



**TYPE APPROVAL CERTIFICATE**  
**No. FPE351419XG/001**

**This is to certify that the product identified below satisfies the requirements of the standard quoted under "Reference standard"**

<i>Description</i>	<b>Fire resisting decks</b>
<i>Type</i>	<b>ISOVER Steel deck A-60</b>
<i>Applicant</i>	<b>SAINT-GOBAIN ISOVER G+H AG - SAINT - GOBAIN ISOVER G+H AG BURGERMEISTER-GRUNZWEIG-STRASSE 1 67059 Ludwigshafen GERMANY</b>
<i>Manufacturer</i>	<b>SAINT-GOBAIN ISOVER G+H</b>
<i>Reference standards</i>	<b>Chap. II-2 of SOLAS 74 Convention, as amended; IMO Res. MSC.307(88)-(2010 FTP Code)</b>
<i>Reference documents</i>	<b>Rules for Testing and Certification of Marine Materials and Equipment</b>

*Issued in* **Hamburg** on **December 5, 2019**. *This Certificate is valid until* **December 4, 2024**



**RINA Services S.p.A.**  
**Giuseppe Russo**

This certificate consists of this page and 1 enclosure



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ISOVER Steel deck A-60

### Product description

#### "Steel Deck A-60"

##### Construction 1: "U SeaProtect 36/70 + 76/25"

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. The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm. See appendix for further details.

##### Construction 2: "U SeaProtect 36/70 + 36/70"

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. The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm. See appendix for further details.

##### Construction 3: "U SeaProtect 66/50 + 76/25"

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. The insulation is fastened with 3 mm steel pins and 38 mm steel washers. Distance between pins is maximum 300 mm. See appendix for further details.

##### Construction 4: "U SeaProtect Wired Mat 66/40"

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 is fitted around the stiffeners. The insulation is mounted across the steel plate with stiffeners. The insulation is wrapped around the stiffeners as the mats are mounted. The insulation is fastened with 3 mm steel pins and 30 or 38 mm steel washers. Distance between pins is maximum 300 mm. See appendix for further details.





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### Construction 5: "U SeaProtect 56/50 +76/20"

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 joint.

All the insulation slabs are mounted tightly together along the joints.

Insulation (U SeaProtect 76) is fitted inside the void of the stiffeners.

The insulation slabs are mounted without staggered joints.

The stiffeners are insulated with 20 mm thick Ultimate U SeaProtect Slab 76.

The insulation is fasten with 3 mm steel pins and 38 mm steel washers.

Distance between pins is maximum 300 mm.

See appendix for further details.

### Construction 6: "U SeaProtect 36/70 + 76/20"

Composed of a stiffened steel deck insulated underneath with 70 mm thick mineral wool of type U SeaProtect Slab 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 joint.

All the insulation slabs are mounted tightly together along the joints.

Insulation (U SeaProtect 76) is fitted inside the void of the stiffeners.

The insulation slabs are mounted without staggered joints.

The stiffeners are insulated with 20 mm thick Ultimate U SeaProtect Slab 76.

The insulation is fasten with 3 mm steel pins and 30 or 38 mm steel washers.

Distance between pins is maximum 300 mm.

See appendix for further details.

### Field of application

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

The insulation thickness or insulation density may be increased up to a maximum area weight of 5280 g/m<sup>2</sup>.

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.



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**Reference documents**

Test report no. 4P04380-1 dated 12 August 2014 from SP Technical Research Institute of Sweden, Borås, Sweden. (U SeaProtect 36/70 + 76/25)

Test report no. PGA10521 dated 24 September 2014, PGA11099A dated 6 December 2017, PGA11132 dated 2 February 2018 and PGA11268A dated 30 August 2018 all issued by Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

PHA10498a, Revision no.: 1 (use of mats or rolls instead of slabs) dated 2 November 2018,

PHA10498b (alternative insulation on stiffeners) dated 15 January 2015

PHA10498c (minimum thickness and density) dated 27 November 2019,

PHA10498d (position of joints) dated 16 December 2014,

PHA10498e (mounting methods for insulation on stiffeners) dated 24 November 2014,

PHA10498g (pin pattern) dated 28 November 2014.

PHA11239A dated 8 October 2018,

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

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

Documentation filed by RINA with n° HMFP/5829-5832.

MEDB00004C6 issued by DNV GL AS on 2019-07-16.

