



MARINE DIVISION

Certificate number: 07997/A0 BV

File number: ACI 1200/51/023

Product code: 5170H

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

ALVEDOOR AB

Alvesta - SWEDEN

for the type of product

B15 CLASS DOORS

B-15 class single leaf hinged fire door-Type "ALVEDOOR B-15 M"

Requirements:

BV Rules Part C Chapter 4 - SOLAS 74 Convention, as amended, Regulations II-2/9.4.1.1.2, II-2/9.4.1.2.1, II-2/9.4.2 - IMO Resolution A.754(18) - IMO Resolution MSC.61(67) Annex 1, Part 3 and Annex 2 - IMO MSC/Circ.916

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: 20 Oct 2014

For BUREAU VERITAS,

At BV GOTHENBURG, on 20 Oct 2009,

Magne Moller



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 :

B-15 class door - Type "ALVEDOOR B-15 M"

Single leaf hinged door composed of an insulating core of approximately 38 mm of "Rockwool 337.00", density 150 kg/m³ (+/- 10 %) faced on both sides with 0.7 mm thick glued (150 g/m²) steel sheets. The door is fitted with a window, glass type "Contraflam 31", in its upper part and an escape panel with ventilation louvre in lower part of doorblade. The door frame is made up of steel sheet 1.5mm thick

Maximum door leaf size: 2114 x 934 mm (height x width);
 Maximum clear size opening: 2080 x 900 mm;
 Maximum escape panel size: 400 x 500 mm;
 Maximum ventilation louvre size: area up to 0.05 m²;
 Maximum glass clear size: 350 x 350 mm.

2. DOCUMENTS AND DRAWINGS :

- 2.1- Drawings n°C301074, C301078A, C301293, D300925D, D300925E, D300925F, D100345B, D100345, P929546 from the Manufacturer.
- 2.2- Manual(s) for installation, use and maintenance is/are to be stamped by the Society's Surveyor and supplied in the language prescribed by the Maritime National Administration to whom the ship is registered.
- 2.3- Manufacturing documentation: to be stamped by the Society's Surveyor.

3. TEST REPORTS :

- 3.1- Test report n°GV99.16.1 dated August 25, 1999 as per IMO FTP Code Annex 1 part 3 [testing standard: IMO Resolution A.754(18)] issued by TÜV Nord, Germany.
- 3.2- Test report n°PG10690 dated May 11, 2000 as per IMO FTP Code Annex 1 part 3 [testing standard: IMO Resolution A.754(18)] issued by DIFT, Denmark.
- 3.3- Technical assessment WFRC n°C121929 dated November 12, 2001 as per IMO FTP Code Annex 1 Part 3 issued by the Warrington fire Research Center, UK.
- 3.4- Non combustible material: "Rockwool 337", nominal density 150 kg/m³, manufactured by ROCKWOOL AB, Sweden; Test report N° PF 10851 dated December 16, 1999 as per IMO FTP Code Annex 1 Part 1 [testing standard: IMO Resolution A.799(19)] issued by DIFT, Denmark. To be EC type approved and to bear the □ mark.
- 3.5- Adhesive, type "Casco Nobel 1833 PUR 1K", 150 g/m² manufactured by Casco Nobel A/S. Test report n°20192.6.2 as per IMO FTP Code Annex 1 Part 5 [testing standard: IMO Resolution A.653(16)] issued by TÜV Nord, Germany. (Filed under Society's reference n°ACI 1330/041).
- 3.6- Fire glass "Contraflam 31" manufactured by Vegla Aachen, Germany.
- 3.7- Fire glass "Pyrostop 60-10 GII" manufactured by Pilkington.

4. APPLICATION / LIMITATION :

Application / Limitation of use :

- 4.1- Approval also valid for ships having to comply with IMO Resolution A649 (The "MODU Code").

On board installation & Maintenance requirements :

- 4.2 - Flame spread characteristics and calorific value of the lining to be as per Rule requirements.
- 4.3 - The fitting aboard to be the same as used for the test.
- 4.4- The door should be mounted in a B-15 class bulkhead.
- 4.5- Openings made in or under doors must have a total net area not exceeding 0,05 m².

5. PRODUCTION SURVEY REQUIREMENTS :

The A60 fire doors are to be manufactured, examined and tested by **Alvedoor AB** 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 **Alvedoor AB** has to make the necessary arrangements for a Society's Surveyor to perform visits and product audits at the production sites.

Alvedoor AB has declared to Bureau Veritas that the type of product described in this certificate may be manufactured at the following production sites :

Alvedoor AB
Blådingevägen 32
34232 Alvesta
Sweden

6. MARKING OF PRODUCT :

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

7. OTHERS :

This approval is given on the understanding that the Manufacturer will accept full responsibility for informing shipbuilders 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 *****