

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED). This Certificate is issued by DNV GL SE based on the notification of the Federal Maritime and Hydrographic Agency of Germany.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)

THF-II Type Class A-60 Lightweight Floating Deck Covering

Issued to

Taicang Hongle Marine Fittings Co.,Ltd.
Taicang, China

is found to comply with the requirements in the following Regulations/Standards:

Regulation **(EU) 2015/559,**

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 2010 FTP Code.

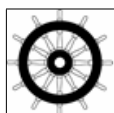
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2021-09-26.**

Issued at **Hamburg** on **2016-09-27**

DNV GL local station:
Shanghai CMC

Approval Engineer:
Thomas Blohme



Notified Body
No.: **0098**

for **DNV GL SE**

Sven Dudzsus
Head of Notified Body

A 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 European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment", signed February 27th, 2004.

The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU. This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL SE of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled. Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

Job Id: **344.1-005517-4**
Certificate No: **MEDB000015N**

Product description

"THF-II Type Class A-60 Lightweight Floating Deck Covering"

Composed of a 5 mm thick stiffened steel deck, insulated on upper side (unexposed side) with two layers of insulation core.

The insulation core consists of 20 mm nominal thick bottom layer TG 2 type ceramic wool of density 170 kg/m^3 , $\leq 0,5\%$ moisture content (manufactured by Changzhou Thermal Insulation Material Factory Co., Ltd.), steel fabric and 30 mm nominal thick top layer 'THF-II' Type Surface Deck Covering of nominal density $\leq 1500 \text{ kg/m}^3$, $\leq 2,0\%$ moisture content.

Total nominal thickness of the two insulation materials: 50 mm (30mm + 20mm).

For further details see test report stated under Type Examination documentation, below.

Application/Limitation

Approved for use as a horizontal fire retarding deck division of class A-60.

The insulation material, any surface materials and adhesive used have to be approved according to the Marine Equipment Directive and bear the Mark of Conformity. This requirement may also be applicable for surface materials used, if required by relevant rules and regulations.

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

Type Examination documentation

Test report No. FT16032 dated 02nd February 2016 from Fare East Fire Testing Centre, Shanghai, China.

Test report No. FT16026 dated 02nd February 2016 from Fare East Fire Testing Centre, Shanghai, China.

Test report No. FT12098 dated 14th May 2012 from Fare East Fire Testing Centre, Shanghai, China.

Tests carried out

Test according to IMO 2010 FTP Code Annex 1 Part 1 and Part 3.

Marking of product

The product or packing is to be marked with name of manufacturer, type designation, MED Mark of Conformity and USCG approval if applicable (see page 1).