



Marine & Offshore

Certificate number: 42413/A2 BV

File number: AC11000/499/034

Product code: 5080H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

SAINT-GOBAIN ISOVER G+H AG

Ludwigshafen - GERMANY

for the type of product

A60 CLASS DECKS

A-60 Class Deck type U SeaProtect 66/50 + 76/25 and
A-60 Class Deck type U SeaProtect 36/70 + (76/25 or 36/70)

Requirements:

Bureau Veritas Rules for Classification of Ships, Part C, Chapter 4
SOLAS 74 Convention, as amended, Regulation II-2
IMO resolution MSC.307(88) -FTP Code 2010-
IMO MSC.1/Circ.1434
IMO MSC.1/Circ.1435

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 14 Sep 2021

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 10 Dec 2018,

Jens Bauermeister



This certificate is recognized by Transport Canada

This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

1.1 - A-60 Class deck type U SeaProtect 66 - 50 mm + U SeaProtect 76 - 25 mm

Composed of structural steel deck insulated underneath with glass wool :

- 50 mm of U SeaProtect 66, density 66 kg/m³ in between stiffeners
- 25 mm of U SeaProtect 76, density 76 kg/m³ around stiffeners using box shape (joints leading to the steel plate).

The cavities inside stiffeners if any, are also to be filled.

Fastening welded pins :

- max spacing 300 mm on plate between stiffeners and on stiffeners
- max spacing 150 mm around stiffeners

1.2 - A-60 Class deck type U SeaProtect 36 - 70 mm + (U SeaProtect 76 - 25 mm or 36 - 70 mm)

Composed of structural steel deck insulated underneath with glass wool :

- 70 mm of U SeaProtect 36, density 36 kg/m³ in between stiffeners
- 25 mm of U SeaProtect 76, density 76 kg/m³ around stiffeners using box shape (joints leading to the steel plate)
- or
- 70 mm of U SeaProtect 36, density 36 kg/m³ around stiffeners
- or
- 70 mm of U SeaProtect 36, density 36 kg/m³ on the stiffeners web and 25 mm of U SeaProtect 76, density 76 kg/m³ around the stiffeners flange.

The cavities inside stiffeners if any, are also to be filled.

Fastening welded pins :

- max spacing 300 mm on plate between stiffeners and on stiffeners.
- max spacing 150 mm around stiffeners.

2. DOCUMENTS AND DRAWINGS :

2.1 - U SeaProtect 66/50 + 76/25 : As per Manufacturer drawing N°AK2306 dated 17/06/2014.

2.2 - U SeaProtect 36/70 + 76/25 : As per Manufacturer drawing N°AK2302 dated 01/07/2014.

2.3 - U SeaProtect 36/70 + (36/70 + 76/25) : As per Manufacturer drawing N°AK2360 dated 20/06/2016.

3. TEST REPORTS :

3.1 - U SeaProtect 66/50 + 76/25 : Test report N° PGA10521, dated 24/09/2014, as per IMO 2010 FTP Code Annex 1 Part 3, from DBI, Denmark.

3.2 - U SeaProtect 36/70 + 76/25 : Test report N° 4P04380-1, dated 12/08/2014, as per IMO 2010 FTP Code Annex 1 Part 3, from SP, Sweden.

3.3 - Technical Assessment "Mounting methods for insulation on stiffeners" N°PHA10498e, dated 21/06/2016, from DBI, Denmark (L1 mounting in both test reports).

3.4 - Technical Assessment "Insulation on stiffeners" N°PHA10498b, dated 15/01/2015, from DBI, Denmark.

3.5 - Technical Assessment "Minimum thickness and density" N°PHA10498c, dated 13/10/2014, from DBI, Denmark.

3.6 - Technical Assessment "Position of joints" N°PHA10498d, dated 16/12/2014, from DBI, Denmark.

3.7 - Technical Assessment "Pin Pattern" N°PHA10498g, dated 28/11/2014, from DBI, Denmark.

4. APPLICATION / LIMITATION :

- 4.1 - The following component(s) shall comply with the requirements of the relevant Bureau Veritas rules and be type approved:
- the insulation materials "U SeaProtect 36", "U SeaProtect 66" and "U SeaProtect 76"
 - any added finish surface material(s).
- 4.2 - The thickness of insulation can be increased up to a max. area weight of 5280 g/m². The density can be increased up to 66 kg/m² or a max. area weight of 5280 g/m² whichever comes first (technical assessment N° PHA10498c).
- 4.3 - For alternative pins spacing: technical assessments N° PHA10498d and N° PHA10498g (minimum of six pins and washers used per slab).
- 4.4 - For alternative mounting methods for stiffeners insulation : technical assessment N° PHA10498e.
- 4.5 - The fitting aboard to be the same as used for the test.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The **A-60 class decks** are to be supplied by **Saint-Gobain ISOVER G+H AG** in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **Saint-Gobain ISOVER G+H AG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information concerning the production phase modules, **Saint-Gobain ISOVER G+H AG** has declared the following manufacturing site(s):

Saint-Gobain ISOVER G+H AG
Industriestrasse 11
DEU-19386 LÜBZ

6. MARKING OF PRODUCT :

The product or packing is to be marked with manufacturer name, type, designation and fire-technical rating.

7. OTHERS :

- 7.1 - It is **Saint-Gobain ISOVER G+H AG**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
- 7.2 - This Certificate supersedes the Type Approval Certificate n° 42413/A1 BV issued on 05/10/2016 by the Society.

*** END OF CERTIFICATE ***