

TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate no.:
MERB0001N5J
Revision no.:
0

This Certificate is issued by DNV UK Limited based on authorisation of the Maritime & Coast Guard Agency (MCA) as an UK Approved Body to undertake conformity assessments on marine equipment in accordance with the requirements of the Merchant Shipping (Marine Equipment) Regulations 2016 as amended.

This is to certify:

that the '**A**' & '**B**' Class divisions fire integrity: - '**A**' class division

with type designation(s)

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

issued to

Rockwool Danmark A/S
Hedehusene, Denmark

is found to comply with the Regulation (UK) **MSN 1874 Amendment 10** for
Item no. **UK/3.11a (Row 2 of 2)**

according to the following requirements:

SOLAS 74 Reg. II-2/3.2, SOLAS 74 Reg. II-2/9, IMO MSC.1/Circ.1434, IMO MSC.1/Circ.1616, IMO MSC.1/Circ.1621, IMO MSC/Circ.1120

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

Date of issue: **2025-08-01**

Expiry date: **2030-07-31**

DNV local unit:
Denmark CMC

Approval Engineer:
Izabela Misztal



Approved Body No.: **0097**



for **DNV UK Ltd.**

Digitally Signed By:
Christine Mydlak-Röder

Christine Mydlak-Röder
MER Service Responsible



**Maritime &
Coastguard
Agency**

UK Approved Body Authorised
by the MCA

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to, and agreed with the approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

"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-control phase module (D, E or F) of Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an approved body. In case limitations of use apply, these should be indicated in the Annex.

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 USD 300 000.

Product description

"Class A-30 steel bulkhead with several combinations of SeaRox FB or FM type insulation"
is 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 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 mm-38 mm 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 Regulations and bear the UK 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

Please see Appendix: Type Examination Documentation

Tests carried out

Tested according to IMO 2010 FTP Code part 3.

Marking of product

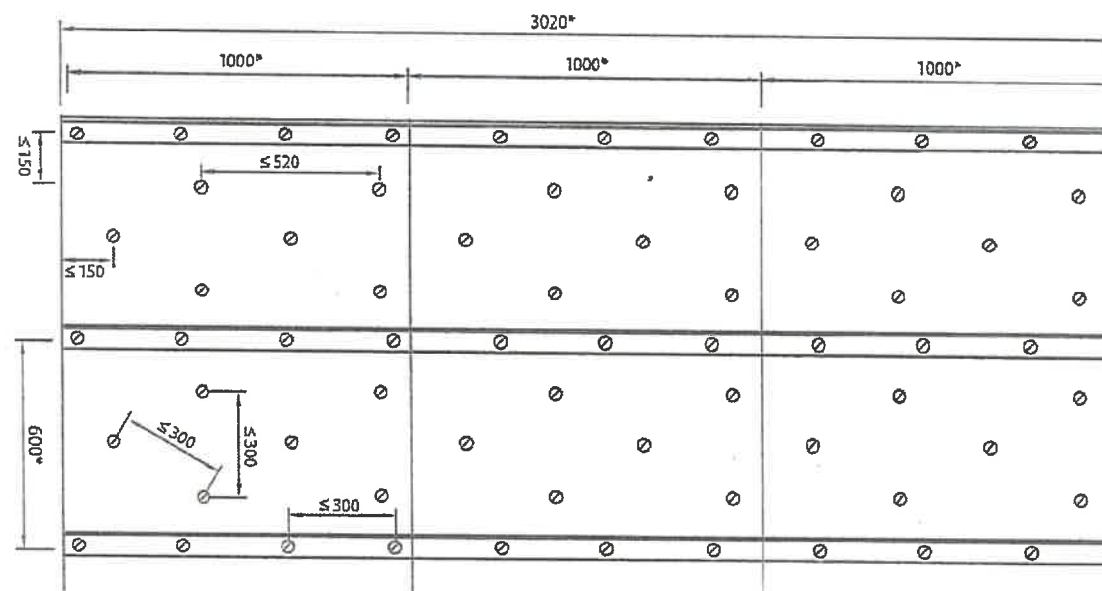
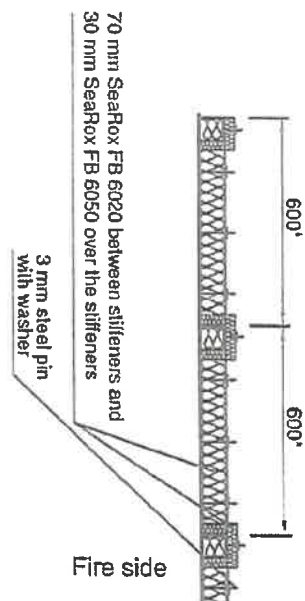
The product is to be marked with name and address of manufacturer, type designation, fire technical rating and the UK Mark of Conformity (see first page).

