



EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB000005Y
Revision No:
8

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 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)

Class A-30 steel bulkhead with several combinations of SeaRox FB or FM type insulation

Issued to

Rockwool A/S
Hedehusene, Denmark

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

Regulation (EU) 2023/1667,

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.1434,1435; IMO MSC.1/Circ.1616, 1621

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

This Certificate is valid until **2025-07-27**.

Issued at **Høvik** on **2023-12-10**

DNV local unit:
Denmark CMC

Approval Engineer:
Tessa Bieber



Notified Body
No.: **0575**



for **DNV AS**

Digitally Signed By:
Kristin Grønnæss Hovden
Location: **DNV AS, Høvik,**
Norway
on behalf of

Mydlak-Röder, Christine
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 1/2023 dated August 21st, 2023.

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 This certificate remains valid unless suspended, withdrawn, recalled or cancelled.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

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

'Class A-30 steel bulkhead with several combinations of SeaRox FB or FM type insulation'
Composed of a structural steel bulkhead to be insulated with one of the following variants:

1. SeaRox FB or FM 6020 (density 40 kg/m³, minimum thickness 70 mm) between the stiffeners and SeaRox FM 6030 (density 50 kg/m³, minimum thickness 30 mm) around the stiffener.
2. SeaRox FB or FM 6020 (density 40 kg/m³, minimum thickness 70 mm) between the stiffeners and SeaRox FM 6040 (density 60 kg/m³, minimum thickness 35 mm) around the stiffener.
3. SeaRox FB or FM 6020 (density 40 kg/m³, minimum thickness 70 mm) between the stiffeners and SeaRox FB or FM 6050 (density 70 kg/m³, minimum thickness 30 mm) around the stiffener.
4. SeaRox FM 6040 (density 60 kg/m³, minimum thickness 35 mm) between the stiffeners and SeaRox FM 6040 (density 60 kg/m³, minimum thickness 35 mm) between and around the stiffener.
5. SeaRox FB or FM 6040 (density 60 kg/m³, minimum thickness 50 mm) between the stiffeners and SeaRox FM 6040 (density 60 kg/m³, minimum thickness 35 mm) around the stiffener.
6. SeaRox FB or FM 6040 (density 60 kg/m³, minimum thickness 50 mm) between the stiffeners and SeaRox FB or FM 6050 (density 70 kg/m³, minimum thickness 30 mm) around the stiffeners.

For all variants:

- The insulation is fixed to the bulkhead by means of standard Ø3 mm pins in combination with 30-38 diameter steel clips (spring washers).
- Distance between pins on the stiffeners is maximum 300 mm. Distance between pins on the bulkhead (between stiffeners) is maximum 300 mm.
- The cavity inside the stiffener filled out with two layers of 30 mm thick SeaRox FB or FM 6050 (density of 70 kg/m³, minimum thickness 30 mm) and/or insulation of cavity / inside stiffener to be in accordance with reference drawings 170-1~5 Rev.3 dated 12 July 2023.

For further details see documentation listed under Type Examination documentation below.

Application/Limitation

Approved for use as a vertical fire retarding division of class A-30.

General application: Fire on either side.

The insulation materials and adhesives used have to be approved according to the Marine Equipment Directive and bear the MED 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 report No. PGA10658 dated 4 May 2015 from DBI, Hvidovre, Denmark.
Test report No. PGA10731 dated 22 September 2015 from DBI, Hvidovre, Denmark.
Test report No. PGB10284A dated 28 July 2023 from DBI, Hvidovre, Denmark.

Assessment report No. PHA10628a dated 3 August 2020 (expires 31 August 2025) from DBI, Hvidovre, Denmark.
Assessment report No. PHA10628e dated 03 August 2020 (expires 31 August 2025) from DBI, Hvidovre, Denmark.
Assessment report No. PHA10628f dated 30 January 2022 (expires 30 January 2027) from DBI, Hvidovre, Denmark.
Assessment report No. PHD10038a dated 27 October 2021 (expires 27 October 2026) from DBI, Hvidovre, Denmark.
Assessment report No. PHD10025a dated 5 July 2021 (expires 5 July 2026) from DBI, Hvidovre, Denmark.
Assessment report No. PHA10628f dated 22 September 2023 (expires 22 September 2028) from DBI, Hvidovre, Denmark.

