TYPE APPROVAL CERTIFICATE
No. **FPE351419XG/002**

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

Description	**Fire resisting decks**
Type	**ISOVER Steel deck A-30**
Applicant	**SAINT-GOBAIN ISOVER G+H AG - SAINT - GOBAIN ISOVER G+H AG** **BURGERMEISTER-GRUNZWEIG-STRASSE 1** **67059 Ludwigshafen** **GERMANY**
Manufacturer	**SAINT-GOBAIN ISOVER G+H AG - SAINT - GOBAIN ISOVER G+H AG**
Reference standards	**Chap. II-2 of SOLAS 74 Convention, as amended; IMO Res. MSC.307(88)-(2010 FTP Code)**
Reference documents	**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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TYPE APPROVAL CERTIFICATE
No. **FPE351419XG/002**
Enclosure - Page 1 of 2
ISOVER Steel deck A-30

Product description

"Steel Deck A-30"

Construction 1: "U SeaProtect 24/50 + 66/25"
Composed of a stiffened steel deck insulated underneath with 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m3) from SAINT-GOBAIN ISOVER G+H AG. 25 mm mineral wool of type U SeaProtect 66 (density 66 kg/m3) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.
Insulation (U SeaProtect 66) is fitted 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.
See appendix for further details.

Construction 2: "U SeaProtect 24/50 + 24/50"
Composed of a stiffened steel deck insulated underneath with 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m3) from SAINT-GOBAIN ISOVER G+H AG. 50 mm mineral wool of type U SeaProtect 24 (density 24 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.
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 3: "U SeaProtect 24/50 + 76/20"
Composed of a stiffened steel deck insulated underneath with 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m3) from SAINT-GOBAIN ISOVER G+H AG. 20 mm mineral wool of type U SeaProtect 76 (density 76 kg/m3) 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 fasten 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 24/50 + 56/30"
Composed of a stiffened steel deck insulated underneath with 50 mm mineral wool of type U SeaProtect 24 (density 24 kg/m3) from SAINT-GOBAIN ISOVER G+H AG. 30 mm mineral wool of type U SeaProtect 56 (density 56 kg/m3) from SAINT-GOBAIN ISOVER G+H AG is fitted around the stiffeners.
Insulation (U SeaProtect 56) is fitted 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.
See appendix for further details.

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Construction 5: "U SeaProtect 76/25 + 76/20"
Composed of a stiffened steel deck insulated underneath with 25 mm mineral wool of type U SeaProtect 76 (density 76 kg/m3) from SAINT-GOBAIN ISOVER G+H AG. 20 mm mineral wool of type U SeaProtect 76 (density 76 kg/m3) 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 fasten with 3 mm steel pins and 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-30.
The insulation thickness or insulation density may be increased up to a maximum area weight of 5280 g/m2.
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. PGA10230 dated 7 May 2013 (U SeaProtect 76/25 + 76/20)
and PGA10289 dated 6 August 2013 (U SeaProtect 24/50 + 66/25) both from 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,
PHA10498g (pin pattern) dated 28 November 2014.
PHA11239A dated 8 October 2018,
All from Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

Drawing no. AK2307 (4 pages) dated 11 December 2014 from SAINT-GOBAIN ISOVER G+H AG.
Documentation filed by RINA with n° HMFP/5829-5832.

MED-B-9328 issued by DNV GL AS on 2015-02-05.

