



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-4189

This Certificate consists of 7 pages

This is to certify that the

"A" Class divisions, fire integrity

with type designation(s)

A-60 Deck, Steel

Manufacturer

Rockwool - Marine & Offshore A/S

Hedehusene, Denmark



*Extended until
2012-06-30*

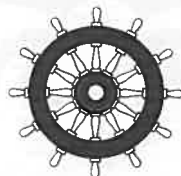
*is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/3.11a and Annex B, Module B in the Directive. SOLAS 74 as
amended, Regulation II-2/3.2.5 and IMO FTP Code.*

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

Place and date

Høvik, 2007-03-27

for DET NORSKE VERITAS AS



This Certificate is valid until

2011-12-20

[Signature]
Kristen Ulveseter
Manager, MTPNO370
Department Systems & Components

Notified Body No. 0575

[Signature]
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.



Cert. No.: MED-B-4189
Job Id.: 344.1-000237-5
Item No.: A1/3.11a

Product description

“A-60 Deck, Steel”

Steel deck 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 deck. 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. 0 (4 pages)

QS- Certificate of Assessment-EC, MED-B-4189

Common International Solutions:

Construction	Product Description	Application / Limitations	Type Approval Documentation
Solution no . <u>1 – A60DCK</u> A-60 Deck, Steel Rockwool Marine Firebatts 100 40 mm / 25 mm	A-60 Deck, Rockwool Marine Firebatts 100. Composed of steel deck insulated on the underside of the deck with minimum 40 mm mineral wool of type “Rockwool Marine Firebatts 100” of density 100 kg/m3 between stiffeners, and minimum 25 mm mineral wool of type “Rockwool Marine Firebatts 100“ around stiffeners. The deck 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	Approved for use as a Class A-60 Deck. General application. Fire against either side.	Test report 96-DG-348-TO , 22 August 1996 RINA
Solution no . <u>2 – A60DCK</u> A-60 Deck, Steel Rockwool Marine Firebatts 130 40 mm / 40 mm	A-60 Deck, Rockwool Marine Firebatts 130. Composed of steel deck insulated on the underside of the deck with minimum 40 mm mineral wool of type “Rockwool Marine Firebatts 130” of density 130 kg/m3 between stiffeners, and minimum 40 mm mineral wool of type “Rockwool Marine Firebatts 130“ around stiffeners. The deck 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	Approved for use as a Class A-60 Deck. General application. Fire against either side.	Test report G 10141 / 6026 , 26 February 1996, DIFT
Solution no. <u>3 – A60DCK</u> A-60 Deck, Steel Rockwool Marine Firebatts 130 & Rockwool Marine Wired Mat 105 45 mm / 30 mm	A-60 Deck, Rockwool Marine Firebatts 130 & Rockwool Marine Wired Mat 105 Composed of steel deck insulated on the underside of the deck with minimum 45 mm mineral wool of type “Rockwool Marine Firebatts 130” of density 130 kg/m3 between stiffeners plus infill for L-shape stiffener, and minimum 30 mm mineral wool of type “Rockwool Marine Wired Mat 105“ of density 105 kg/m3 around stiffeners. The deck 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	Approved for use as a Class A-60 Deck. General application. Fire against either side.	Test report PG 10944 / 8276, 31 October 2001, DIFT



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<p>Solution no. 4 – A60DCK</p> <p>A-60 Deck, Steel</p> <p>Rockwool Marine Wired Mat 90 45 mm / 45 mm</p>	<p>A-60 Deck, Rockwool Marine Wired Mat 90</p> <p>Composed of steel deck insulated on the underside of the deck with minimum 45 mm mineral wool of type “Rockwool Marine Wired Mat 90” of density 90 kg/m3 between stiffeners and over stiffeners, as one layer. The deck 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>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test report PG 10984 / 8384 , 14 March 2002 , DIFT</p>
<p>Solution no. 5 – A60DCK</p> <p>A-60 Deck, Floating Floor , Steel</p> <p>Rockwool Marine Slab 200 2 x30 mm</p>	<p>A-60 Deck , Floating Floor , Rockwool Marine Slab 200</p> <p>Composed of steel deck insulated with a floating floor on top. The insulation on top of the deck consists of 2 x 30 mm “Rockwool Marine Slab 200” of density 200 kg/m3. Made with staggered and tight butt joints. Insulation installed floating without pin’s/washer, and covered by minimum one layer of minimum 2 mm steel sheets spot welded together.</p>	<p>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test report 103020.44 , 18 February 2004 , SINTEF NBL</p>

Local National Solutions:

