as a Class A-30 Bulkhead.</p> <p>General application: Fire against either side.</p> <p>Insulation of same type (U SeaProtect from SAINT-GOBAIN ISOVER G+H AG) with density up to 86 kg/m³ may be used.</p>	<p>Test report no. PGA10384</p> <p>Assessment report nos. PHA10498b (alternative insulation on stiffeners) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e (mounting methods for insulation on stiffeners) PHA10498g (pin pattern)</p> <p>Drawing no. AK2304</p>

Job Id: **344.1-004262-23**
 Certificate No: **MEDB00006FW**
 Revision No: **1**

<p>4</p>	<p>“U SeaProtect 76/40 + 76/20” Composed of a stiffened steel bulkhead insulated on stiffened side with min. 40 mm mineral wool of type U SeaProtect 76 (density 76 kg/m³) from SAINT-GOBAIN ISOVER G+H AG. Min. 20 mm U SeaProtect 76 is fitted around the stiffeners. Insulation (U SeaProtect 76) is fitted inside the void of the stiffeners.</p> <p>Alternatively, the bulkhead may be insulated with 2 layers of 20 mm mineral wool of type SeaProtect 76.</p> <p>The insulation is fasten 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>Approved for use as a Class A-30 Bulkhead.</p> <p>General application: Fire against either side.</p> <p>Insulation of same type (U SeaProtect from SAINT-GOBAIN ISOVER G+H AG) with density up to 86 kg/m³ may be used.</p>	<p>Test report no. PGA10386</p> <p>Assessment report nos. PHA10498b (alternative insulation on stiffeners) PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e (mounting methods for insulation on stiffeners) PHA10498g (pin pattern) PHA10601</p> <p>Drawing no. AK2304</p>
<p>5</p>	<p>“U SeaProtect 46/40 + 46/30” Composed of a stiffened steel bulkhead insulated on stiffened side with min. 40 mm mineral wool of type U SeaProtect 46 (density 46 kg/m³) from SAINT-GOBAIN ISOVER G+H AG. Min. 30 mm U SeaProtect is fitted around the stiffeners. Insulation (U SeaProtect 46) is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten 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>Approved for use as a Class A-30 Bulkhead.</p> <p>Restricted application: Fire from insulated side only.</p> <p>Insulation of same type (U SeaProtect from SAINT-GOBAIN ISOVER G+H AG) with density up to 86 kg/m³ may be used.</p>	<p>Test report no. PGA10227</p> <p>Assessment report nos. PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e (mounting methods for insulation on stiffeners) PHA10498f (washers diameters 30mm) PHA10498g (pin pattern)</p> <p>Drawing no. AK2304</p>

Job Id: **344.1-004262-23**
 Certificate No: **MEDB00006FW**
 Revision No: **1**

Appendix B Rev. No. 0 to MEDB00006FW



Job Id: **344.1-004262-23**
 Certificate No: **MEDB00006FW**
 Revision No: **1**

