DNV·GL

Certificate No:
MEDB000057X

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

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 bulkhead, restricted application

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) 2018/773,**
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

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

This Certificate is valid until **2024-07-03**.

Issued at **Hamburg** on **2019-07-04**

DNV GL local station:
Augsburg

Approval Engineer:
Pavel Golyshev

Notified Body
No.: **0098**

for **DNV GL SE**

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.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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 bulkhead, restricted application"
Steel bulkheads with different insulation constructions as listed in enclosed Appendix.

(For latest revision of the appendix, see https://approvalfinder.dnvgl.com).

Application/Limitation
Approved for use as vertical fire retarding division of class A-60 with "restricted application".
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 reports nos. PGA10457 dated 24th of July 2014 and PGA11267A dated 27th of August 2018 both issued by Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark.

Assessment reports nos. (all issued by Danish Institute of Fire and Security Technology (DBI), Hvidovre, Denmark):
PHA10498a, Revision no.: 1 (use of of mats instead of slabs: as applicable, considering range of included densities and thicknesses) dated 2nd of November 2018,
PHA10498b (alternative insulation on stiffeners) dated 15th of January 2015,
PHA10498c (minimum thickness and density) dated 13th of October 2014,
PHA10498d (position of joints) dated 16th of December 2014,
PHA10498e (mounting methods for insulation on stiffeners) dated 24th of November 2014,
PHA10498f (washers diameters 30mm) dated 15th of July 2014 and
PHA10498g (pin pattern) dated 28th of November 2014.
PHA11121A dated 8th of October 2018. With assessment no. PHA11121A the validity of technical assessments nos. PHA10498c, PHA10498d, PHA10498e, PHA10498f and PHA10498g is prolongated and extended to cover test report no. PGA11267A.

Drawing no. AK2304 (4 pages) dated 11th of December 2014 all 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).

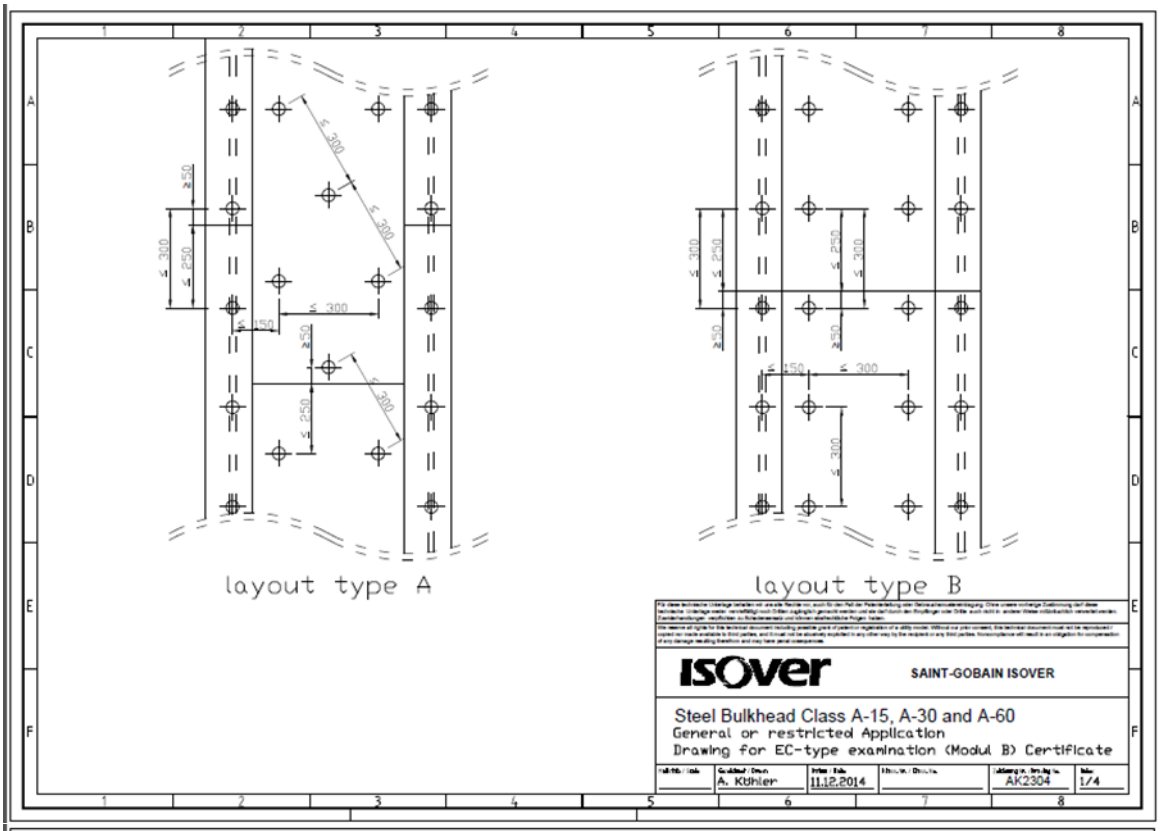
USCG Approval Category (Module B) number
This product has been assigned a U.S. Coast Guard Module B number 164.107/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval as allowed by the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004.