APPENDIX

Type Examination documentation

Certificate no.:
MERB0001N5J
Revision no.:
0

Document No.	Rev.	Title
PHA10628a		Assessment report dated 3 August 2020 from DBI, Hvidovre, Denmark.
PHA10628d		Assessment report dated 3 August 2020 from DBI, Hvidovre, Denmark.
PHA10628e		Assessment report dated 3 August 2020 from DBI, Hvidovre, Denmark.
PHD10038A		Assessment report dated 27 October 2021 from DBI, Hvidovre, Denmark.
PHA10628f	4	Assessment report dated 22 September 2023 from DBI, Hvidovre, Denmark.
Drawing nos. from 160-1 to 160-5		Drawings dated 2 July 2015 from the manufacturer.
Drawing nos. from 170-1 to 170-5	3	Drawings dated 12 July 2023 from the manufacturer.
PGA10658		Test report dated 4 May 2015 from DBI, Hvidovre, Denmark.
PGA10731		Test report dated 11 December 2015 from DBI, Hvidovre, Denmark.
PGB10284A		Test report dated 28 July 2023 from DBI, Hvidovre, Denmark.



BULKHEAD

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

All measurements in mm

Danish Institute of Fire
and Security Technology

File no. PHA10628 d

[Signature]

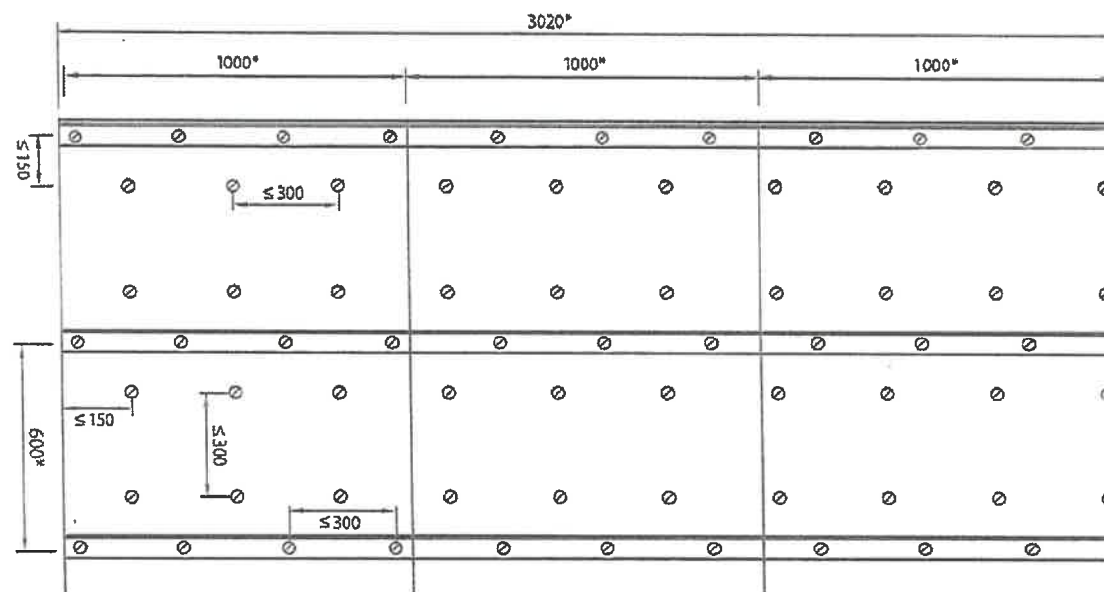
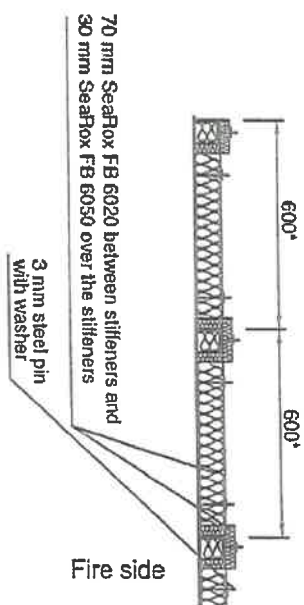
Subject: A-30 Bulkhead SeaRox FB 6020/ SeaRox FB 6050

