



MARINE DIVISION

Certificate number: 19952/A0 BV

File number: ACI 1000/353/018

Product code: 5010H

*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*

**ROCKWOOL A/S**  
Hedehusene - DENMARK

*for the type of product*

**A30 CLASS BULKHEADS**

A-30 class Bulkhead

**Requirements:**

BV Rules Part C Chapter 4 - SOLAS 74, as amended, Chapter II.2

*This certificate is issued to attest that BUREAU VERITAS 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: 24 Aug 2015**

For BUREAU VERITAS,

At BV FREDERICIA, on 24 Aug 2010,

Arne Madsen



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. 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 Division 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 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 :

#### **A-30 CLASS BULKHEAD**

Structural steel bulkhead insulated with either :

Common international solutions :

Construction	Product Description	Application / Limitations
<b>Solution 1</b> A-30 Bulkhead, Steel Rockwool Marine Batts 45. 50 mm / 25 mm	A-30 Bulkhead, Rockwool Marine Batts 45.  Mineral wool <b>Rockwool Marine            Batt 45</b> density 45 kg/m <sup>3</sup> 50mm thick between stiffeners, 25mm thick on top of stiffeners. The space between the stiffener's flange and the bulkhead plate is filled with mineral wool.  Maximum distance between 2 pins : 300 mm	Fire against either side.
<b>Solution 2</b> A-30 Bulkhead, Steel  Rockwool Marine Wired Mat 90. 50 mm / 30 mm	A-30 Bulkhead, Rockwool Marine Wired Mat 90  Mineral wool <b>Rockwool Marine            Wired Mat 90</b> density 90 kg/m <sup>3</sup> 50mm thick between stiffeners, 30mm thick on top of stiffeners. The space between the stiffener's flange and the bulkhead plate is filled with mineral wool.  Pin spacing : 300 x 300 mm	Fire against either side.

Local national solutions :

Construction	Product Description	Application / Limitations	National country
<b>Solution A</b> A-30 Bulkhead, Steel Rockwool Marine Batts 120. 50 mm / 30 mm	A-30 Bulkhead, Rockwool Marine Firebatts 120.  Composed of steel bulkhead insulated on surface with minimum 50 mm mineral wool of type "Rockwool Marine Firebatts 120 of density 120 kg/m <sup>3</sup> between stiffeners, and minimum 30 mm around stiffeners. The bulkhead insulation is mounted with standard 3 mm steel pins and 38 mm steel clips ( spring washers ) at intervals of approx 300 mm.	Fire against either side.	Norwegian solution :  Brannplate 110
<b>Solution B</b> A-30 Bulkhead, Steel  Rockwool Marine	A-30 Bulkhead, Rockwool Marine Firebatts 100.  Composed of steel bulkhead	Fire against either side.	UK, Benelux, France

Firebatts 100. 40 mm / 25 mm	insulated on surface with minimum 40 mm mineral wool of type “  Rockwool Marine Firebatts 100 of density 100 kg/m3 between stiffeners, and minimum 25 mm around stiffeners. The bulkhead insulation is mounted with standard 3 mm steel pins and 38 mm steel clips ( spring washers ) at intervals of approx 300 mm.		solution :  Marine Firebatt 2000, Marine Slab 758, Marine Slab 759
<b>Solution C</b> A-30 Bulkhead, Steel Rockwool Marine Firebatts 100. 50 mm / 40 mm	A-30 Bulkhead, Rockwool Marine Firebatts 100.  Mineral wool Rockwool Marine Firebatts 100 density 100 kg/m3 , 50mm thick between stiffeners, 40mm thick around stiffeners (U-shaped box). The space between the stiffener's flange and the bulkhead plate is filled with mineral wool.  Maximum distance between 2 pins : 390 mm	Fire against either side.	France solution :  Rockwool 759

**2. DOCUMENTS AND DRAWINGS :**

As Manufacturer's drawings attached in tests reports mentioned in § 3.

**3. TEST REPORTS :**

- 3.1- Test report N° G 10148 Serial N° 6100 dated 9th April 1996 as per IMO A754 (18) from DIFT, Denmark.
- 3.2- Test report N° GV95.33.1 dated 26.10.1995 as per IMO A754 (18) from TUV, Germany.
- 3.3- Test report N° 846002.08 dated 27.11.1997 as per IMO A754 (18) from SINTEF, Norway.
- 3.4- Test report N° 96-DG-813-TO/1 dated 24.02.1997 as per IMO A754 (18) from RINA, Italy.
- 3.5- Test report N° G 10387 Serial N° 6801 dated 11.03.1998 as per IMO A754 (18) from DIFT, Denmark.

**4. APPLICATION / LIMITATION :**

- 4.1- The fitting aboard to be the same as used for the test.
- 4.2- Flame spread, smoke characteristics and calorific value of the lining to be as per applicable regulations.
- 4.3- The insulating materials shall comply with the requirements of BV Rules, to the satisfaction of the Society for acceptance of the division on board the concerned ship.

**5. PRODUCTION SURVEY REQUIREMENTS :**

The products are to be manufactured, examined and tested by Rockwool A/S in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

Production sites are to be recognized by Bureau Veritas as per NR320 for HBV products. To this end Rockwool A/S has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

**6. MARKING OF PRODUCT :**

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

**7. OTHERS :**

This approval is given with the understanding that the manufacturer will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of fitting and general maintenance of the approved equipment and the conditions of this approval.

**\*\*\* END OF CERTIFICATE \*\*\***