

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)

Class B-15 ceiling with various units

Issued to

Stengel GmbH
Ellwangen, Germany

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

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

Annex A.1, item No. A.1/3.11b and Annex B, Module B in the Directive; SOLAS 74 as amended, Regulation II-2/3.4.4 and IMO 2010 FTP Code

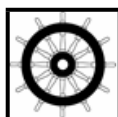
Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2022-01-24**.

Issued at **Hamburg** on **2017-01-25**

DNV GL local station:
Augsburg

Approval Engineer:
Pavel Golyshev



Notified Body
No.: **0098**

for **DNV GL SE**

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

"Class B-15 ceiling with various units"

Class B-15 ceiling panel, consisting of 25 mm mineral wool Rockwool RPI 17 covered with 0.7 mm galvanized steel sheets as basic panel for following ceilings:

Ceiling without units acc. to test report PGA10003:

- continuous Class B-15-ceiling consisting of basic panels as described above
- panels connected to each other with tongue and groove (acc. to drwg.-no.: 200024_29[V00] and photos 1 to 6)
- additional insulation strip was placed on top of the joint
acc. to drawing no.: 200024_29[V00]

Cabin- and bath room ceiling combined with various units acc. to test report PGA10004:

- continuous Class B-15-ceiling consisting of basic panels as described above
- a 25 mm wide and 150 mm high bulkhead panel section was mounted along the outer edges of both ceiling panels, acc. to drwg.-no. 200024_31[V00], page 2, detail E1 and E3 as well as photos Nos. 1 to 4, 6 and 8
- along the joint between the cabin- and bath room ceiling a bulkhead section was mounted, acc. to drwg.-no.: 200024_31[V00], page 2, detail E2
- along one longitudinal edge an additional insulation strip was placed above the connection between the ceiling and the bulkhead section, acc. to drwg.-no.: 200024_31[V00], page 2 – detail E1
acc. to drawing no.: 200024_31[V00], page 2

Various units:

- Down light, detail 1:
Type "Lightpartner DL52 A1" covered with an insulating box made of mineral wool type PAROC 220 (density 220 kg/m³), external dimensions of 550 mm x 335 mm x 65 mm, acc. to drwg.-no.: 200024_32[V00], page 3 and photos 21 to 26
- Loudspeaker, detail 2:
Type Visaton DL 8, cross section of cut out in ceiling is 93 mm; covered with an insulating box of mineral wool type PAROC 220 (density 220 kg/m³) with external dimension of 200 mm x 200 mm x 65 mm, the insulation box was also held in place by means of two strips of 100 mm wide aluminium tape, acc. to drwg.-no.: 200024_32[V00], page 3 and photos 29 and 30
- Down light, detail 3:
Type "Lightpartner DL 90S" covered with an insulating box made of mineral wool type PAROC 220 (density 220 kg/m³), external dimensions of 200 mm x 200 mm x 50 mm, acc. to drwg.-no.: 200024_32[V00], page 3 and photos 34 and 35
- Exhaust air unit with flexible aluminium duct, detail 4:
Consisting of a circular 100 mm flexible aluminium duct, type FTAI 100 connected to a steel sleeve 125/100 mm and measuring 130 mm towards the exposed face of the ceiling. The steel sleeve was insulated inside with 25 mm Rockwool Marine Lamella, an URH Exhaust air valve was mounted on the exposed side of the ceiling panel; the entire duct with sleeve was insulated outside with 25 mm Isosleeve 25 with aluminium foil, acc. to drwg.-no.: 200024_32[V00], page 4 and photos 39 to 44 and 46
- Razor socket, detail 5:
Type Merten M-Smart, cross section of cut out in ceiling is 139 x 68 mm; covered with an insulating box of mineral wool type PAROC 220 (density 220 kg/m³) with external dimension of 200 mm x 200 mm x 50 mm, the insulation box was also held in place by means of two strips of 100 mm wide aluminium tape, acc. to drwg.-no.: 200024_32[V00], page 4 and photos 49 and 51

Job Id:
Certificate No: **MEDB0000222**

Application/Limitation

Approved for use as a horizontal fire retarding division of class B-15. With a minimum distance between exposed side of the ceiling and the A-Class structural steel deck of 300 mm, the whole construction may be regarded as a horizontal fire retarding division of Class A-30.

Maximum panel size (ceiling without units acc. to test report PGA10003):
1466 mm x 2980 mm (width x length).

Maximum panel size (ceiling with units acc. to test report PGA10004):
1480 mm x 2340 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, use and maintenance.

Type Examination documentation

Test reports PGA10003 dated 30th of August 2011 and PGA10004 dated 30th of October 2011 both issued by Danish Institute of Fire and Security Technology, Hvidovre, Denmark.

Tests carried out

Tested according to IMO FTP Code Part 3 and in compliance with IMO 2010 FTP Code Ch.8.

Marking of product

The product 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).