



**TYPE APPROVAL CERTIFICATE**  
**No. FPE351419XG/008**

**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 bulkheads</b>
<i>Type</i>	<b>ISOVER Steel bulkhead A-15</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 AG - SAINT - GOBAIN ISOVER G+H AG</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



## TYPE APPROVAL CERTIFICATE

No. FPE351419XG/008

Enclosure - Page 1 of 2

ISOVER Steel bulkhead A-15

### Product description

#### "Steel bulkhead A-15"

##### Construction 1: "U SeaProtect 24/50 + 66/25"

Composed of a stiffened steel bulkhead insulated on stiffened side with min. 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG.

Min. 25 mm U SeaProtect 66 (density 66 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.

Insulation (U SeaProtect 24) is fitted inside the void of the stiffeners.

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.

##### Construction 2: "U SeaProtect 24/50 + 76/20"

Composed of a stiffened steel bulkhead insulated on stiffened side with min. 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG.

Min. 20 mm 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 24) is fitted inside the void of the stiffeners.

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.

##### Construction 3: "U SeaProtect 24/50 + 24/50"

Composed of a stiffened steel bulkhead insulated on stiffened side with min. 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG.

Min. 50 mm U SeaProtect 24 is fitted inside the void of the stiffeners.

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.

##### Construction 4: "U SeaProtect 24/50 + 56/30"

Composed of a stiffened steel bulkhead insulated on stiffened side with min. 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG.

Min 30 mm U SeaProtect 56 (density 56 kg/m<sup>3</sup>) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.

Insulation (U SeaProtect 24) is fitted inside the void of the stiffeners.

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.



## TYPE APPROVAL CERTIFICATE

FPE351419XG/008

Enclosure - Page 2 of 2

ISOVER Steel bulkhead A-15

### Field of application

Approved for use as vertical fire retarding division of class A-15 with "general application" that is means fire can come from either side of the construction (insulation can be fitted either on stiffened or non stiffened side of the division).

The insulation thickness may be increased and Insulation density may be increased up to 86kg/m<sup>3</sup> as stated in PHA10498c dated 27 November 2019,

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.

### Reference documents

Test report no. PGA10288 dated 29 January 2014, from 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,

PHA10498f (washers diameters 30 mm) dated 15 of July 2014,

PHA10498g (pin pattern) dated 28 November 2014,

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.

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

MEDB000004A issued by DNV GL AS on 2015-07-18.

