DNV·GL

Certificate No:
MEDB000074W

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 & B Class divisions fire integrity: A class divisions.

with type designation(s)
A-60 aluminium deck - Rapid Access Composite plus ultralight (RAC+ ultralight)

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) 2020/1170,**
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, IMO MSC.1/Circ.1435.

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

This Certificate is valid until **2025-12-03**.
Issued at **Høvik** on **2020-12-04**

DNV GL local station:
Australia NB

Approval Engineer:
Tessa Biever

Notified Body
No.: **0575**

for **DNV GL AS**
Digitally Signed By: Hoff, Øyvind
Location: DNV GL Høvik, Norway
on behalf of

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, and amended by Decision No 1/2019 dated February 22nd, 2019.

NORWEGIAN ACCREDITATION PROD 019

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

Product description

"A-60 aluminium deck - Rapid Access Composite plus ultralight (RAC+ ultralight)"
is a structural aluminium deck with non-homogenous composite panels and light gauge stainless steel supporting structure, mounted so that a minimum 350 mm air gap is maintained between the back (non-fire side) of the panels and the aluminium structural deck.

Composite panels
The RAC+ light panel consist of a 20 mm thick non-combustible material Marine Panel (manufactured by Unifrax with density of 160 kg/m^3) faced on both sides by means of HIPS (Hybrid Inorganic Polymer System) impregnated in a fiberglass cloth and covered by a veneer named VentureClad-1577CW-WML (on fire exposed side) and an aluminium foil lining (on the unexposed side). The VentureClad-1577CW-WML on fire exposed side may be substituted by:

- aluminium foil lining named RAC-2 Alu foil facing
- venture tape lining named RAC-2 facing

The panels have maximum dimensions of 2382 x 1182 mm (L x W) and are typically 20 mm thick.

Supporting infrastructure and installation
The panels are mounted on a stainless steel framework suspended below the aluminium structural deck using eye bolt, hanging rod and clips. An air gap of 350 mm is to be maintained between the aluminium shell plating and the non-fire side of the panels. Suspension rods are to be installed at 1500 mm maximum centres in the longitudinal and transverse directions.

Joints between the 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 600 mm spacing. In the middle of each joint a 0.45 mm thick stainless steel sheet having dimensions of 450 x 150 mm is fitted between the VentureClad-1577CW-WML surface and the stainless steel cover strips. 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)

For further details see documentation under Type Examination documentation below.

Application/Limitation

Approved for use as a horizontal fire retarding division of class A-60. The aluminium deck with suspended panel construction may also be used in fire resisting divisions in High Speed Craft.

During fire test the average temperature of aluminium deck structural core did not exceeded 140°C.

Restricted application: Fire hazard shall be on the stiffened insulated side.

Max. panel size: 2382 mm x 1182 mm (L 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. 2020CS01313/3 dated 25 May 2020 from RINA, Genova, Italy.
Test report No. 103603859SAT-002 dated 27 July 2018 from Intertek, Texas, US.
Test report No. 103447451SAT-002 dated 18 April 2018 from Intertek, Texas, US.

Drawing No. RAC-PLUS-DECK-G Rev. D dated 7 February 2020 from manufacturer.
Drawing No. RAC-PLUS-DECK-P Rev. D dated 18 February 2020 from manufacturer.

DS11 Design Specifications RAC PLUS Ultralight Deckhead version 1.0 dated 19 October 2020 from CBG Systems Pty. Ltd. Revisions of Design Specifications are to be approved by DNV GL.

Title	Drw. No.	Rev. No.	Date
Cover plate	RAC-PLUS-COV (RAC-PLUS-COVERPLATE)	-	2019-04-04
Locking disc & spacer	RAC-CSB (RAC- CORNER-SUPPORT-BRACKET)	C	2020-06-15
Corner Bracket	RAC-CSB (RAC- CORNER-SUPPORT-BRACKET)	C	2020-06-15
Channel intersection joint detail	CBG-RAC-PLUS-DECK-A (DECK ANNOTATED)	-	2019-03-12
Support Channel	RAC-CHS (RAC-CHANNEL SHORT) RAC-CHL (RAC-CHANNE L-LONG)	E E	2017-09-18 2017-09-18
Cover strip	RAC-PLUS-CSL-24 (RAC-PLUS-COVERSTRIP-LONG-2400) RAC-PLUS-CSS (RAC-PLUS-COVERSTRIP-SHORT) RAC-PLUS-CSL (RAC-PLUS-COVERSTRIP-LONG)	- - -	2019-04-04 2019-04-04 2019-04-04
Caddy clip hanging detail	RAC-CLIP (RAC-CLIP-SS-SPECIAL-4H24) RAC-CLIP (RAC-CLIP-SS-SPECIAL-4H58) RAC-CLIP (RAC-CLIP-SS-SPECIAL-4H912)	C C C	2016-11-10 2016-11-10 2016-11-10

Tests carried out

Tested 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, the MED Mark of Conformity and the USCG number if applicable (see first page).