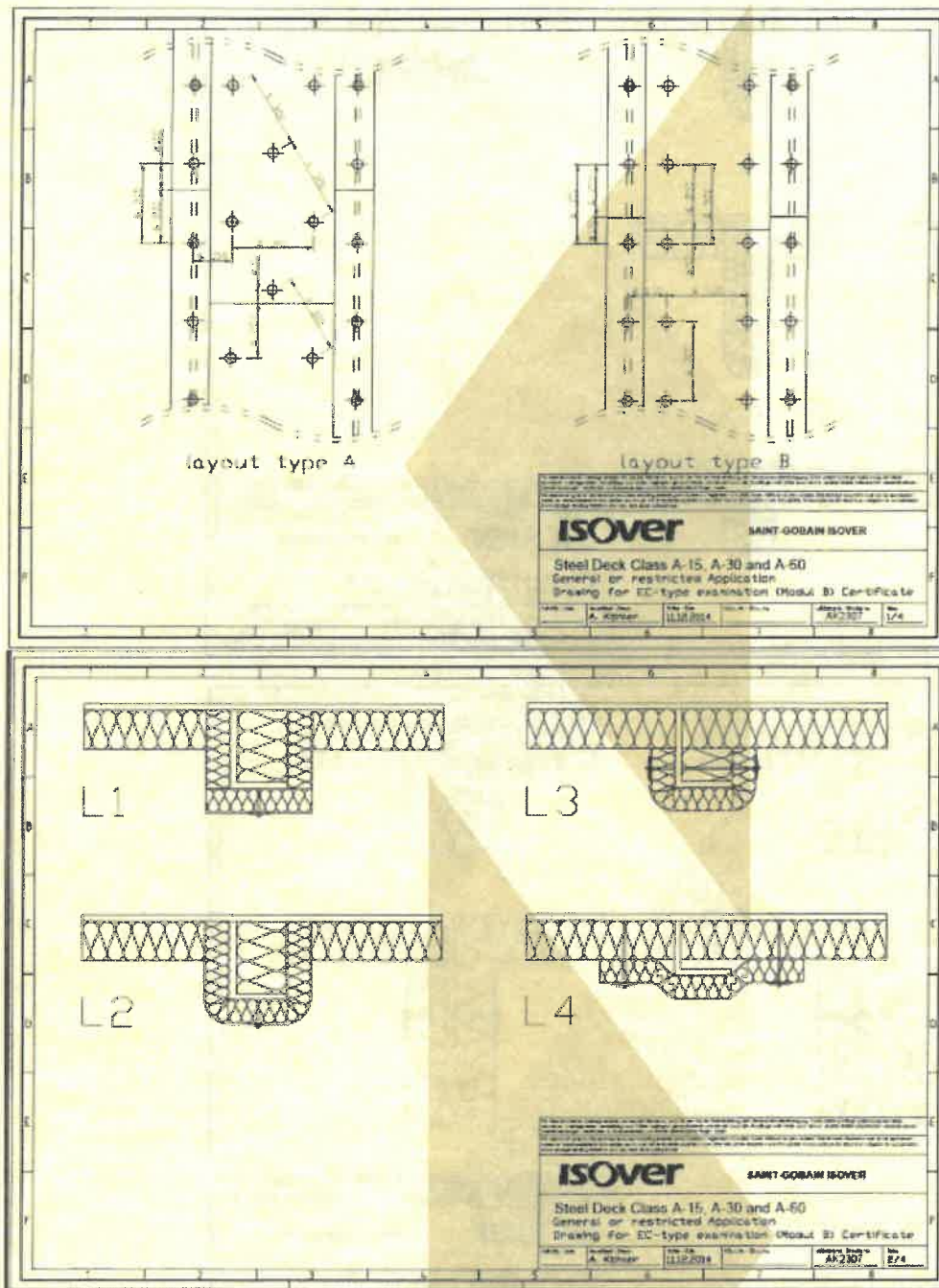
**Tests carried out**

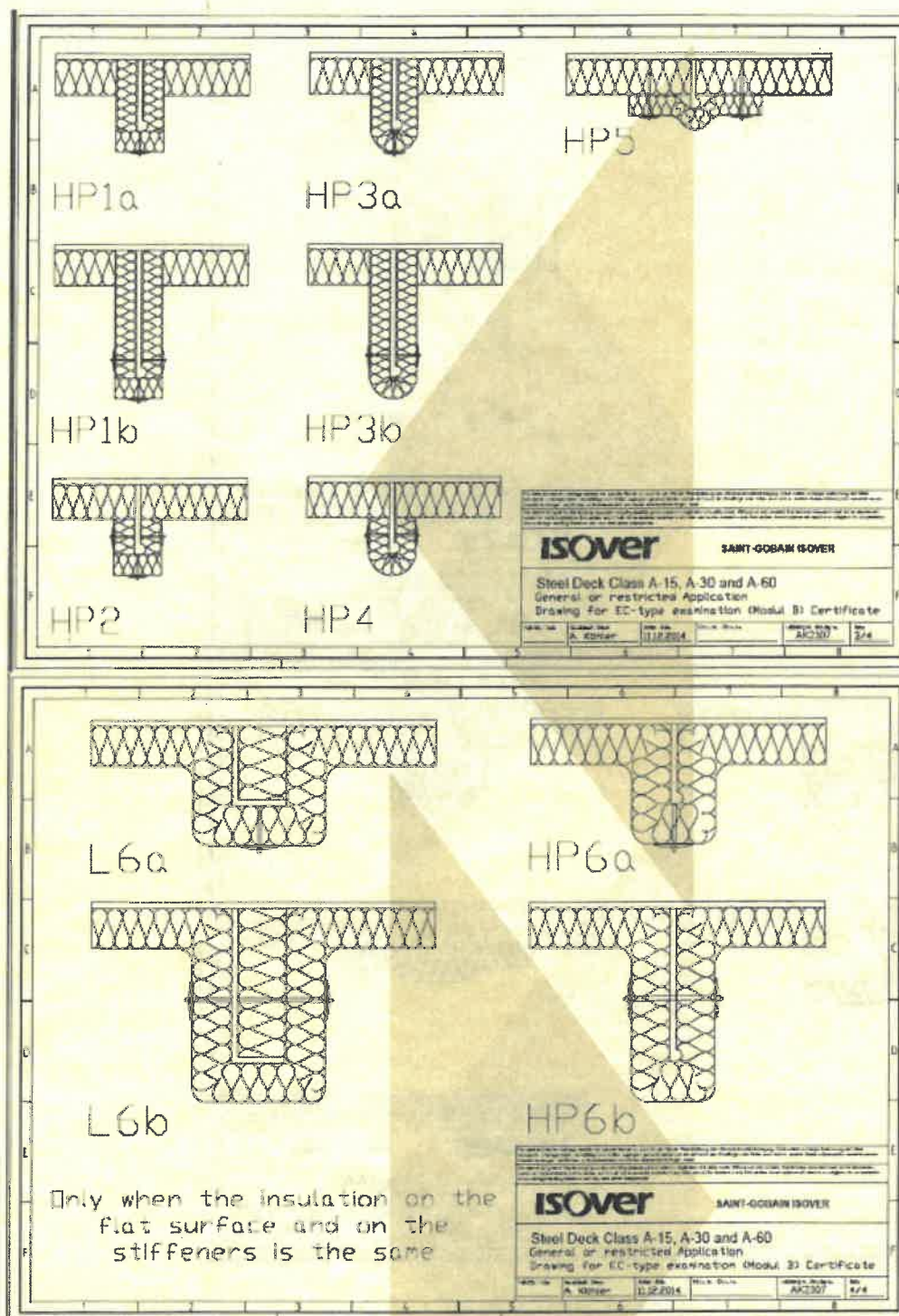