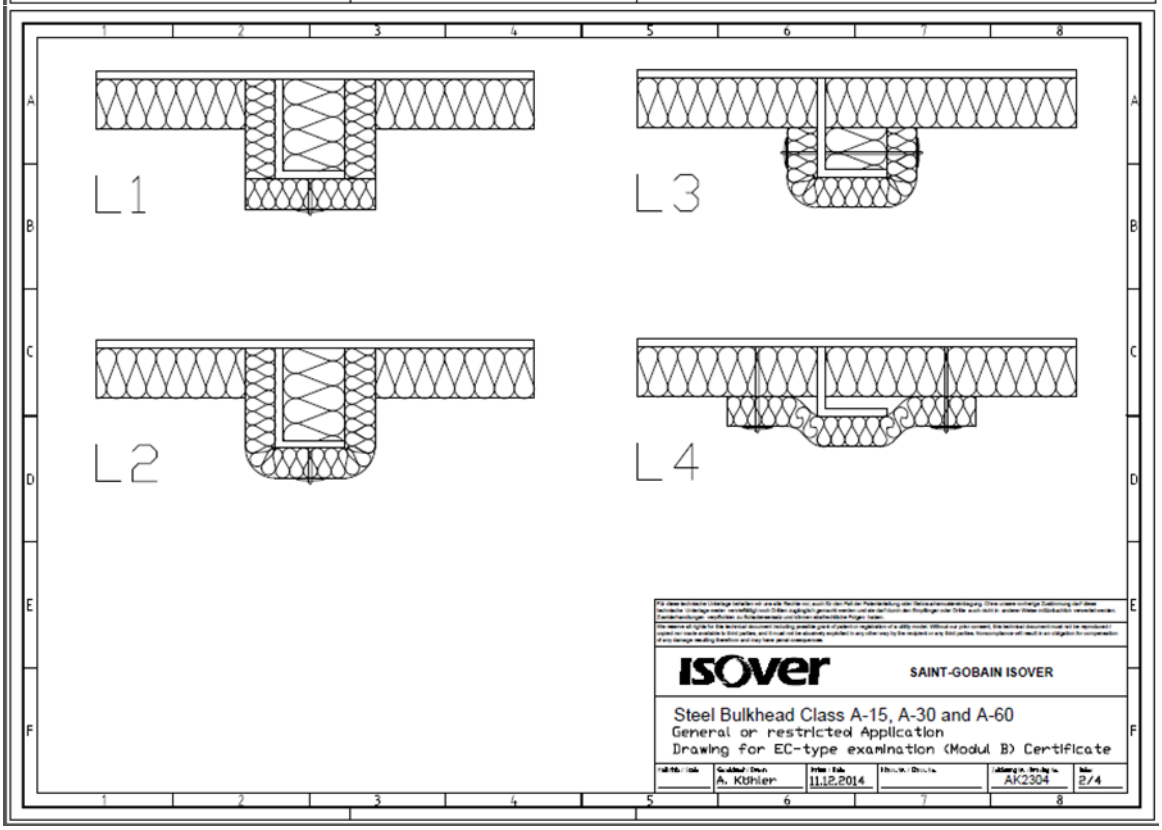
Appendix A to MEDB000057X
Alternative constructions:

