



TYPE APPROVAL CERTIFICATE
No. FPE351419XG/005

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

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

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 bulkhead A-60 restricted application

Product description

"Steel Bulkhead A-60"

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

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. 25 mm U SeaProtect 76 (density 76 kg/m³) is fitted around the stiffeners. Insulation (U SeaProtect 76) 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 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 (density 36 kg/m³) is fitted around the stiffeners. Insulation (U SeaProtect 76) 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 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) is fitted around the stiffeners. Insulation (U SeaProtect 76) 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.

Field of application

Approved for use as vertical fire retarding division of Class A-60 with "restricted application" insulation thickness may be increased and insulation density may be increased up to 86kg/m³ as stated in PHA10498c dated 27 November 2019, The insulation material 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. PGA10457 dated 24 July 2014 and PGA11267A dated 27 of August 2018 both issued by Danish Institute of Fire and Security Technology (DBI), Hvidovre, Danmark.

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 an stiffeners) dated 24 November 2014,
PHA10498f (washers diameters 30 mm) dated 15 of July 2014,
PHA10498g (pin pattern) dated 28 November 2014.

PHA11121A dated 8 October 2018. With assessment no. PHA 11221A the validity of technical assessments nos. PHA10498c, PHA10498d, PHA10498e, PHA10498f and PHA10498g is prolonged and extended to cover test report no. PGA11267A.
Drawing no. AK2304 (4 pages) dated 11 December 2014
Documentation filed by RINA with n° HMFP/5829-5832.
MEDB000057X issued by DNV GL AS on 2019-07-04.

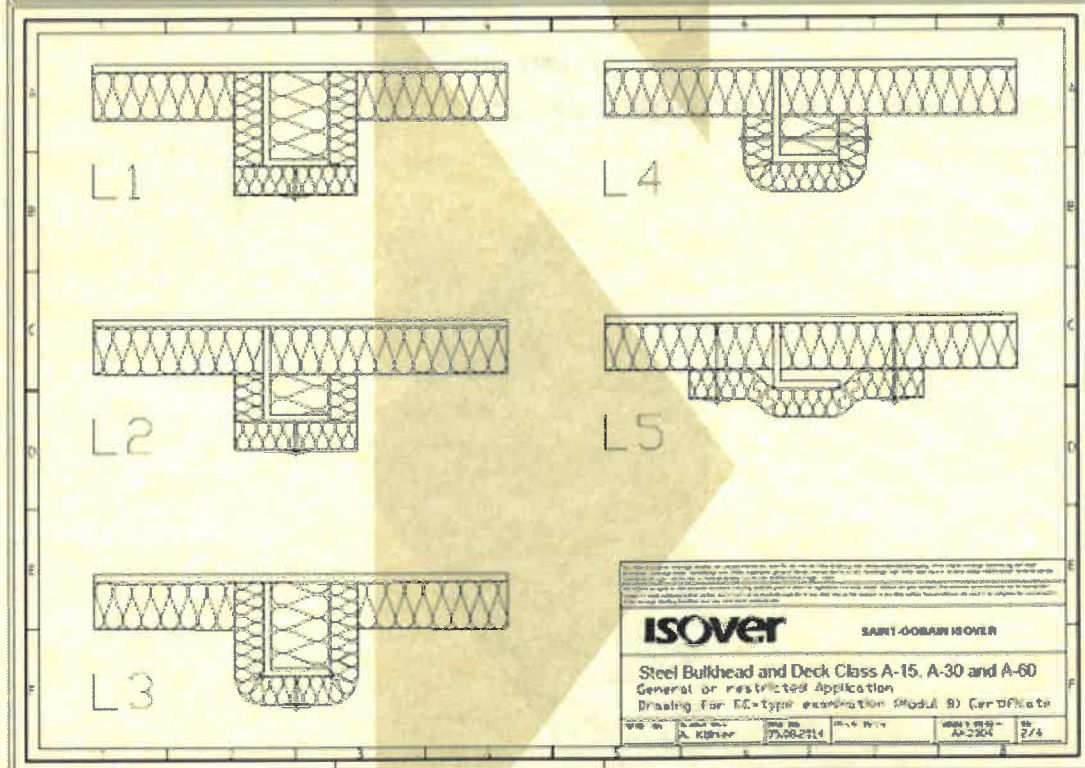
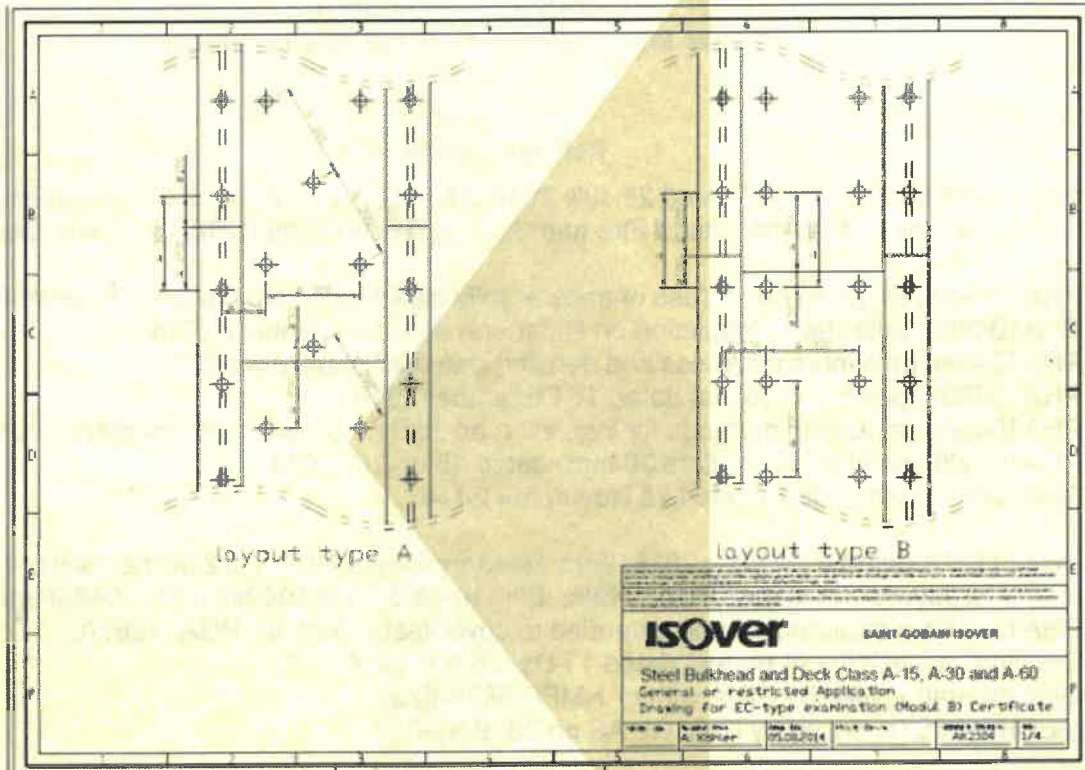
Tests carried out