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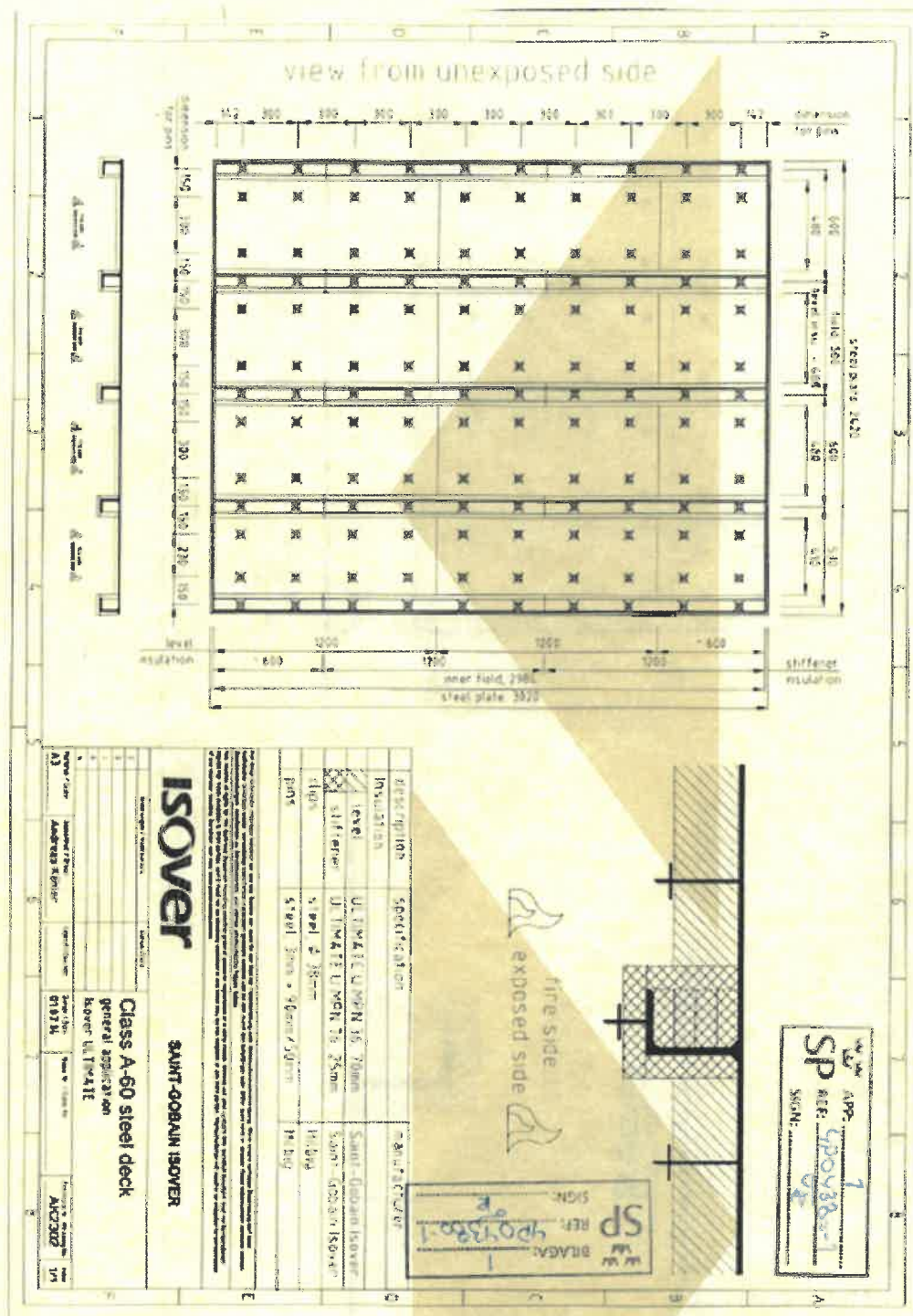


