



# DET NORSKE VERITAS

## EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2002/75/EC, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

**CERTIFICATE NO. MED-B-4188**

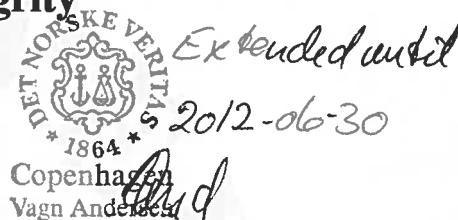
This Certificate consists of 7 pages

*This is to certify that the*  
**"A" Class divisions, fire integrity**

*with type designation(s)*  
**A-60 Bulkhead, Steel**

*Manufacturer*

**Rockwool - Marine & Offshore A/S**  
Hedehusene, Denmark

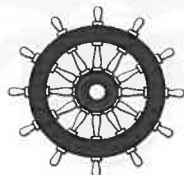


*is found to comply with the requirements in the following Regulations/Standards:*  
Annex A.1, item No. A.1/3.11a and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/3.2.5 and IMO FTP Code.

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

*Place and date*

Høvik, 2007-03-27  
for DET NORSKE VERITAS AS



Notified Body No. 0575

*This Certificate is valid until*

2011-12-20

Kristen Ulveseter  
Manager, MTPNO370  
Department Systems & Components

Rolf Emilsen  
Surveyor

*DNV local office:*  
DNV Copenhagen



*Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended.*

*The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.*

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



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Job Id.: 344.1-000237-5  
Item No.: A1/3.11a

### Product description

A-60 Bulkhead, Steel”

Steel bulkheads with different insulation solutions are listed in enclosed appendix.

(For latest revision of the appendix, see <http://exchange.dnv.com/tari>).

### Applications/Limitations

Approved for use as a class A-60 bulkhead. Applications/Limitations see appendix.

The insulation used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity.

Each product is to be supplied with its manual for installation and maintenance.

### Type Approval documentation

Given in enclosed appendix

Tested according to IMO FTPC Part 3 (IMO Res. A. 754(18)).

### Marking of product


The product or packing is to be marked with name of manufacturer, type designation, fire-technical rating, the Mark of Conformity and USCG approval (see page 3).





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## Mark of conformity

The manufacturer is allowed to affix the Mark of Conformity  according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

- Module D:** The quality system for production and testing shall be approved by the Notified Body.
- Module E:** The quality system for inspection and testing shall be approved by the Notified Body.
- Module F:** Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who shall issue a Certificate of Conformity.

## USCG Approval

An 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 United States of America and the EEA EFTA states on the mutual recognition of certificates of conformity for marine" signed 17 October 2005.





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**Appendix Rev. No. 2 (4 pages)**

**QS- Certificate of Assessment-EC, MED-B-4188**

**Common International Solutions:**

Construction	Product Description	Application / Limitations	Type Approval Documentation
Solution no. <b>1 – A60BH</b>  <b>A-60 Bulkhead, Steel</b>  <b>Rockwool Marine Firebatts 100 60 mm / 25 mm</b>	<b>A-60 Bulkhead, Rockwool Marine Firebatts 100.</b>  Composed of steel bulkhead insulated with minimum 60 mm mineral wool of type "Rockwool Marine Firebatts 100" of density 100 kg/m <sup>3</sup> between stiffeners, and minimum 25 mm mineral wool of type "Rockwool Marine Firebatts 100" 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 / 400 mm, according to drawing.	<b>Approved for use as a Class A-60 Bulkhead.</b>  <b>General application. Fire against either side.</b>	Test report 2004CS01428/3 , 4 March 2004 , RINA
Solution no. <b>2 – A60BH</b>  <b>A-60 Bulkhead, Steel</b>  <b>Rockwool Marine Firebatts 130 2 x 30 mm / 30 mm</b>	<b>A-60 Bulkhead, Rockwool Marine Firebatts 130.</b>  Composed of steel bulkhead insulated with minimum two layers of 30 mm mineral wool of type "Rockwool Marine Firebatts 130" of density 130 kg/m <sup>3</sup> between stiffeners, and minimum 30 mm mineral wool of type "Rockwool Marine Firebatts 130" 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, according to drawing.	<b>Approved for use as a Class A-60 Bulkhead.</b>  <b>General application. Fire against either side.</b>	Test report G 10096 / 5994 , 26 January 1996 , DIFT
Solution no. <b>3 – A60BH</b>  <b>A-60 Bulkhead, Steel</b>  <b>Rockwool Marine Firebatts 130 &amp; Rockwool Marine Wired Mat 105 65 mm / 30 mm</b>	<b>A-60 Bulkhead, Rockwool Marine Firebatts 130 &amp; Rockwool Marine Wired Mat 105.</b>  Composed of steel bulkhead insulated with minimum 65 mm mineral wool of type "Rockwool Marine Firebatts 130" of density 130 kg/m <sup>3</sup> between stiffeners, and minimum 30 mm mineral wool of type "Rockwool Marine Wired Mat 105" of density 105 kg/m <sup>3</sup> 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, according to drawing.	<b>Approved for use as a Class A-60 Bulkhead.</b>  <b>General application. Fire against either side.</b>	Test report PG 10842 / 8061 , 15 June 2001 , DIFT
Solution no. <b>4 – A60BH</b>  <b>A-60 Bulkhead, Steel</b>  <b>Rockwool Marine Wired Mat 90 2 x 45 mm / 45 mm</b>	<b>A-60 Bulkhead, Rockwool Marine Wired Mat 90.</b>  Composed of steel bulkhead insulated with minimum two layers of 45 mm mineral wool of type "Rockwool Marine Wired Mat 90" of density 90 kg/m <sup>3</sup> between stiffeners, and minimum 45 mm mineral wool of type "Rockwool Marine Wired Mat 90" 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, according to drawing.	<b>Approved for use as a Class A-60 Bulkhead.</b>  <b>General application. Fire against either side.</b>	Test report 2006CS013889-1 2007-02-07