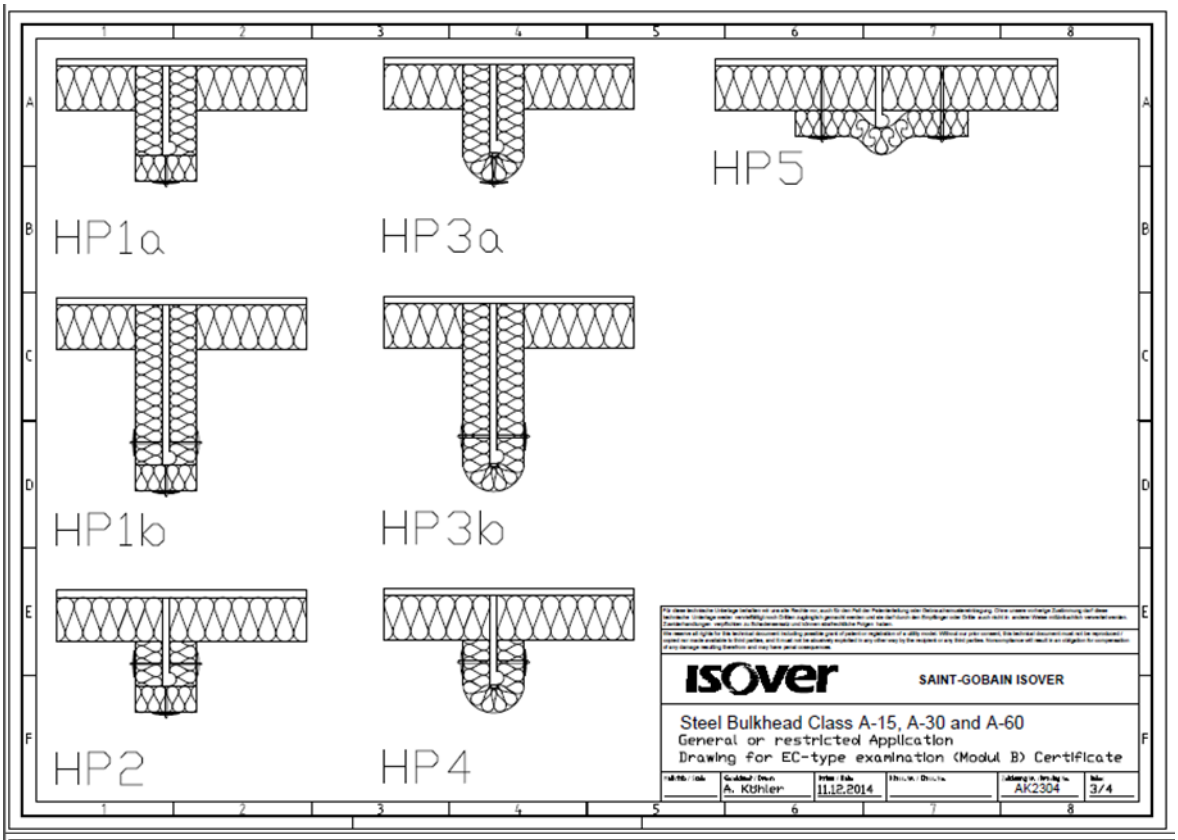
	Product Description	Application / Limitations	Type Approval Documentation