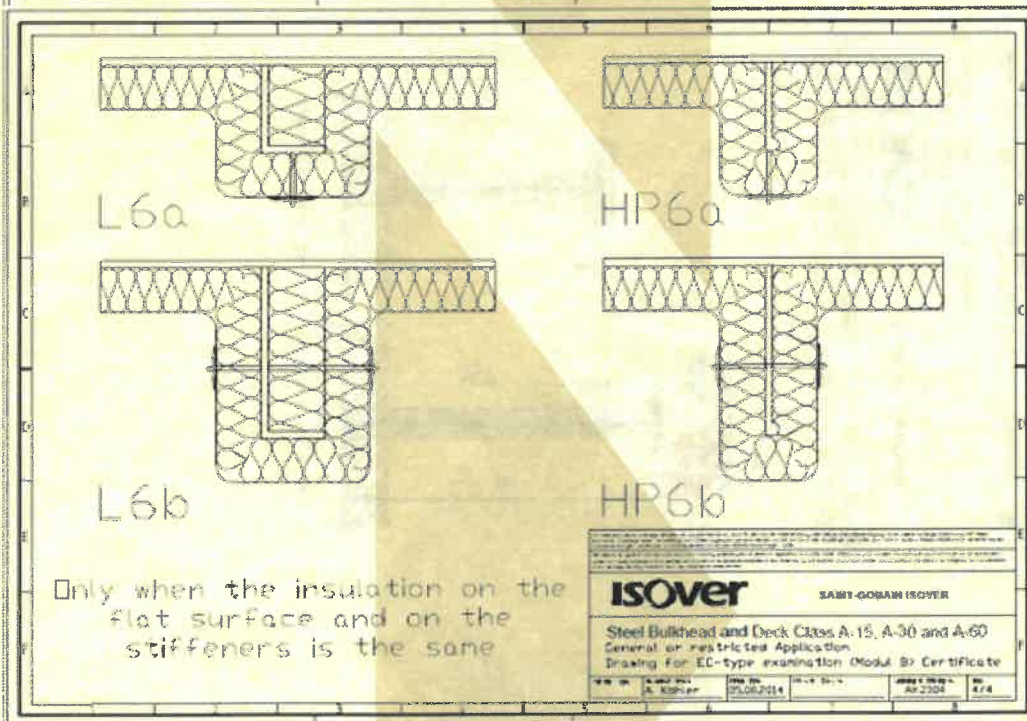
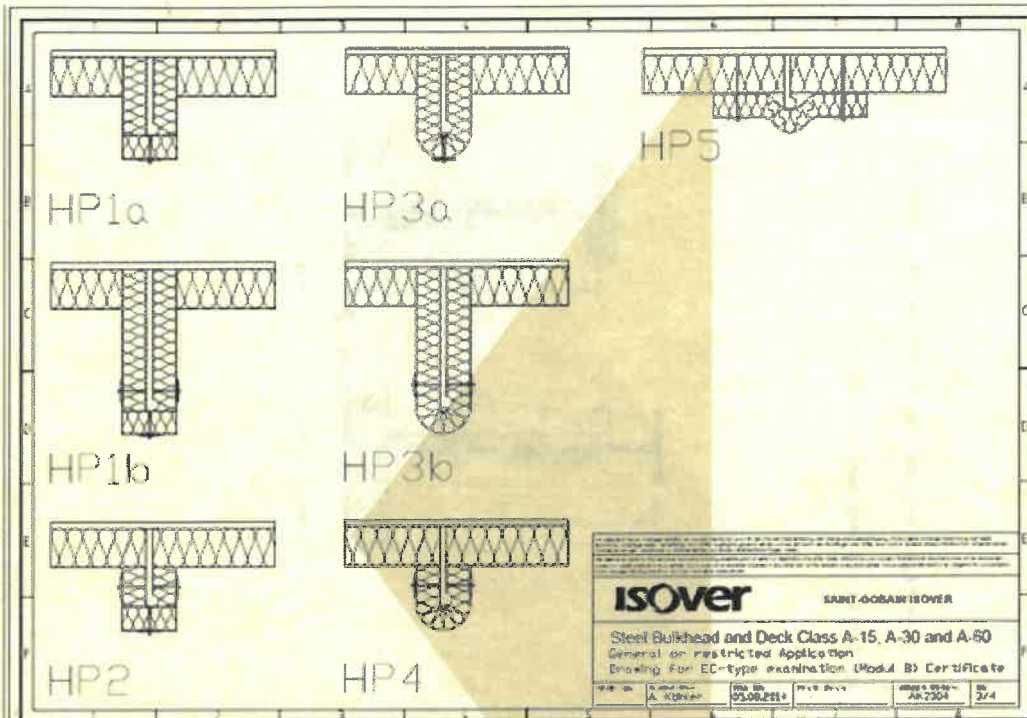
Tested according to IMO 2010 FTP Code part 3.



