

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)

W25P (light weight) - Wall panel without/with fixtures, restricted

Issued to

**R & M International GmbH
Hamburg, Germany**

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

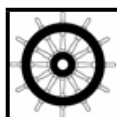
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-05-02.**

Issued at **Hamburg** on **2019-05-03**

DNV GL local station:
Hamburg

Approval Engineer:
Pavel Golyshev



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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"W25P (light weight) - Wall panel without/with fixtures, restricted"

B-Class wall construction composed of individual panels which are joined together by means of tongue connection and are additionally fixed with steel screws and pop rivets.

An individual panel is a sandwich construction made by 0.6 mm thick steel sheet (from the side exposed to fire) and 0.5 mm thick perforated steel sheet (from the other side) facings and a mineral wool core. For the mineral wool, Tizol-Flot 120 Lamella (from Joint Stock Company "Tizol" and with nominal density of 120 kg/m³) is used. The mineral wool is fixed to the steel sheets by means of approved adhesive.

The panels are jointed together on the unexposed side along the joints with 4.2 x 16 mm self-drilling steel screws at c/c 300 mm. The panels are also fixed together on the exposed side near each joint at a height of 2200 mm from the bottom of the bulkhead. Further fixing details acc. to the manufacturer drawings (1st sheet) included in test reports.

Total panel thickness: 25 mm.

Following optional installations may be included according to test report PGA11336A:

Installation 1 "Reinforcement double U-profile"

The double reinforcement is mounted inside the panel and consists of two U-shaped 18.5 mm x 80 mm x 18.5 mm x 3 mm steel profiles mounted inside each other and glued to the steel sheet with approved adhesive on both sides. The void inside the profiles is filled out with Tizol-Flot 120. Further details acc. to drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_04-11.

Installation 2 "Cable duct"

The cable duct is cut 2075 mm x 90 mm x 12.5 mm into the mineral wool towards the unexposed side of the panel. The cut-out is covered with a 2275 mm x 140 mm x 1.0 mm steel cover plate fixed to the panel with steel screws. On the exposed side of the panel approx. 900 mm from the bottom of the cover plate an opening of Ø50 mm is cut out for the cable. The opening is filled out with mineral wool around the Ø8 mm cable. At the top of the cable duct, the cable is pushed through the last 200 mm mineral wool ending at the panel edge. Further details acc. to drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_08-11.

Installation 3 "Cable penetration"

The penetration is made by Ø20 mm opening drilled into the bulkhead panel with Ø8 mm cable passing approx. 50 mm through the opening. The opening as well as the cable on the exposed side of the panel are sealed off with Sika Firesil Marine N sealing. On the unexposed side of the panel the penetration is covered with a 100 mm x 100 mm x 3.5 mm aluminium coated needle mat of type VitriBond Marine and (with nominal density of 220 kg/m³ and manufactured by Culimeta Textiles-Technologie GmbH) which is fixed to the bulkhead panel near each corner with steel screws with pressed washer. A strip of 100 mm wide aluminium duct tape is adhered with 30 mm on the bulkhead panel and 70 mm on the cover. Further details acc. to drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_9-11.

Installation 4 "5 x switch socket"

5x switch unit with cavity sockets, covered with a soft cover box. 40 mm of the edges of the cover box are bent 90° outwards and are fixed to the bulkhead panel along all four sides with steel screws with pressed washer. A strip of 100 mm wide aluminium duct tape is adhered with 70 mm on the bulkhead panel covering the screws and 30 mm upwards along the sides of the cover box. Further details acc. to drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_7-11.

Installation 5 "Astro Fuse wall light"

Type designation Astro "FUSE" with integrated locking mechanism. On the unexposed side of the panel the entire wall light is covered with a soft cover box. 50 mm of the edges of the box are bent 90° outwards and the edges are fixed to the bulkhead panel along all four sides with screws with pressed washer. A strip of 100 mm wide aluminium duct tape is adhered with 70 mm on the bulkhead panel

covering the screws and 30 mm upwards along the sides of the cover box. Further details acc. to drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_6-11.

The soft cover box in installations 4 and 5 is formed from 3.5 mm thick aluminium coated needle mat of type VitriBond Marine (with nominal density of 220 kg/m³ and manufactured by Culimeta Textiles-Technologie GmbH).

Installation 6 "Reinforcement, flat"

Reinforcement flat, consisting of 2.0 mm thick flat steel glued to the steel sheet with approved adhesive and the mineral wool inside the bulkhead panel towards the exposed side of the bulkhead, acc. to drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_5-11.

Installation 7 "Reinforcement single U-profile"

The single reinforcement is mounted inside the panel and consists of one U-shaped 23.5 mm x 80 mm x 23.5 mm x 3 mm steel profile glued to the steel sheet with approved adhesive inside the bulkhead panel towards the exposed side. The U-profile is filled out with Tizol-Flot 120, see also drawing No. W25P-LIGHT-WEIGHT+FIXTURES_FIRETEST_12.2018_03-11.

For further details, see test reports (all with included drawings) listed under Type Examination documentation below.

Application/Limitation

Approved for use as a vertical fire retarding division of Class B-0 with restricted application: the bulkhead is to be installed with the 0.6 mm thick steel sheet side to the fire hazard.

Maximum size of panels: 2475 mm x 600 mm (height x width).

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, use and maintenance.

Type Examination documentation

Test Reports Nos. PGA11313A dated 20th of November 2018 (basic wall without fittings) and PGA11336A dated 10th of January 2019 (wall with fittings) all issued by DBI Danish Institute of Fire and Security Technology, Hvidovre, Denmark.

Tests carried out

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

Marking of product

The product or packing is to be marked with name and address of manufacturer, type designation, fire-technical rating, Mark of Conformity and USCG marking if applicable (see first page).

USCG Approval Category (Module B) number

This product has been assigned a U.S. Coast Guard Module B number 164.108/EC0098 to note type approval to Module B only as it pertains to obtaining US Coast Guard approval 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.