DNV·GL

Certificate No:
MEDB00004TY

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the "A" Class divisions, fire integrity

with type designation(s)
A-60 Class bulkhead, RAC+

Issued to
CBG Systems International Pty Ltd
DERWENT PARK, TASMANIA, Australia

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2018/773,**
item No. MED/3.11a. SOLAS 74 as amended, Regulation II-2/3.2 & II-2/9, IMO 2010 FTP Code, IMO MSC/Circ.1120 and IMO MSC.1/Circ.1434

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

This Certificate is valid until **2023-12-18**.

Issued at **Høvik** on **2018-12-19**

DNV GL local station:
Hobart

Approval Engineer:
Tessa Biever

Notified Body
No.: **0575**

for **DNV GL AS**

Roald Vårheim
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 United States of America and the EEA EFTA states on the mutual recognition of Certificates of Conformity for Marine Equipment" signed 17 October 2005.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

NORWEGIAN ACCREDITATION PROD 019

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Product description

'A-60 Class bulkhead, RAC+'
Structural aluminium bulkhead insulated on the stiffened side exposed to the fire with Rapid Access Composite PLUS (RAC+) bulkhead structural fire protection system consisting of composite panels (RAC+ panel) supported by a stainless steel frame work mounted with an air gap of 150 mm between the panels and the ship bulkhead. The bulkhead is provided with an inspection hatch.

RAC+ panel
The RAC+ panel, having dimension of 2383 mm x 1183 mm and thickness of 20 mm, is composed of a 20 mm thich layer of non-combustible material named Marine Board (manufacturered by Unifrax with density of 152 kg/m^3 (nominal denstity 160 kg/m^3)) facing on both sides by means of Hybrid Inorganic Polymer System (HIPS) impregnated into a fiberglass cloth and covered with a self-adhesive veneer named VentureClad-1577CW-WML on each side or aluminium foil on the unexposed side.

The panels are mounted inside a framework created by 0.45 mm thick stainless steel channels. The framework is fixed to the aluminium bulkhead stiffeners using Omega shaped standoff brackets, having dimension of 50 mm x 100 m x 150 mm. Joints between panels are covered with stainless steel cover strips, which are insulated with 6 mm thick Superwool paper (manufactured by Morgan Thermal Ceramics with density of 230 kg/m^3) and screwed to the framework at nominal 600 mm spacing.

Each intersection of 4 panels is supported by a stainless steel corner support bracket and a locking disc, covered with a pressed stainless steel cover plate insulated with 6 mm thick Superwool Paper (manufactured by Morgan Thermal Ceramics with density of 230 kg/m^3).

Inspection hatch
The bulkhead is fitted with an inspection hatch with maximum clear light of 900 mm x 900 mm, with the hinge fitted on the exposed side, installed in the middle of a RAC+ panel. The hatch leaf, having dimensions of 900 mm x 900 mm, is composed of a stainless steel frame, 0.9 mm thick and, in between, the insulating material. This material is composed of two layers of Marine Board (manufacturered by Unifrax with density of 160 kg/m^3), 20 mm thick each, externally facing by means of Hybrid Inorganic Polymer System (HIPS) impregnated into a fiberglass cloth and covered with a self-adhesive veneer named VentureClad-1577CW-WML.
The frame is composed of a C shaped stainless steel profile having dimensions of 1000 mm x 1000 mm x 70 mm and thickness of 0.9 mm. Between the frame and the leaf a gasket type Intumescent Promaseal-LFC Fire protection laminate, having thickness of 3 mm, is fitted. The leaf is equipped with a closure system, that acts on three points, actuated by a removable handle and fitted with one sliding stainless steel rod having diameter of 10 mm.

Application/Limitation

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

Restricted application: fire against insulated side.

Only the system consisting of structural aluminium bulkhead fitted with the insulated steel panels minimum 150 mm from the bulkhead, is approved as an A-60 class bulkhead.

Maximum panel dimensions: 2383 x 1183 mm (H x W).

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. 2018CS012387/1 dated 2018-11-12 from RINA, Genova, Italy.

Drawing Nos.:
- RAC-PLUS-BULK-H-G Rev.A dated 2018-09-25
- RAC-PLUS-BULK-P Rev.0 dated 2018-09-11
- RAC-PLUS-HATCH Rev.A dated 2018-10-31

All from manufacturer.

Tests carried out
Tested in according to IMO 2010 FTP Code part 3.

Marking of product
The product is to be marked with name and address of manufacturer, type designation, fire-technical rating, MED Mark of Conformity and USCG approval number if applicable (see page 1).