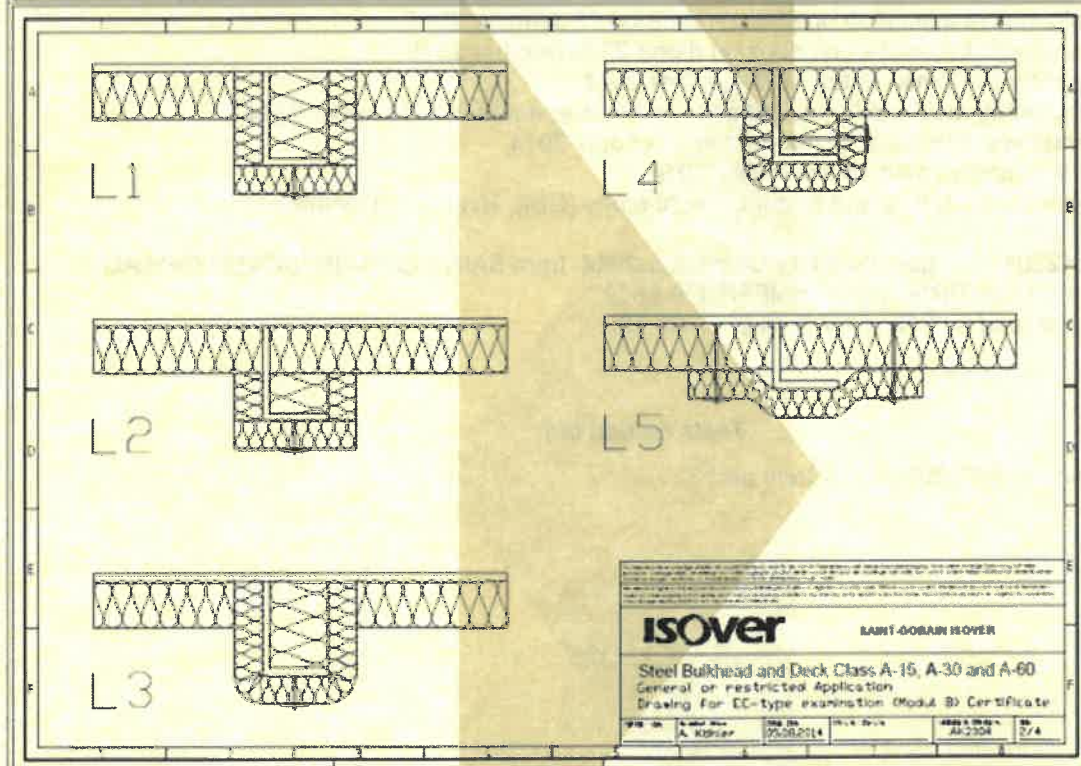
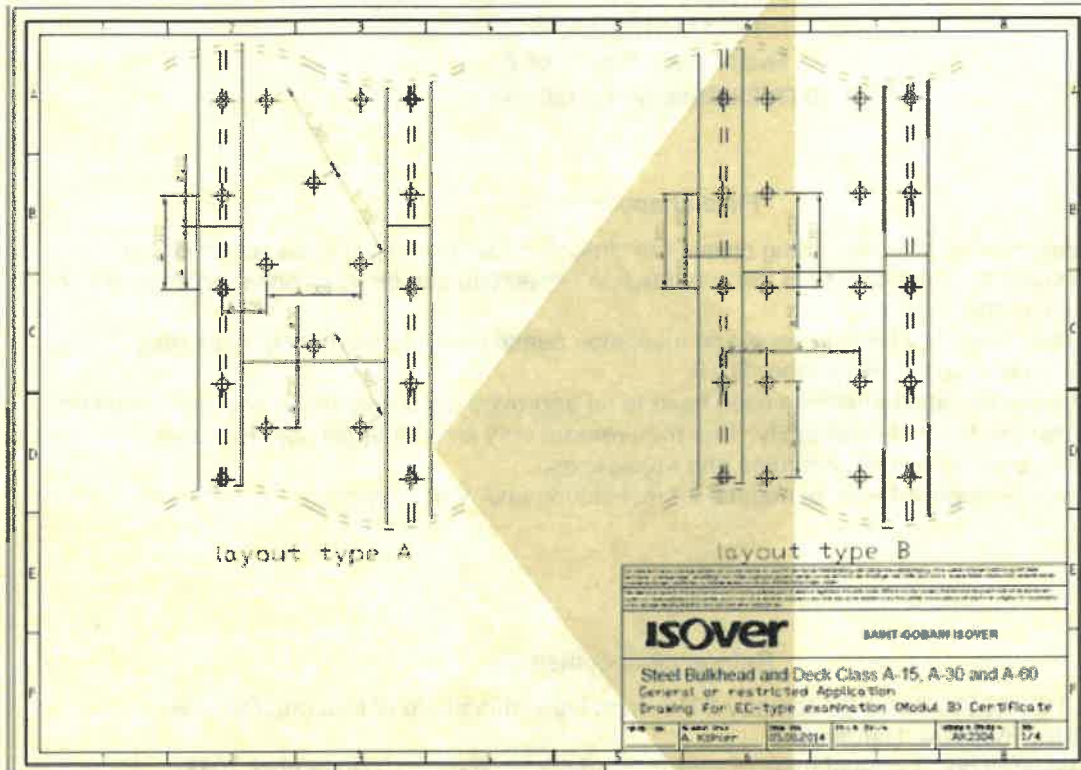
### Tests carried out