Construction	Product Description	Application / Limitations	Type Approval Documentation	National Country
<p>Solution no. A – A60DCK</p> <p>A-60 Deck, Steel</p> <p>Rockwool Marine Wired Mat 125 40 mm / 40 mm</p>	<p>A-60 Deck, Rockwool Marine Wired Mat 125</p> <p>Composed of steel deck insulated on the underside of the deck with minimum 40 mm mineral wool of type “Rockwool Marine Wired Mat 125” of density 125 kg/m3 between stiffeners and over stiffeners, as one layer. The deck 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>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test Report 22N002.29.A SINTEF 11.01.2000</p>	<p>Norway</p> <p>Rockwool Firemat 100 (Brannmatte)</p>
<p>Solution no. B – A60DCK</p> <p>A-60 Deck, Steel</p> <p>Rockwool Marine Firebatts 120 & Rockwool Marine Wired Mat 125 50 mm + 30 / 30 mm</p>	<p>A-60 Deck, Rockwool Marine Firebatts 120 & Rockwool Marine Wired Mat 125.</p> <p>Composed of steel deck insulated with minimum 50 mm mineral wool of type “Rockwool Marine Firebatst 120” of density 120 kg/m3 between stiffeners, and minimum 30 mm mineral wool of type “Rockwool Marine Wired Mat 125 “ of density 125 kg/m3 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>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test Report 22N002.10b SINTEF 05.11.1998</p>	<p>Norway</p> <p>Rockwool Firebatt 110</p> <p>Rockwool Firemat 100</p>



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<p>Solution no. C – A60DCK</p> <p>A-60 Deck, Steel</p> <p>Rockwool Marine Firebatts 120 Alu 50 mm / 30 mm</p>	<p>A-60 Bulkhead, Rockwool Marine Firebatts 120 Alu.</p> <p>Composed of steel deck insulated with minimum 50 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 Firebatts 120" 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>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test Report 22N002.31 SINTEF 10.03.2000</p>	<p>Norway</p> <p>Rockwool Alubatt 110</p>
<p>Solution no. D – A60DCK</p> <p>A-60 Deck, Floating Floor , Steel</p> <p>Rockwool Marine Slab 140 60 mm</p>	<p>A-60 Deck , Floating Floor , Rockwool Marine Slab 140</p> <p>Composed of steel deck insulated with a floating floor on top. The insulation on top of the deck consists of 60 mm "Rockwool Marine Slab 140" of density 140 kg/m³. Insulation installed floating without pin's/washer, and covered by minimum two layers of minimum 1.5 + 3.0 mm steel sheets spot welded together or fastened together by pop rivets.</p>	<p>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test report 22N002.07 D SINTEF NBL 12.10.1998</p>	<p>Norway</p> <p>Rockwool Slab FF 14</p>
<p>Solution no. E – A60DCK</p> <p>A-60 Deck, Steel</p> <p>Rockwool Marine Firebatt 100 40 mm / 25 mm</p>	<p>A-60 Deck , Rockwool Marine Firebatts 100 or Rockwool Slab 759</p> <p>Composed of steel deck insulated on the underside of the deck with minimum 40 mm mineral wool of type "Rockwool Marine Firebatts 100" of density 100 kg/m³ between stiffeners and minimum 25 mm mineral wool of type "Rockwool Marine Firebatts 100" over stiffeners (U-shaped boxes) Cavities inside stiffeners are filled with same mineral wool as above. The deck 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>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test Report 96.DG.348.TO RINA 22.08.1996</p>	<p>France Benelux</p> <p>Rockwool Slab 759</p>
<p>Solution no. F – A60DCK</p> <p>A-60 Deck, Steel</p> <p>Rockwool Marine Firebatt 100 40 mm / 40 mm</p>	<p>A-60 Deck, Rockwool Marine Firebatts 100 or Rockwool Slab 759</p> <p>Composed of steel deck insulated on the underside of the deck 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" over stiffeners (U-shaped boxes) Cavities inside stiffeners are filled with same mineral wool as above. The deck 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>Approved for use as a Class A-60 Deck.</p> <p>General application. Fire against either side.</p>	<p>Test Report 98R1 3114A SP Laboratories 14.07.1998</p>	<p>France Benelux</p> <p>Rockwool Slab 759</p>



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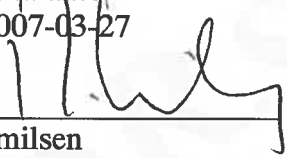


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Place and date
Høvik, 2007-03-27


Rolf Emilsen
Surveyor



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