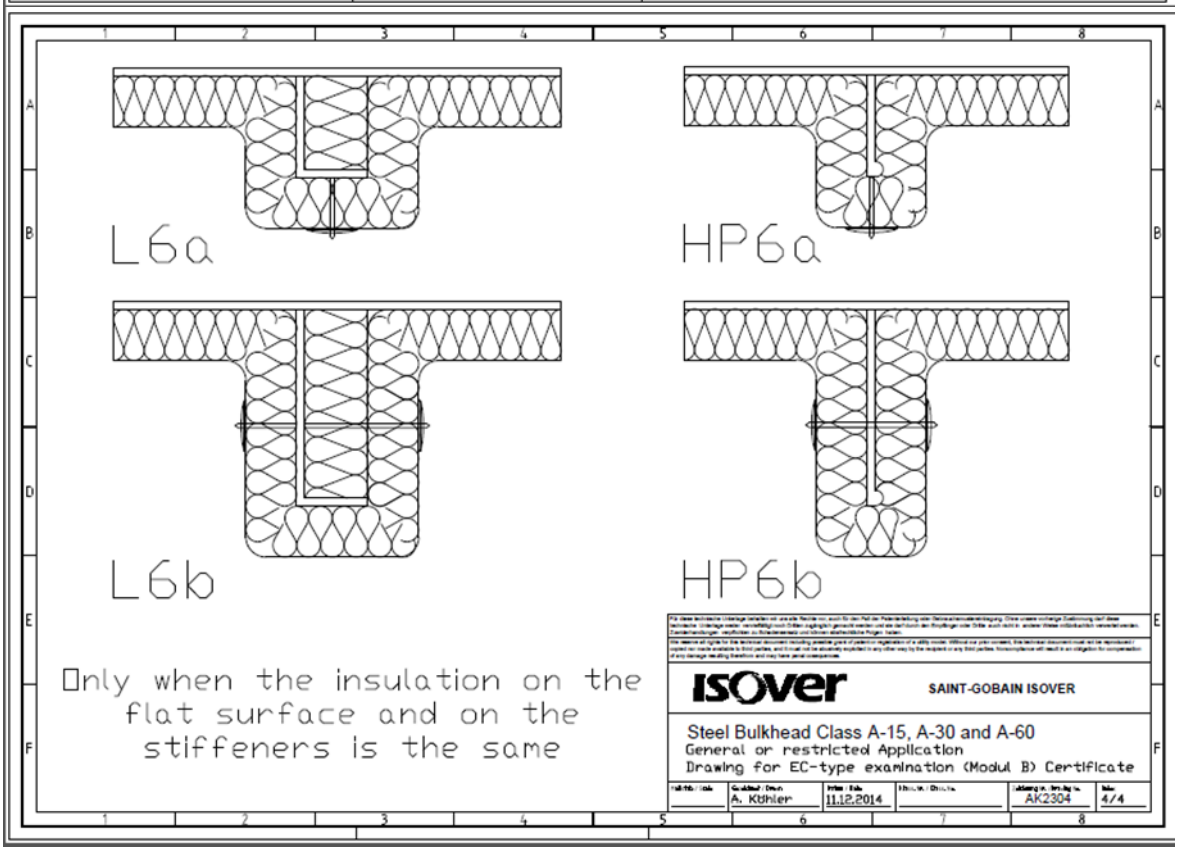
1	**"U SeaProtect 36/70 + 76/25"** Composed of a stiffened steel bulkhead insulated on stiffened side with min. 70 mm mineral wool of type U SeaProtect 36 (density 36 kg/m^3) from Saint-Gobain Isover G+H AG. Min. 25 mm U SeaProtect 76 (density 76 kg/m^3) is fitted around the stiffeners. Insulation (U 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.	**Approved for use as a Class A-60 Bulkhead.** Restricted application: Fire from insulated side only. Insulation of same type (U SeaProtect from Saint-Gobain Isover G+H AG) with density up to 86 kg/m^3 may be used.	Test report no. PGA10457 (with included revised drawing no. AK2295). Assessment reports nos. PHA10498c (minimum thickness and density) PHA10498d (position of joints) PHA10498e (mounting methods for insulation on stiffeners) PHA10498g (pin pattern) Drawing no. AK2304.
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/m^3) from Saint-Gobain Isover G+H AG. Min. 70 mm U SeaProtect 36 (density 36 kg/m^3) 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.	**Approved for use as a Class A-60 Bulkhead.** Restricted application: Fire from insulated side only. Insulation of same type (U SeaProtect from Saint-Gobain Isover G+H AG) with density up to 86 kg/m^3 may be used.	Test report no. PGA10457 (with included revised drawing no. AK2295). Assessment reports 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. AK2304.
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/m^3) from Saint-Gobain Isover G+H AG. Min. 20 mm U SeaProtect 76 (density 76 kg/m^3) 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.	**Approved for use as a Class A-60 Bulkhead.** Restricted application: Fire from insulated side only. Insulation of same type (U SeaProtect from Saint-Gobain Isover G+H AG) with density up to 86 kg/m^3 may be used.	Test report PGA11267A (with included drawing no. AK 2411) 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 30 mm) PHA10498g (pin pattern) Drawing no. AK2304.

Appendix B to MEDB000057X


layout type A
layout type B
ISOVER
SAINT-GOBAIN ISOVER
Steel Bulkhead Class A-15, A-30 and A-60
General or restricted Application
Drawing for EC-type examination (Modul B) Certificate
A. Köhler
11.12.2014
AK2304
1/4


L1
L2
L3
L4
ISOVER
SAINT-GOBAIN ISOVER
Steel Bulkhead Class A-15, A-30 and A-60
General or restricted Application
Drawing for EC-type examination (Modul B) Certificate
A. Köhler
11.12.2014
AK2304
2/4


HP1a
HP3a
HP5
HP1b
HP3b
HP2
HP4
ISOVER
SAINT-GOBAIN ISOVER
Steel Bulkhead Class A-15, A-30 and A-60
General or restricted Application
Drawing for EC-type examination (Modul B) Certificate
A. Köhler
11.12.2014
AK2304
3/4


L6a
HP6a
L6b
HP6b
Only when the insulation on the flat surface and on the stiffeners is the same
ISOVER
SAINT-GOBAIN ISOVER
Steel Bulkhead Class A-15, A-30 and A-60
General or restricted Application
Drawing for EC-type examination (Modul B) Certificate
A. Köhler
11.12.2014
AK2304
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