

# EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:  
**MEDB00004C6**  
Revision No:  
**3**

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)  
**Class A-60 steel deck**

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,**

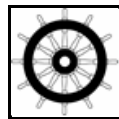
**item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434, IMO MSC.1/Circ.1435.**

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

This Certificate is valid until **2023-09-11.**

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

DNV GL local station:  
**Augsburg**



for **DNV GL SE**

Approval Engineer:  
**Timo Linn**

Notified Body  
No.: **0098**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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



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## Product description

"Class A-60 steel deck"

Steel decks with different insulation constructions as listed in enclosed Appendix.

## Application/Limitation

Approved for use as horizontal fire retarding division of class A-60.  
For further details regarding 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 no. 4P04380-1 dated 12 August 2014 from SP Technical Research Institute of Sweden, Borås, Sweden.

Test reports nos. PGA10521 dated 24 September 2014, PGA11099A dated 6 December 2017, PGA11132A dated 2 February 2018 and PGA11268A dated 30 August 2018 all issued by Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

Assessment report nos. (all issued by Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark):

PHA10498a, Revision no.: 2 (use of mats or rolls instead of slabs) dated 15 January 2020,

PHA10498b (alternative insulation on stiffeners) dated 09 December 2019,

PHA10498c (minimum thickness and density) dated 16 December 2019,

PHA10498d (position of joints) dated 27 March 2020,

PHA10498e (mounting methods for insulation on stiffeners) dated 21 June 2016,

PHA10498f (washers diameters 38mm) dated 16 December of 2019,

PHA10498g (pin pattern) dated 15 January 2020.

PHA11121A dated 8 October 2018. With assessment no. PHA11121A the validity of technical assessments nos. PHA10498c, PHA10498d, PHA10498e, PHA10498f and PHA10498g is prolonged and extended to cover test reports nos. PGA11099A and PGA11268A.

PHA10976A (longitudinal joints placed arbitrarily with respect to the pins) dated 28 November 2017.

Drawing no. AK2307 (4 pages) dated 11 December 2014 from Saint-Gobain Isover G+H AG.

## Tests carried out

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

## Marking of product

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

## USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.105/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 18<sup>th</sup>, 2019.

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## Appendix A to MEDB00004C6

### Alternative constructions:

	Product Description	Type Approval Documentation
1	<p><b>"U SeaProtect 36/70 + 76/25"</b>            Composed of a stiffened steel deck insulated underneath with 70 mm thick mineral wool of type U SeaProtect 36 (density 36 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG. 25 mm thick mineral wool of type U SeaProtect 76 (density 76 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.            Insulation (U SeaProtect 76) is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. 4P04380-1</p> <p>PHA10498a, Rev.2 (use of mats or rolls instead of slabs)            PHA10498c (minimum thickness and density)            PHA10498d (position of joints)            PHA10498e (mounting methods for insulation on stiffeners)            PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
2	<p><b>"U SeaProtect 36/70 + 36/70"</b>            Composed of a stiffened steel deck insulated underneath with 70 mm thick mineral wool of type U SeaProtect 36 (density 36 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG. 70 mm mineral wool of type U SeaProtect 36 is fitted around the stiffeners.            Insulation is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. 4P04380-1</p> <p>PHA10498a, Rev.2 (use of mats or rolls instead of slabs)            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. AK2307</p>
3	<p><b>"U SeaProtect 66/50 + 76/25"</b>            Composed of a stiffened steel deck insulated underneath with 50 mm thick mineral wool of type U SeaProtect 66 (density 66 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG. 25 mm mineral wool of type U SeaProtect 76 (density 76 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.            Insulation (U SeaProtect 76) is fitted inside the void of the stiffeners.</p> <p>The insulation is fasten with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA10521</p> <p>PHA10498c (minimum thickness and density)            PHA10498d (position of joints)            PHA10498e (mounting methods for insulation on stiffeners)            PHA10498g (pin pattern)</p> <p>Drawing no. AK2307</p>
4	<p><b>"A-60 Steel Deck U SP Wired Mat 66/40"</b>            Composed of a stiffened steel deck insulated on the exposed side with one layer of 40 mm thick Ultimate SeaProtect Wired Mat 66 (density 66 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG.</p> <p>The insulation is mounted across the steel plate with stiffeners. The insulation is wrapped around the stiffeners as the mats are mounted.</p> <p>The insulation is fasten with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum</p>	<p>Test report no. PGA11099A</p> <p>Alternative arrangements acc. to assessment no. PHA11121A (with reference to further assessments as stated below):            PHA10498c (minimum thickness and density)            PHA10498d (position of joints)            PHA10498e (mounting methods for insulation on stiffeners)            PHA10498f (washers diameters)</p>