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

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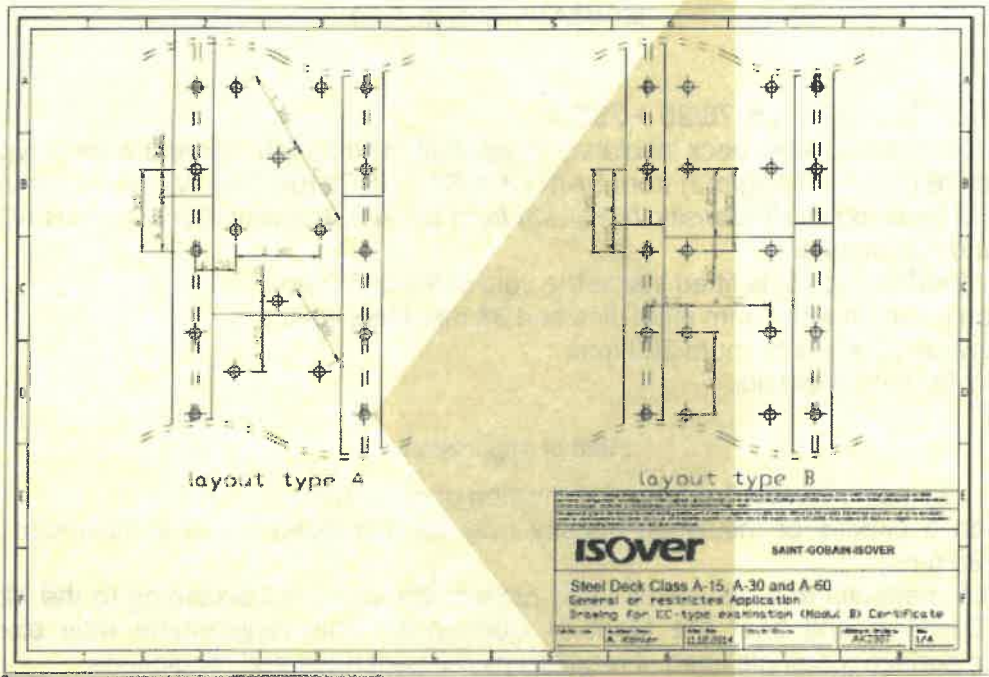
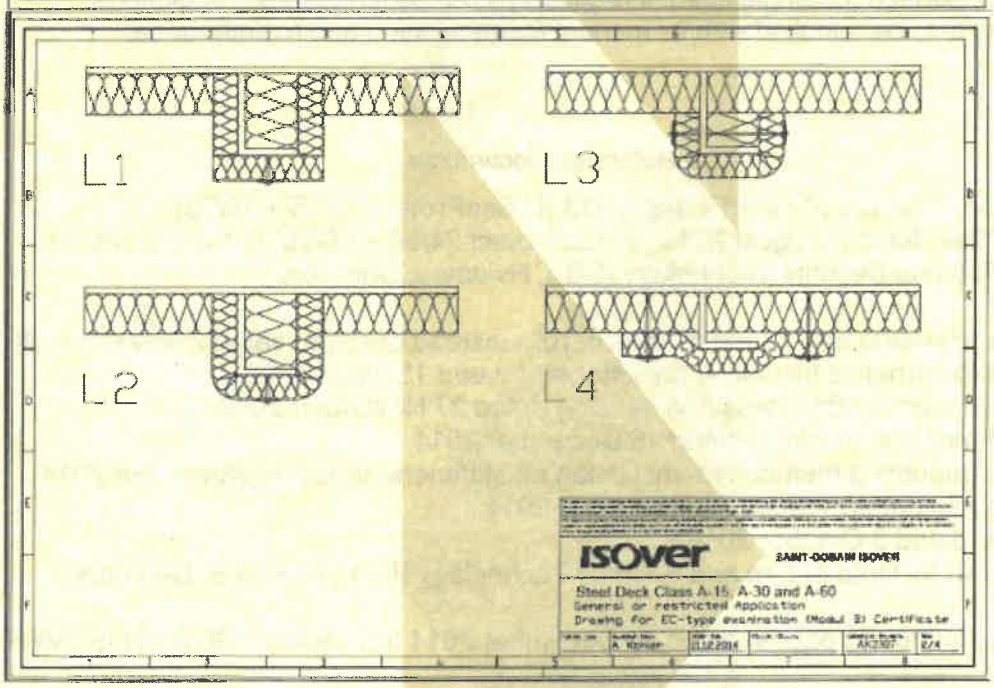
Appendix