Handwritten signature

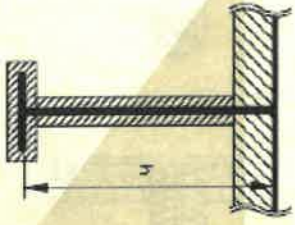
Appendix



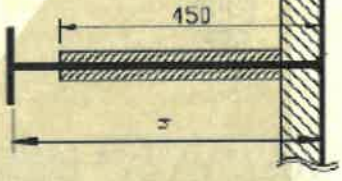




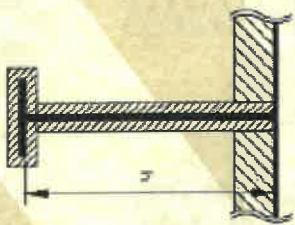
Solution for $h < 450\text{mm}$



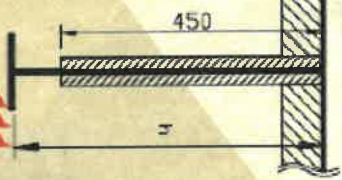
Solution for $h > 450\text{mm}$



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





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



DBI
PHATISSA



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

ISOVER SAKIT-GOBAIN ISOVER

Insulation of T Beams
A-Class steel Deck & Bulkhead

Author	Product Name	Insulation	Year of Issue	Revision	Page
V. Potter	3007/2019			1/1	

Hamburg December 5, 2019