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<p>Solution no <b><u>5 – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel</b></p> <p><b>Rockwool Marine Wired Mat 105 75 mm / 30 mm</b></p>	<p><b>A-60 Bulkhead, Rockwool Marine Wired Mat 105.</b></p> <p>Composed of steel bulkhead insulated with minimum 75 mm mineral wool of type “Rockwool Marine Wired Mat 105” of density 105 kg/m3 between stiffeners, and minimum 30 mm mineral wool of type “Rockwool Marine Wired Mat 105 “ of density 105 kg/m3 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, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p><b>General application. Fire against either side.</b></p>	<p>Test report 2006CS013889/2 2007-02-07</p>
<p>Solution no. <b><u>6 – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel Restricted</b></p> <p><b>Rockwool Marine Firebatts 130 50 mm / 50 mm</b></p>	<p><b>A-60 Bulkhead Restricted , Rockwool Marine Firebatts 130.</b></p> <p>Composed of steel bulkhead insulated with minimum 50 mm mineral wool of type “Rockwool Marine Firebatts 130” of density 130 kg/m3 between stiffeners, and minimum 50 mm mineral wool of type “Rockwool Marine Firebatts 130“ 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, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p><b>Restricted use. Only fire at the insulated side.</b></p>	<p>Test report G 10095 / 5993 , 26 January 1996 , DIFT</p>
<p>Solution no. <b><u>7 – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel Restricted</b></p> <p><b>Rockwool Marine Firebatts 100 40 mm / 40 mm</b></p>	<p><b>A-60 Bulkhead Restricted , Rockwool Marine Firebatts 100.</b></p> <p>Composed of steel bulkhead insulated with minimum 40 mm mineral wool of type “Rockwool Marine Firebatts 100” of density 100 kg/m3 between stiffeners, and minimum 40 mm mineral wool of type “Rockwool Marine Firebatts 100“ 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 / 400 mm, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p><b>Restricted use. Only fire at the insulated side.</b></p>	<p>Test report 2004CS014787 , 13 December 2004 RINA</p>

**Local National Solutions:**

Construction	Product Description	Application / Limitations	Type Approval Documentation	National Country
<p>Solution no. <b><u>A – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel</b></p> <p><b>Rockwool Marine Firebatts 120 80 mm / 30 mm</b></p>	<p><b>A-60 Bulkhead, Rockwool Marine Firebatts 120.</b></p> <p>Composed of steel bulkhead insulated with minimum 80 mm mineral wool of type “Rockwool Marine Firebatts 120” of density 120 kg/m3 between stiffeners, and minimum 30 mm mineral wool of type “Rockwool Marine Firebatt 120 “ around stiffeners. The insulation to be covered by galvanised wire mesh 3/4”. The bulkhead insulation is mounted with standard 3 mm steel pins and 38 mm steel clips ( spring washers ) at intervals of approx 300 mm, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead.</b></p> <p><b>General application. Fire against either side.</b></p>	<p>Test Report 250000.42/95.233 SINTEF 13.07.1995 and 846000.07/97.124 SINTEF 07.03.1997</p>	<p>Norway</p> <p>Rockwool Firebatt 110</p>