Date: 2015/07/02

Drawing No. 160-1

ROCKWOOL®

TECHNICAL INSULATION



BULKHEAD

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

All measurements in mm

Danish Institute of Fire
and Security Technology

File no PHA10628

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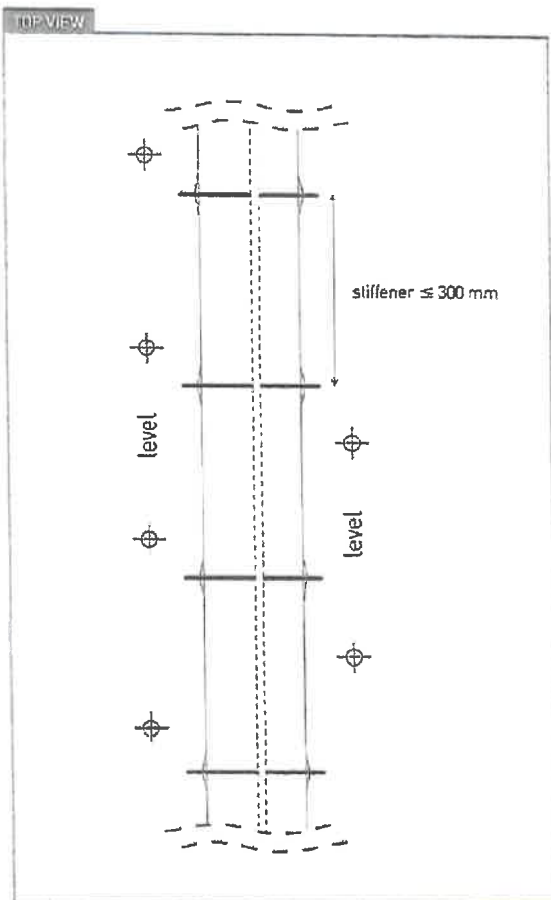
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Date: 2015/07/02

Drawing No. 160-2

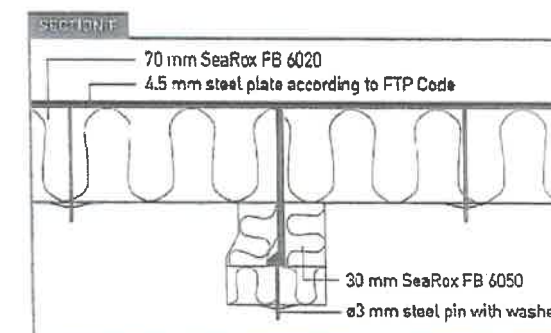
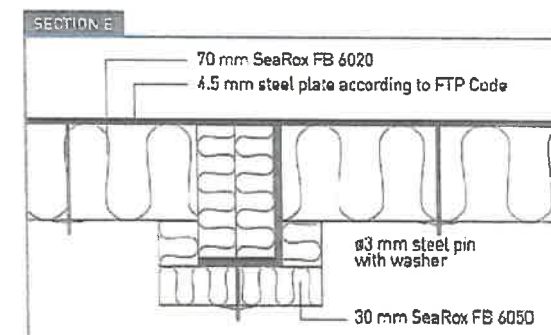
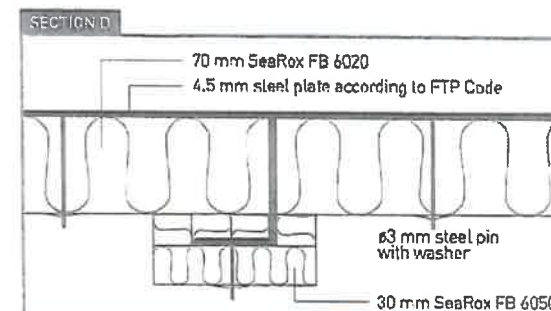
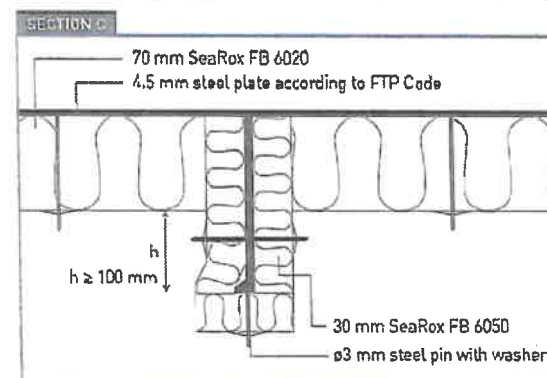
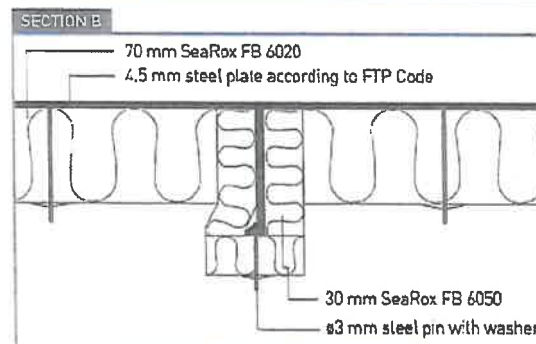
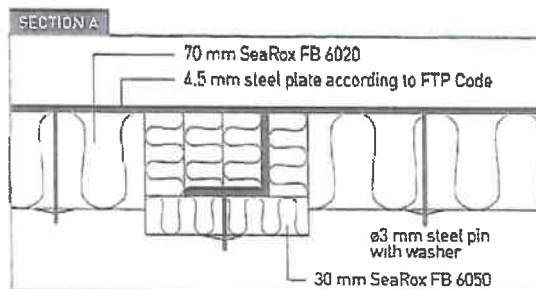
ROCKWOOL®