## Appendix















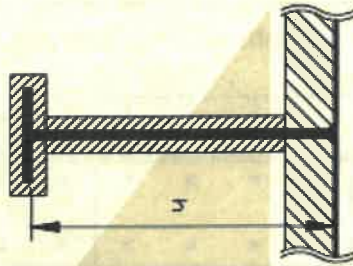




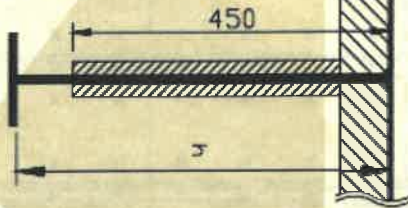




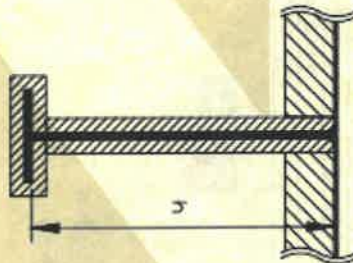
Solution for  $h < 450\text{mm}$



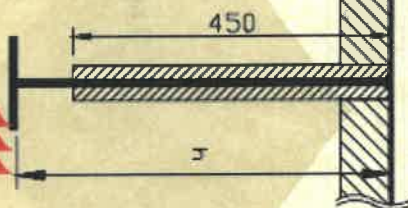
Solution for  $h \geq 450\text{mm}$



Solution for  $h < 450\text{mm}$



Solution for  $h \geq 450\text{mm}$



DBI  
PHAT1230A



Product for insulation between the stiffeners (level)



Product for insulation around the stiffeners

<p><b>ISOVER</b></p> <p>SAINT-GOBAIN ISOVER</p>				
<p>Insulation of T bars</p> <p>A-Class steel Deck &amp; Bulkhead</p>				
Model / Name	Author / Type	Issue / Date	State of / Validity	Signature / Approval
	V. Pottier	30.07.2019		AK2432
				1/1

Hamburg December 5, 2019

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