Drawing No. 160-1 dated 2 July 2015 from the manufacturer.
Drawing No. 160-2 dated 2 July 2015 from the manufacturer.
Drawing No. 160-3 dated 2 July 2015 from the manufacturer.
Drawing No. 160-4 dated 2 July 2015 from the manufacturer.
Drawing No. 160-5 dated 2 July 2015 from the manufacturer.

Drawing No. 170-1 Rev.3 dated 12 July 2023 from manufacturer.
Drawing No. 170-2 Rev.3 dated 12 July 2023 from manufacturer.
Drawing No. 170-3 Rev.3 dated 12 July 2023 from manufacturer.
Drawing No. 170-4 Rev.3 dated 12 July 2023 from manufacturer.
Drawing No. 170-5 Rev.3 dated 12 July 2023 from manufacturer.



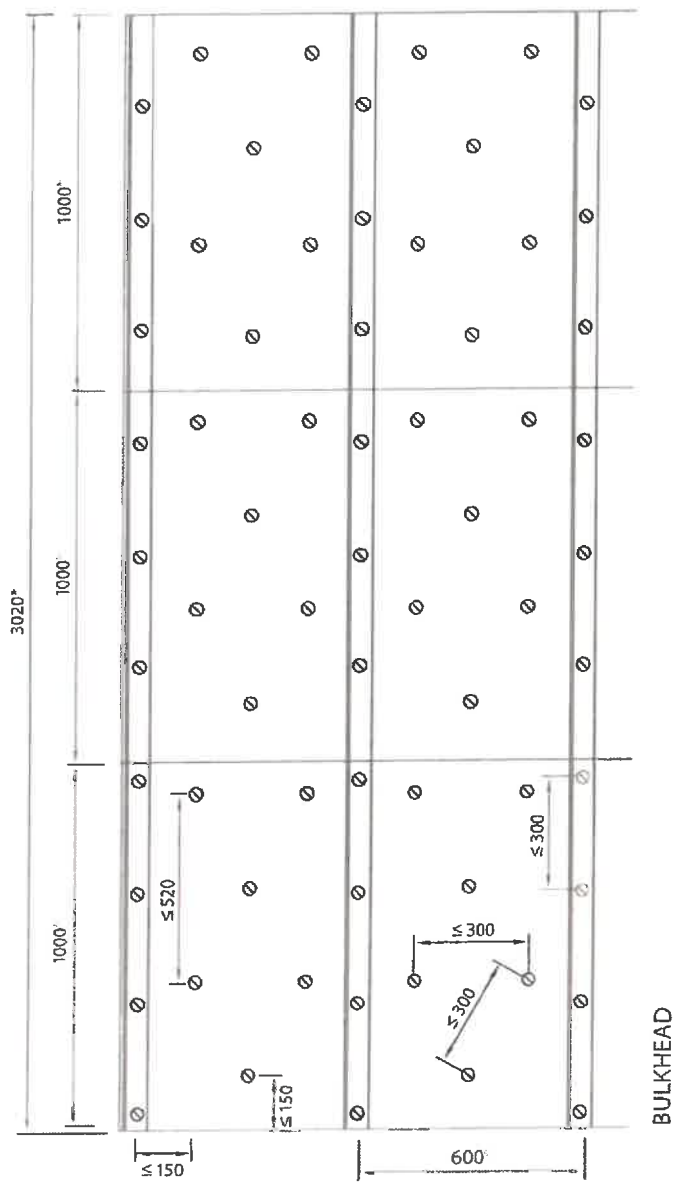
Job Id: **344.1-004873-9**
Certificate No: **MEDB000005Y**
Revision No: **8**

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 USCG Approval Number if applicable (see first page).

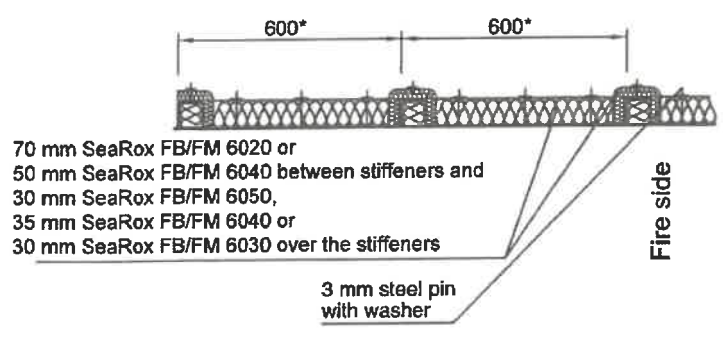


* Dimensions may vary depending on structural design and size of insulation material.