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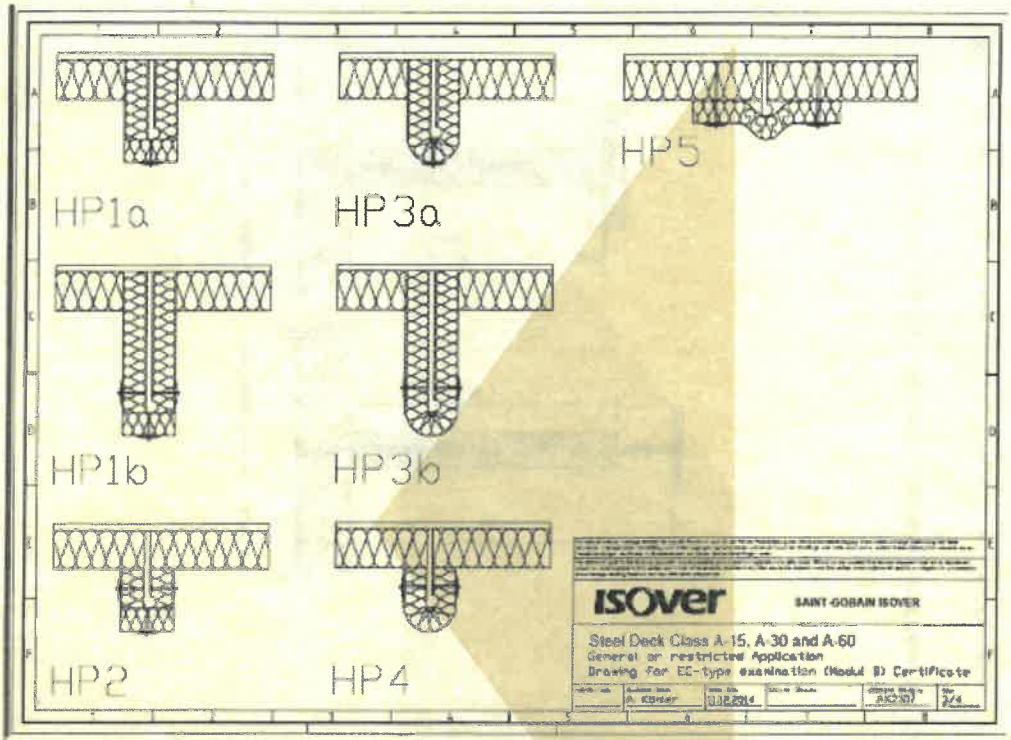

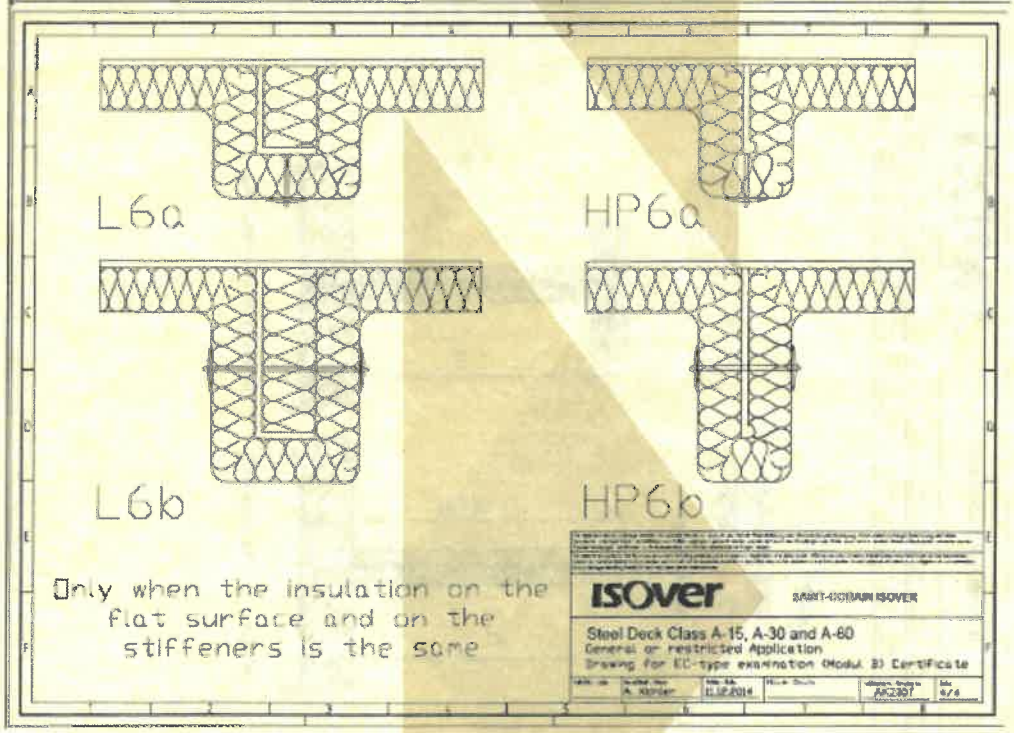

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Hamburg December 5, 2019

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