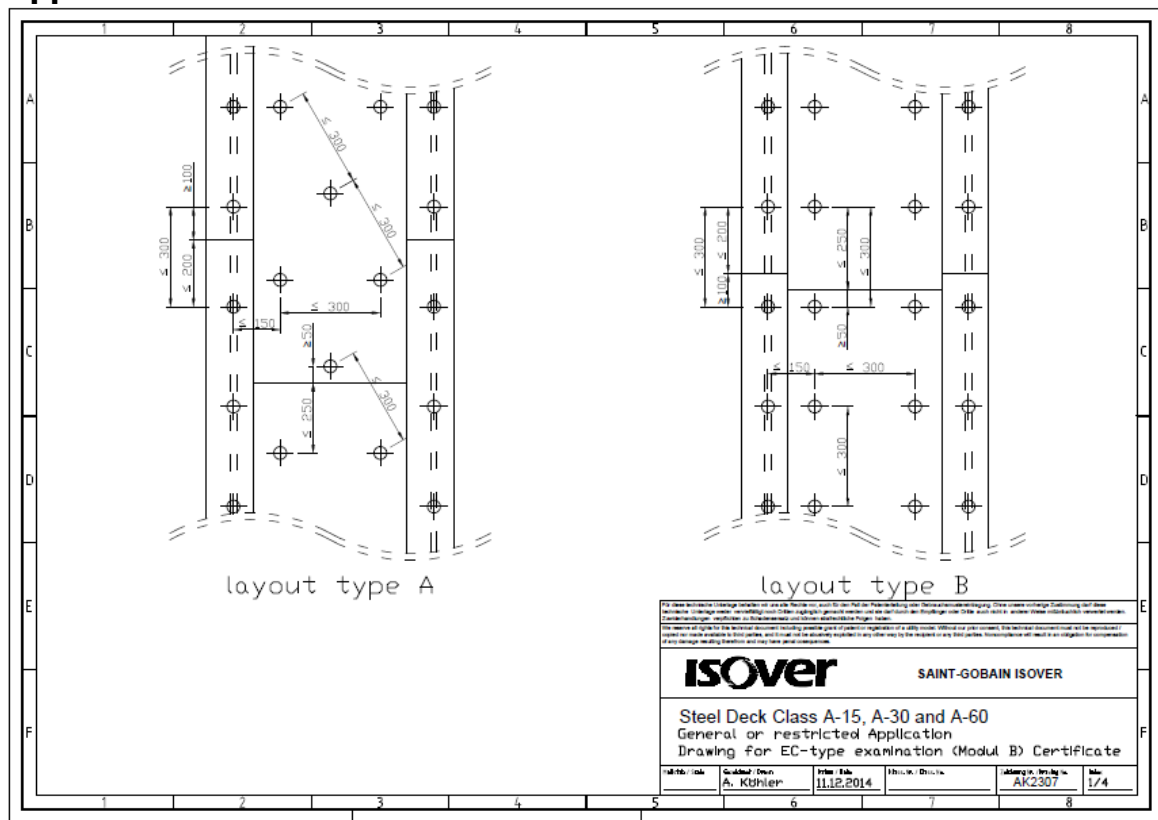
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	<p>300 mm.</p>	<p>30mm)          PHA10498g (pin pattern)</p> <p>PHA10976A (longitudinal joints placed arbitrarily with respect to the pins)</p> <p>Drawing no. AK2307</p>
<p><b>5</b></p>	<p><b>“Ultimate U SeaProtect Slab 56/76”</b>          Composed of a stiffened steel deck insulated on the exposed side with one layer of 50 mm thick Ultimate U SeaProtect Slab 56 (density 56 kg/m<sup>3</sup>).The distance from the joints to the pins on the surface insulation is approx. 150 mm on both sides of the joint. All the insulation slabs are mounted tightly together along the joints.</p> <p>The cavity inside the stiffeners is filled out with five layers of compressed 20 mm thick Ultimate U SeaProtect Slab 76 (density 76 kg/m<sup>3</sup>). The insulation slabs are mounted without staggered joints. The stiffeners are insulated with 20 mm thick Ultimate U SeaProtect Slab 76. Slabs are mounted along the sides of the stiffeners and kept in place by the slabs mounted on the steel plate between the stiffeners. The outer flange is insulated with Ultimate U SeaProtect Slab 76.</p> <p>The insulation is fasten with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11132A</p> <p>PHA10498a, Rev.2 (use of mats or rolls instead of slabs)          PHA10498b (alternative insulation on stiffeners)</p> <p>Drawing no. AK2307</p>
<p><b>6</b></p>	<p><b>“U SeaProtect 36/70 + 76/20”</b>          Composed of a stiffened steel deck insulated underneath with 70 mm thick mineral wool of type U SeaProtect 36 (density 36 kg/m<sup>3</sup>).The distance from the joints to the pins on the surface insulation is approx. 150 mm on both sides of the joint. All the insulation slabs are mounted tightly together along the joints.</p> <p>The cavity inside the stiffeners is filled out with five layers of compressed 20 mm thick Ultimate U SeaProtect Slab 76 (density 76 kg/m<sup>3</sup>). The insulation slabs are mounted without staggered joints. The stiffeners are insulated with 20 mm thick Ultimate U SeaProtect Slab 76. Slabs are mounted along the sides of the stiffeners and kept in place by the slabs mounted on the steel plate between the stiffeners. The outer flange is insulated with Ultimate U SeaProtect Slab 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>Test report no. PGA11268A</p> <p>ISOVER U SeaProtect Slab 36 may be applied in form of mats or rolls instead of slabs acc. to assessment no. PHA10498a (Revision no.: 2 ).</p> <p>PHA10498b (alternative insulation on stiffeners)</p> <p>Alternative arrangements acc. to assessment no. PHA11121A (with reference to further assessments as stated below):          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. AK2307</p>