Subject: A-30 Steel Bulkhead:
 Plate: SeaRox FB/FM 6020 or SeaRox FB/FM 6040
 Stiffener: SeaRox FB/FM 6050, SeaRox FB/FM 6040 or
 SeaRox FB/ FM 6030

Date: 2023/07/12 Designer: DG Drawing No. 170-1 / Rev 3



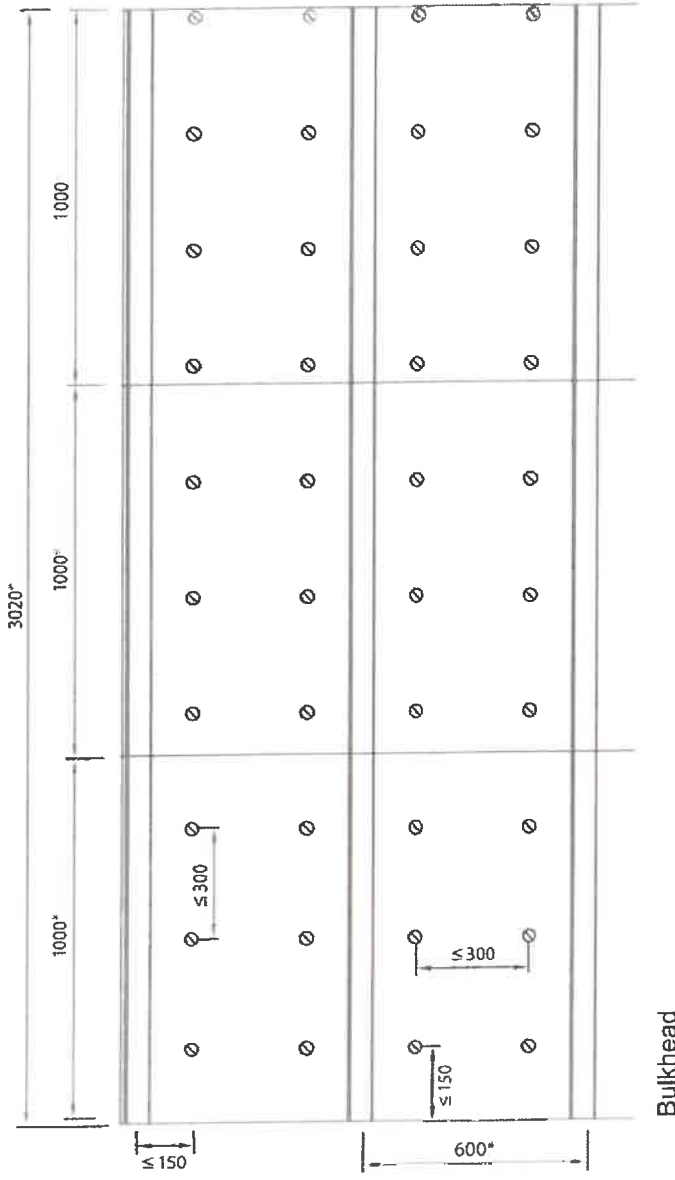
70 mm SeaRox FB/FM 6020 or
 50 mm SeaRox FB/FM 6040 between stiffeners and
 30 mm SeaRox FB/FM 6050,
 35 mm SeaRox FB/FM 6040 or
 30 mm SeaRox FB/FM 6030 over the stiffeners

3 mm steel pin
 with washer

Fire side



TECHNICAL INSULATION



Dimensions may vary depending on structural design and size of insulation material. All measurements in mm

70 mm SeaRox FB/FM 6020 or
 50 mm SeaRox FB/FM 6040 between stiffeners and
 30 mm SeaRox FB/FM 6050,
 35 mm SeaRox FB/FM 6040 or
 30 mm SeaRox FB/FM 6030 over the stiffeners