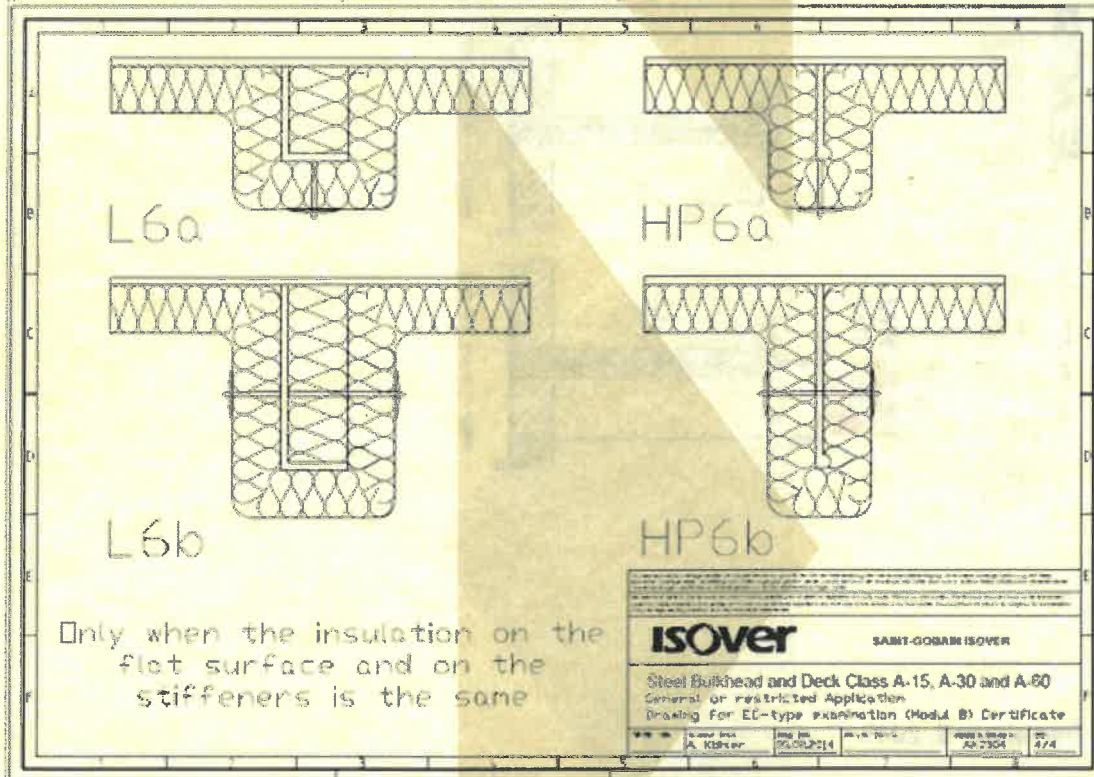
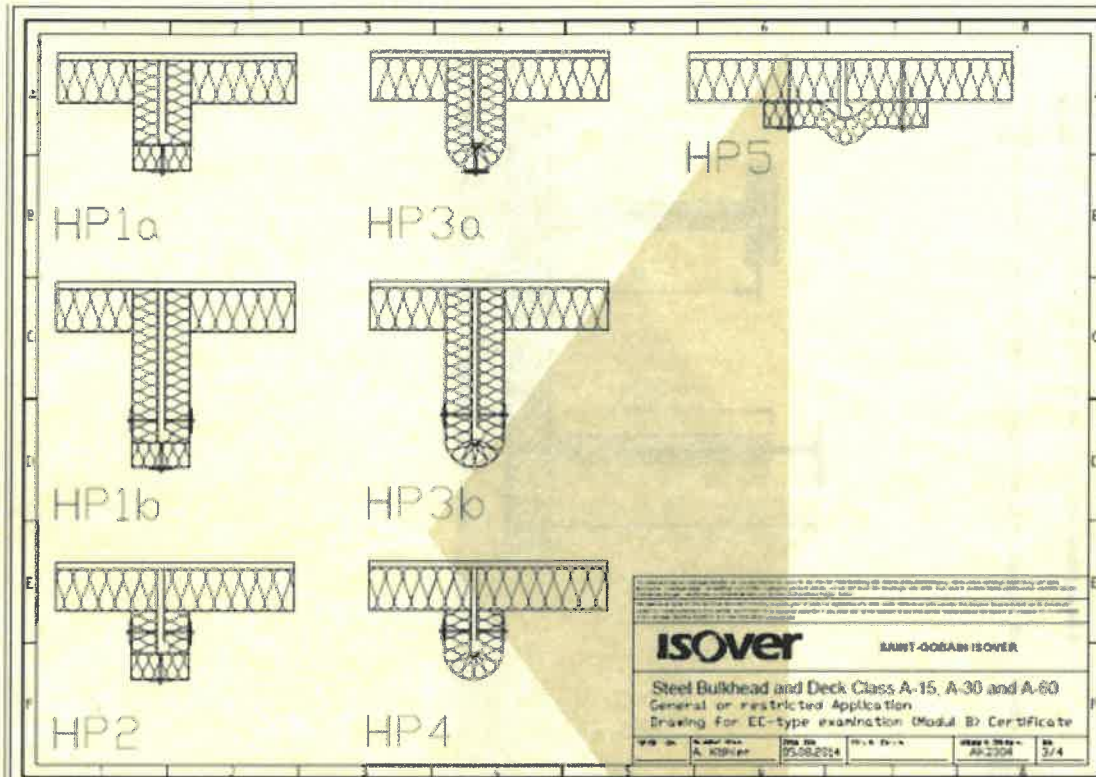
Tested according to IMO 2010 FTP Code part 3.