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<p>Solution no. <b><u>B – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel</b></p> <p><b>50 mm + 40 / 40 mm</b></p>	<p><b>A-60 Bulkhead, Rockwool Marine Firebatts 120 &amp; Rockwool Marine Wired Mat 125.</b></p> <p>Composed of steel bulkhead insulated with minimum 50 mm mineral wool of type “Rockwool Marine Firebatts 120” of density 120 kg/m<sup>3</sup> between stiffeners, and minimum 40 mm mineral wool of type “Rockwool Marine Wired Mat 125 “ of density 125 kg/m<sup>3</sup> between stiffeners and 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, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead. General application. Fire against either side.</b></p>	<p>Test Report 22N002.40 SINTEF 04.12.2000</p>	<p>Norway</p> <p>Rockwool Firebatt 110</p> <p>Rockwool Firemat 100 (Brannmatte)</p>
<p>Solution no. <b><u>C – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel</b></p> <p><b>Rockwool Marine Firebatts 120 80 mm / 30 mm</b></p>	<p><b>A-60 Bulkhead, Rockwool Marine Firebatts 120 Alu.</b></p> <p>Composed of steel bulkhead insulated with minimum 80 mm mineral wool of type “Rockwool Marine Firebatts 120 Alu” of density 120 kg/m<sup>3</sup> between stiffeners, and minimum 30 mm mineral wool of type “Rockwool Marine Firebatts 120 Alu “ around stiffeners. The insulation is covered by 0.2 mm aluminium foil. The bulkhead insulation is mounted with standard 3 mm steel pins and 31/38 mm steel clips ( spring washers ) at intervals of approx 300 mm, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead. General application. Fire against either side.</b></p>	<p>Test Report 250000.42/95.233 SINTEF 17.07.1995</p>	<p>Norway</p> <p>Rockwool Alubatt 110</p>
<p>Solution no. <b><u>D – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel Restricted</b></p> <p><b>Rockwool Marine Wired Mat 125 60 mm / 60 mm</b></p>	<p><b>A-60 Bulkhead, Rockwool Marine Wired Mat 125.</b></p> <p>Composed of steel bulkhead insulated with minimum 60 mm mineral wool of type “Rockwool Marine Wired Mat 125” of density 125 kg/m<sup>3</sup> between stiffeners, and minimum 60 mm mineral wool of type “Rockwool Marine Wired Mat 125 “ above 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, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead. Restricted use. Only fire at the insulated side.</b></p>	<p>Test Report 22N002.07 C SINTEF 12.10.1998</p>	<p>Norway</p> <p>Rockwool Firemat 100 (Brannmatte)</p>
<p>Solution no. <b><u>E – A60BH</u></b></p> <p><b>A-60 Bulkhead, Steel</b></p> <p><b>Rockwool Marine Firebatt 100 75 mm / 25 mm</b></p>	<p><b>A-60 Bulkhead, Rockwool Marine Firebatts 100 or Rockwool Slab 759</b></p> <p>Composed of steel bulkhead insulated with minimum 75 mm mineral wool of type “Rockwool Marine Firebatts 100” of density 100 kg/m<sup>3</sup> between stiffeners, and minimum 25 mm mineral wool of type “Rockwool Marine Firebatts 100” around stiffeners. The bulkhead insulation is mounted with standard 3 mm steel pins and 38 mm steel clips ( spring washers ) at intervals of approx 250 mm, according to drawing.</p>	<p><b>Approved for use as a Class A-60 Bulkhead. General application. Fire against either side.</b></p>	<p>Test Report 96.DG.813.TO RINA 24.02.1997</p>	<p>France Benelux</p> <p>Rockwool Slab 759</p>

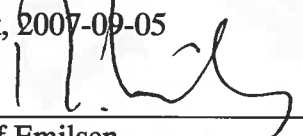




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Construction	Product Description	Application / Limitations	Type Approval Documentation	National Country
Solution no <b><u>F – A60BH</u></b>  <b>A-60 Bulkhead,            Steel</b>  <b>Rockwool Marine            Wired Mat 90            90 mm / 30 mm</b>	<b>A-60 Bulkhead, Rockwool Marine Wired Mat 90.</b>  Composed of steel bulkhead insulated with minimum 90 mm mineral wool of type "Rockwool Marine Wired Mat 90" of density 90 kg/m <sup>3</sup> between stiffeners, and minimum 30 mm mineral wool of type "Rockwool Marine Wired Mat 90" 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, according to drawing.	<b>Approved for use as a Class A-60 Bulkhead. General application. Fire against either side.</b>	Test report GV01.50.1 , 05 07.2001 , TÜV Brandversuchshaus Hamburg	Germany  RTD-S
Solution no0 <b><u>G – A60BH</u></b>  <b>A-60 Bulkhead,            Steel</b>  <b>Rockwool 757            75 mm / 40 mm</b>	<b>A-60 Bulkhead, Rockwool 757.</b>  Composed of steel bulkhead insulated with minimum 75 mm mineral wool of type "Rockwool 757" of density 105 kg/m <sup>3</sup> between stiffeners, and minimum 40 mm mineral wool of type "Rockwool 757" around stiffeners. The bulkhead insulation is mounted with standard 3 mm steel pins and 38 mm steel clips ( spring washers ) at intervals of approx 390 mm, according to drawing.	<b>Approved for use as a Class A-60 Bulkhead. General application. Fire against either side.</b>	Test report G 10388, 11 03.1998 , DIFT	France Benelux  Rockwool 757

Place and date  
 Høvik, 2007-09-05

  
 Rolf Emilsen  
 Surveyor



END OF CERTIFICATE