3 mm steel pin
 with washer

Fire side



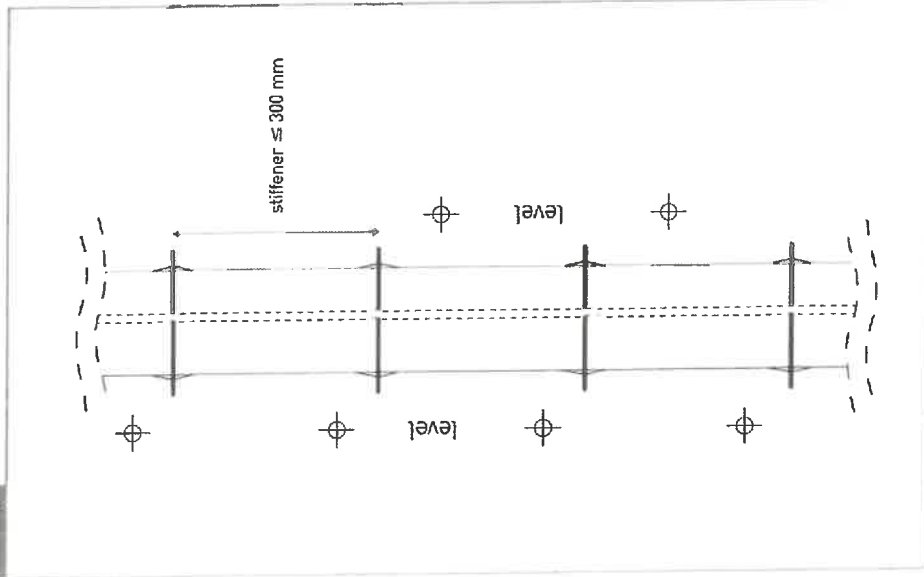
TECHNICAL INSULATION



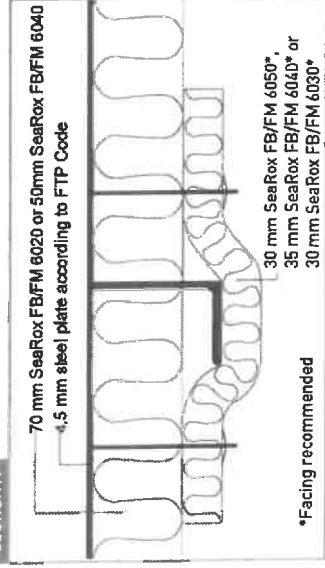
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 Plate: SeaRox FB/FM 6020 or SeaRox FB/FM 6040
 Stiffener: SeaRox FB/FM 6050, SeaRox FB/FM 6040 or
 SeaRox FB/FM 6030