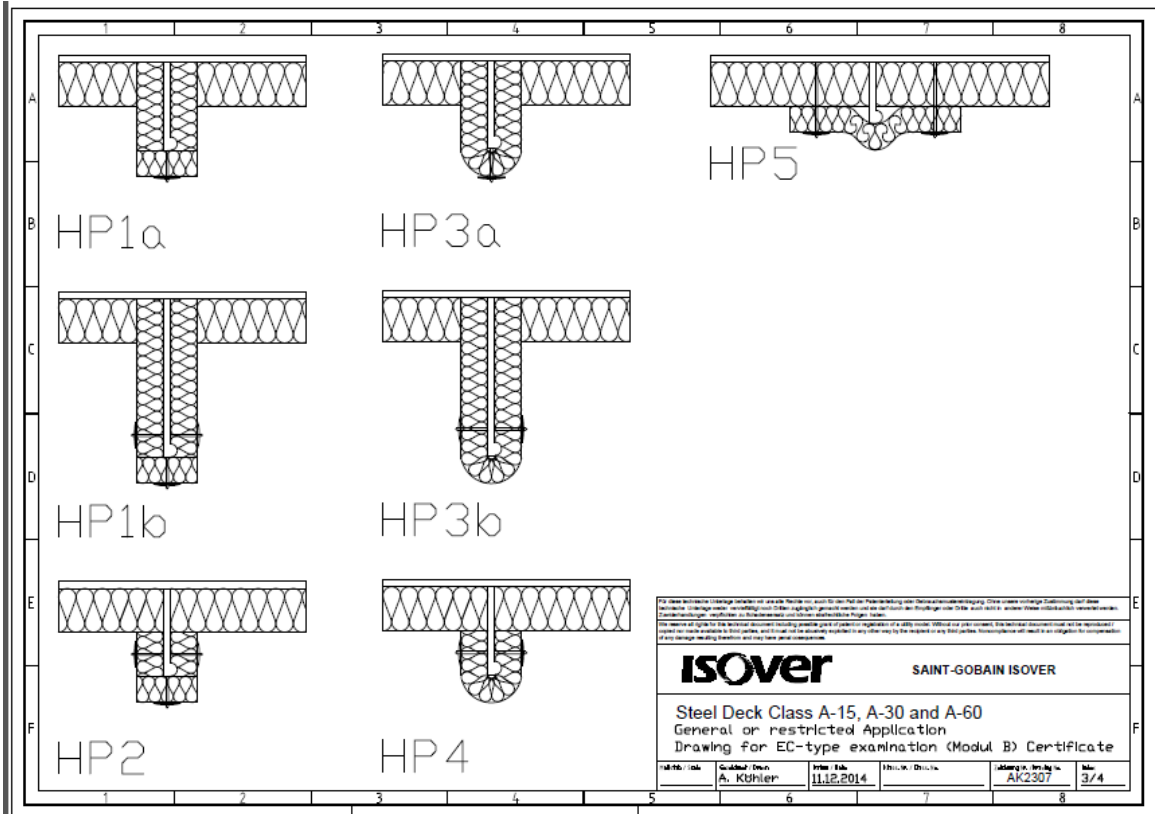
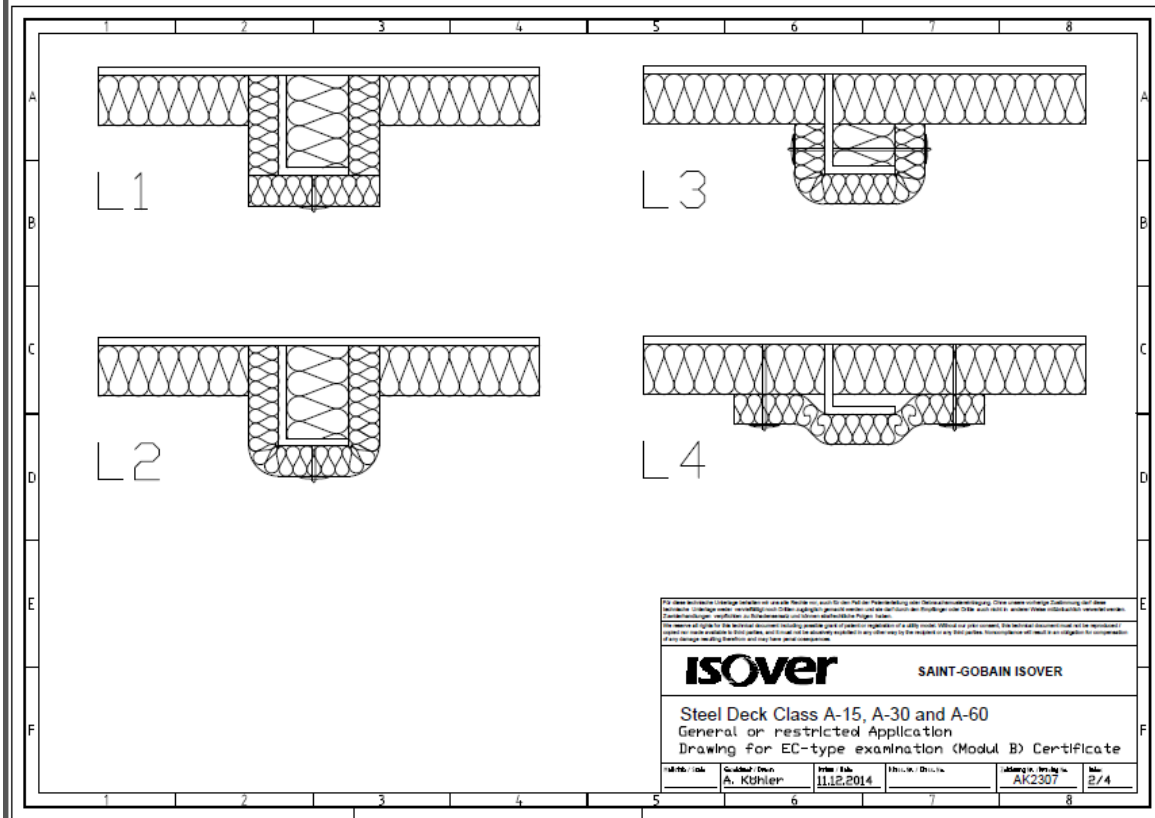
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<b>7</b>	<p><b>“U SeaProtect 36/70 + 56/30”</b>          Composed of a stiffened steel deck insulated underneath with 70 mm thick mineral wool of type U SeaProtect 36 (density 36 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG. 30 mm mineral wool of type U SeaProtect 56 is fitted around and inside the void of the stiffeners.           The insulation is fasten with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm.</p>	<p>Test report no. PGA11268A           PHA10498a, Rev.2 (use of mats or rolls instead of slabs)          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)           Drawing no. AK2307</p>
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**Appendix B to MEDB00004C6**



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