TECHNICAL INSULATION



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and Security Technology

File no. PHA 10628 d



Note: Insulation around stiffener can alternatively be done pre-cut to the shape of the stiffener/bulb

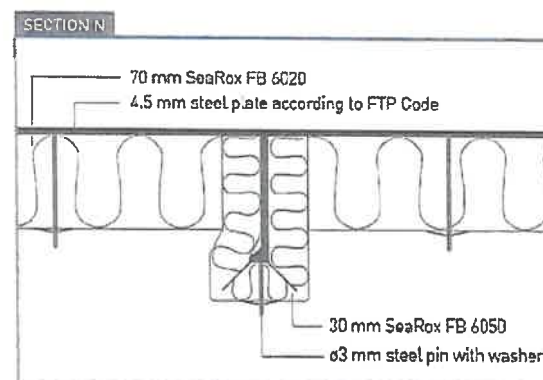
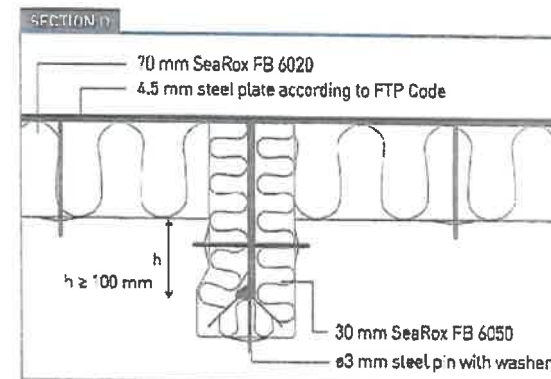
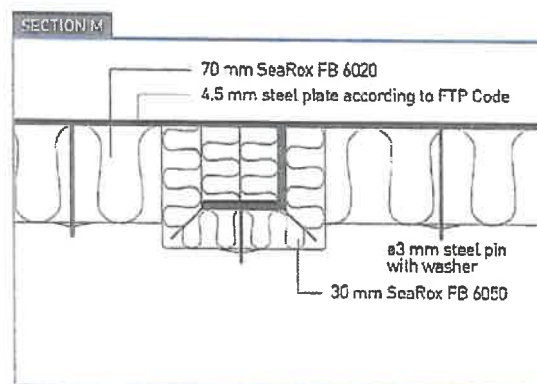
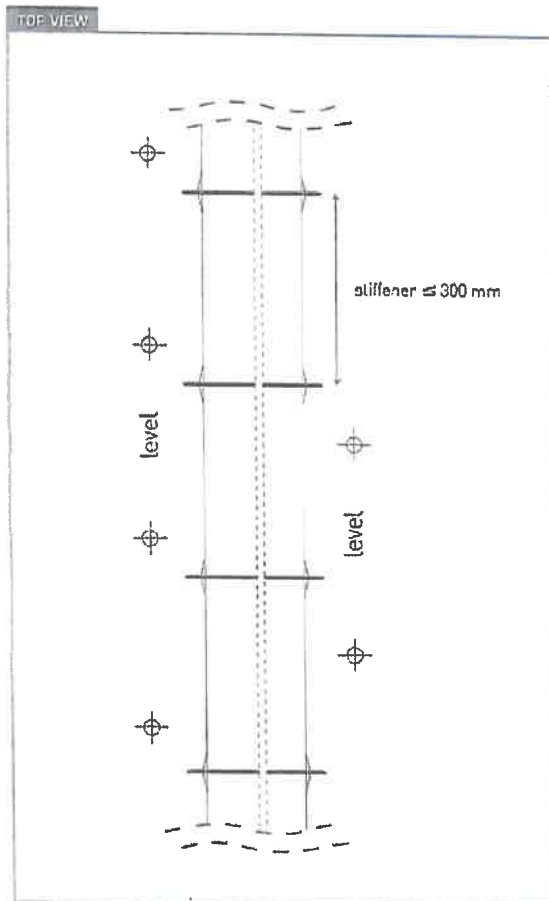
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Date: 2015/07/02