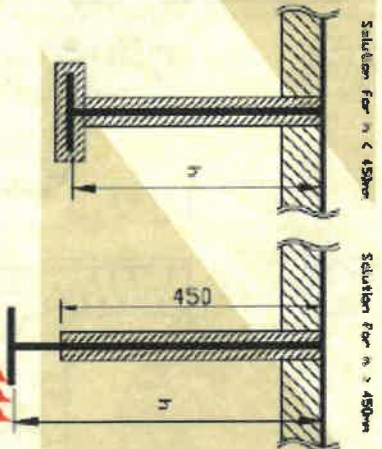
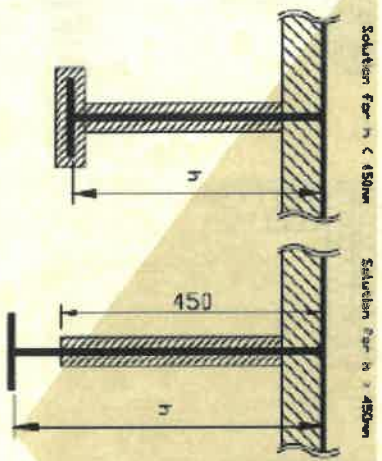




*Handwritten signature*

## Appendix







-  Product for insulation between the stiffeners (level)
-  Product for insulation around the stiffeners

<b>ISOVER</b>		SAINT-GOBAIN ISOVER	
Insulation of T BEAMS			
A-Class steel deck & bulkhead			
Version	Code/Rev	Issue Date	Drawn/Rev. No.
V	Postfix	30/7/2019	
Approved/Checked			Scale
AK/432			1/1

Hamburg December 5, 2019



RINA Services S.p.A.  
 Via Corsica, 12 - 16128 Genova  
 Tel +39 010 53851  
 Fax +39 010 5351000