Date: 2023/07/12 Designer: DG Drawing No. 170-2 / Rev 3

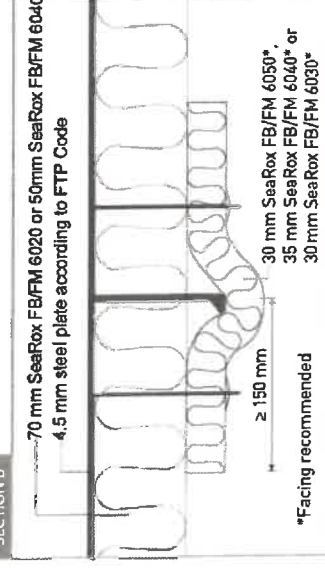
TOP VIEW



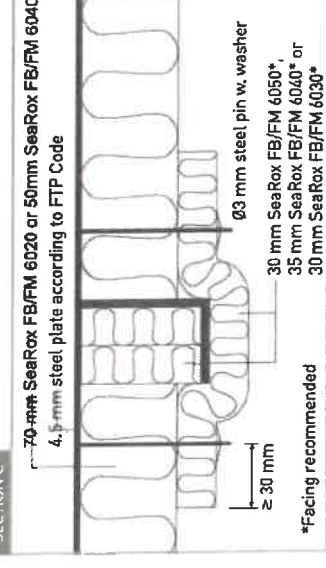
SECTION A



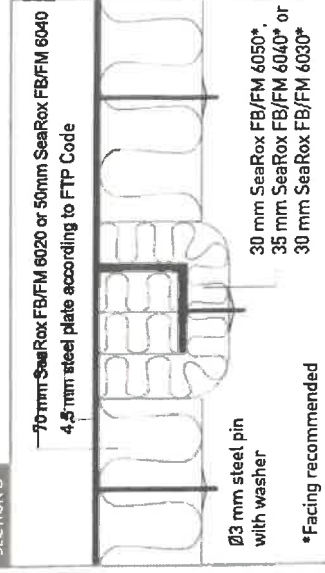
SECTION B



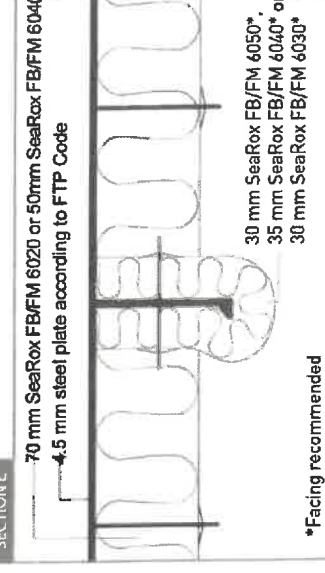
SECTION C



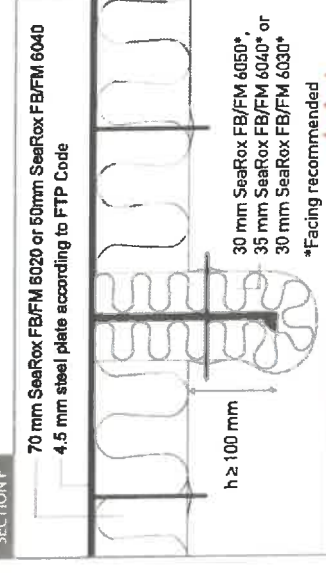
SECTION D



SECTION E



SECTION F



TECHNICAL INSULATION

Subject: A-30 Steel Bulkhead:
 Plate: SeaRox FB/FM 6020 or SeaRox FB/FM 6040
 Stiffener: SeaRox FB/FM 6050, SeaRox FB/FM 6040 or
 SeaRox FB/FM 6030

