

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 "B" Class divisions, fire integrity

with type designation(s)
JCP-C4 Type Class B-15 ceiling (sound absorbing)

Issued to

Jiangsu Hailu Technology Incorporated Corporation
JIANGYIN, JIANGSU, China

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773**,
item No. MED/3.11b. SOLAS 74 as amended, Regulation II-2.3.4 & II-2/9 and IMO 2010 FTP Code

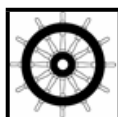
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-04-07**.

Issued at **Hamburg** on **2019-04-08**

DNV GL local station:
Jiangyin

Approval Engineer:
Timo Linn



Notified Body
No.: **0098**

for **DNV GL SE**

Gerhard Aulbert
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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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.



Product description

"The JCP-C4 Type Class B-15 ceiling" is suspended below the steel structural deck and is assembled from 25mm in total thickness having a rock wool core sandwiched between two 0.5mm thick galvanised steel sheets. The panel widths were 650, 550 and 350mm. For sound absorbing the panels' steel sheet undersides are perforated with 5mm diameter holes spaced 18mm apart. The rock wool is affixed to the steel sheets with an adhesive of approved type. The panels are connected to each other along their longitudinal edges by means of 28mm long wedged joints. The tenon on one panel, wedges into a U-shaped clamp on the receiving edge of the adjacent panel.

The panel ends connect on the flanges of a fabricated inverted T-shaped profile (W52mm, H65mm and t=2mm) running transversely to the panels. This T-shaped profile was suspended from the steel structural deck with 35 x 5mm flat bars spaced at approx. 600mm intervals along the length of each inverted T-shaped profile and are welded to the deck. A press frame made up of steel angle bars 30 x 5mm is arranged around the boundaries of the ceiling on the top surface of the panels to clamp the ceiling where it connects to bulkheads and also at the panel end connections.

Where the press frame is connected to steel structural bulkheads and at the inverted T-shaped profile at the panel ends, this is by intermittent welding.

The JCP-C4 type Class B-15 ceiling was suspended under a steel structural deck. The air gap was 425mm.

The construction of the JCP-C4 type Class B-15 ceiling shall be in accordance with the manufacturer's drawings Nos. HL-C4-03, HL-C4-03-T1, HL-C4-03-T2 and HL-C4-03-T2-01(two sheets) which are attached to the test report.

Insulation:

AZ-120 type rock wool made by Jiangyin Anzhou Construction Material Co., Ltd [density: 120kg/m³]. For further details, please see test report with included drawings listed under Type Examination documentation below.

Total panel thickness: 25 mm

For further details, please see test report with included drawings listed under Type Examination documentation below.

Application/Limitation

Approved for use as a horizontal fire retarding division of class B-15.

The minimum distance between the ceiling panel and the structural steel deck is 425 mm.

Max. panel size: 600 mm x 2400 mm (width x length).

The insulation materials and adhesives 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 and maintenance.

Type Examination documentation

Test Report No. FT12298 dated 17th December 2012 by Far East Fire Testing Centre, Shanghai, China.

This certificate is based on the previous MED Module B Certificate No. 60574-13HH.

Tests carried out

Tested according to IMO Resolution MSC.307(88) – 2010 FTP Code Annex 1, Part 3.



Job Id: **344.1-009181-2**
Certificate No: **MEDB000055J**

Marking of product

The product is to be marked with name and address of manufacturer, type designation, fire technical rating, the MED Mark of Conformity and USCG Approval Number if applicable (see first page).