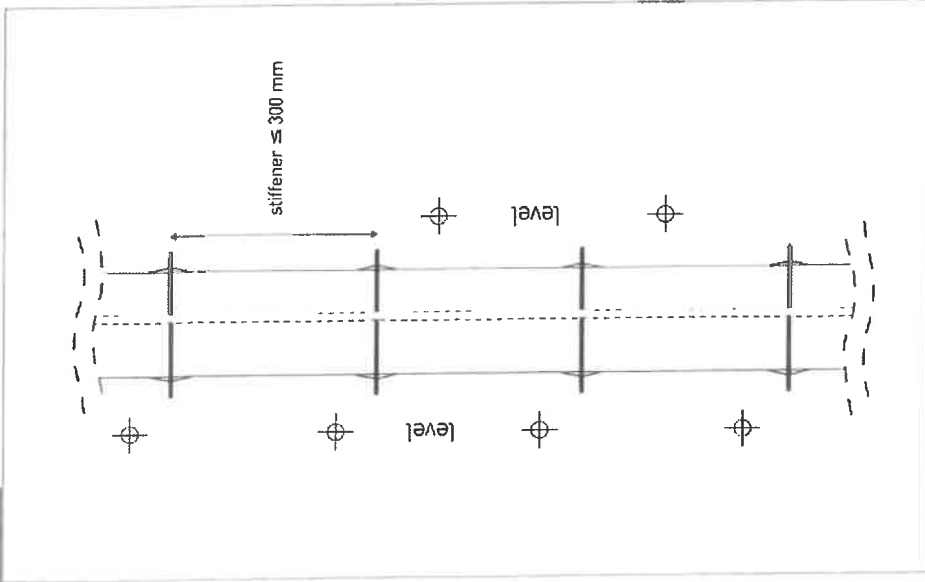


Date: 2023/07/12

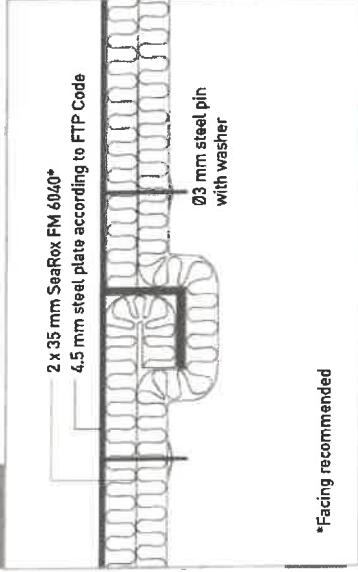
Designer: DG

Drawing No. 170-3 / Rev 3

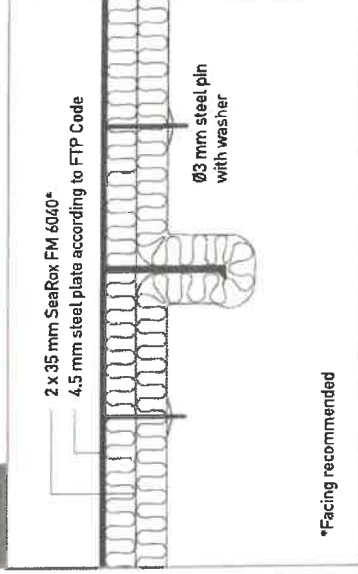
TOP VIEW



SECTION G



SECTION H



TECHNICAL INSULATION



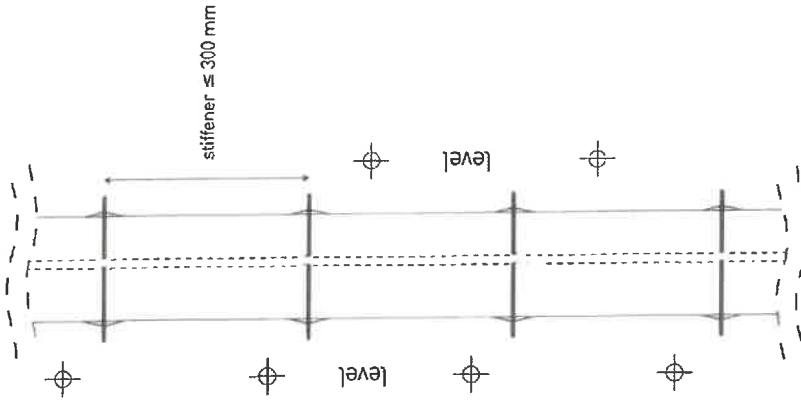
Subject: A-30 Steel Bulkhead:
Plate: SeaRox FM 6040
Stiffener: SeaRox FM 6040

Date: 2023/07/12

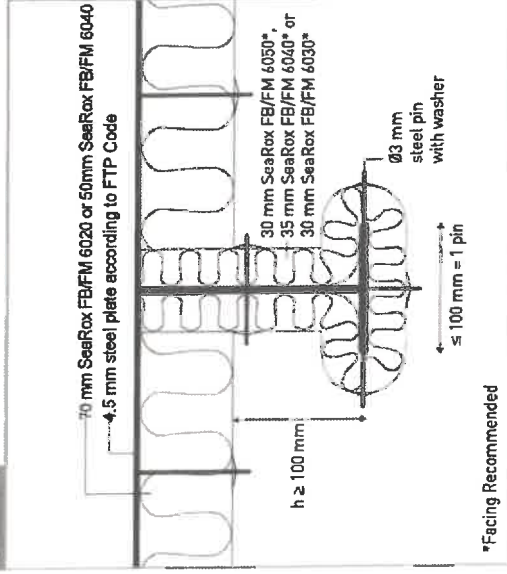
Designer: DG

Drawing No. 170-4 / Rev 3

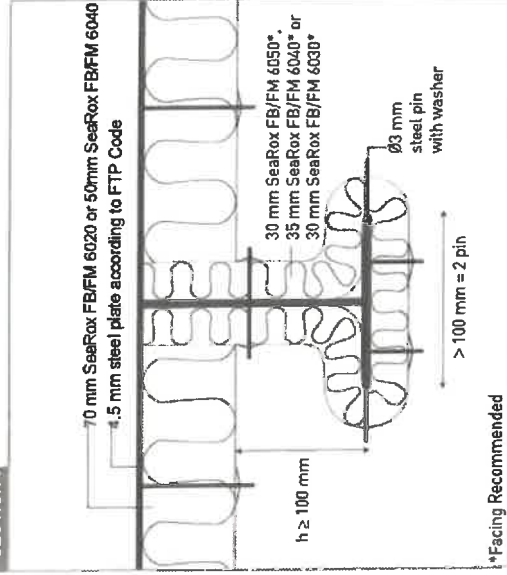
TOP VIEW



SECTION I



SECTION J



TECHNICAL INSULATION



Subject: A-30 Steel Bulkhead:
Plate: SeaRox FB/FM 6020 or SeaRox FB/FM 6040
Stiffener: SeaRox FB/FM 6050, SeaRox FB/FM 6040 or SeaRox FB/FM 6030

Date: 2023/07/12

Designer: DG

Drawing No. 170-5 / Rev 3