Drawing No. 160-3

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TECHNICAL INSULATION



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File no. PHA10628 d

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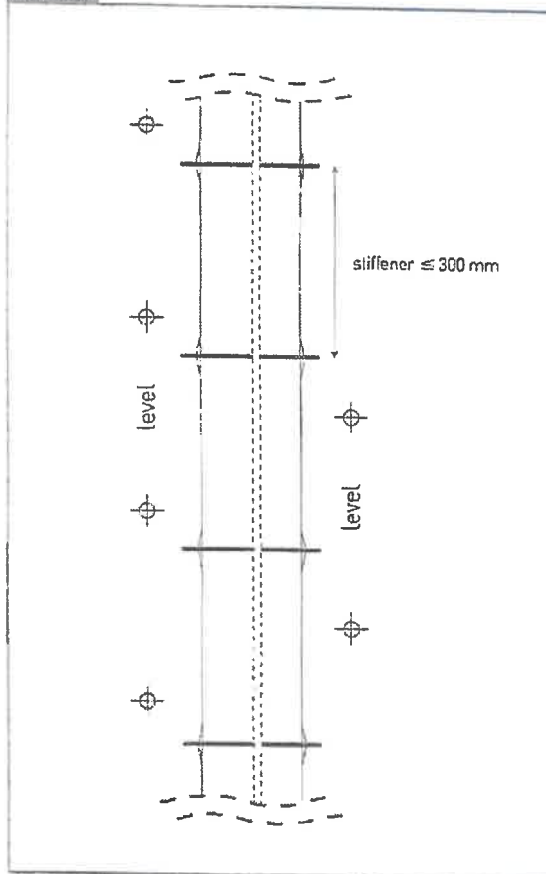
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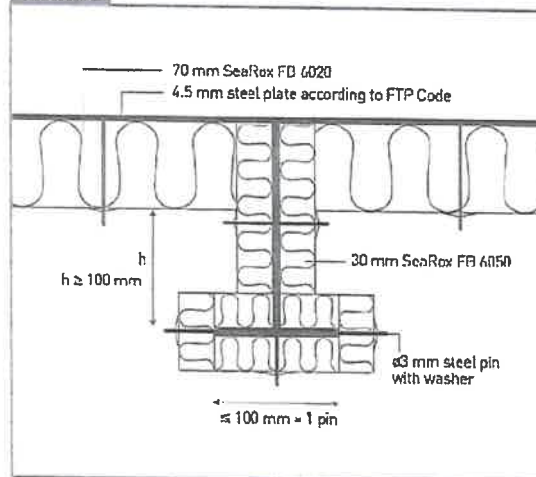
ROCKWOOL®

TECHNICAL INSULATION

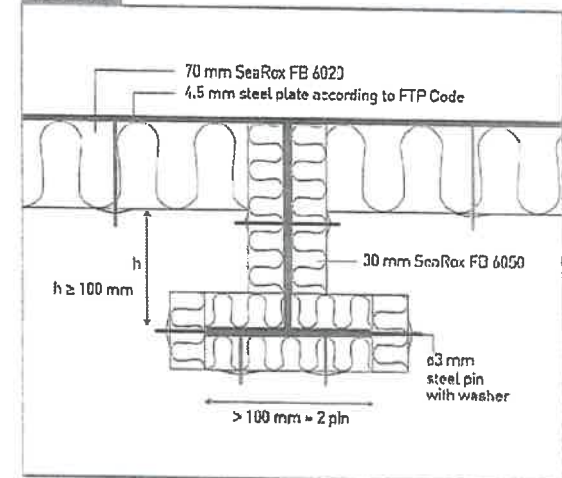
TOP VIEW



SECTION C



SECTION R



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File no. PHA10628

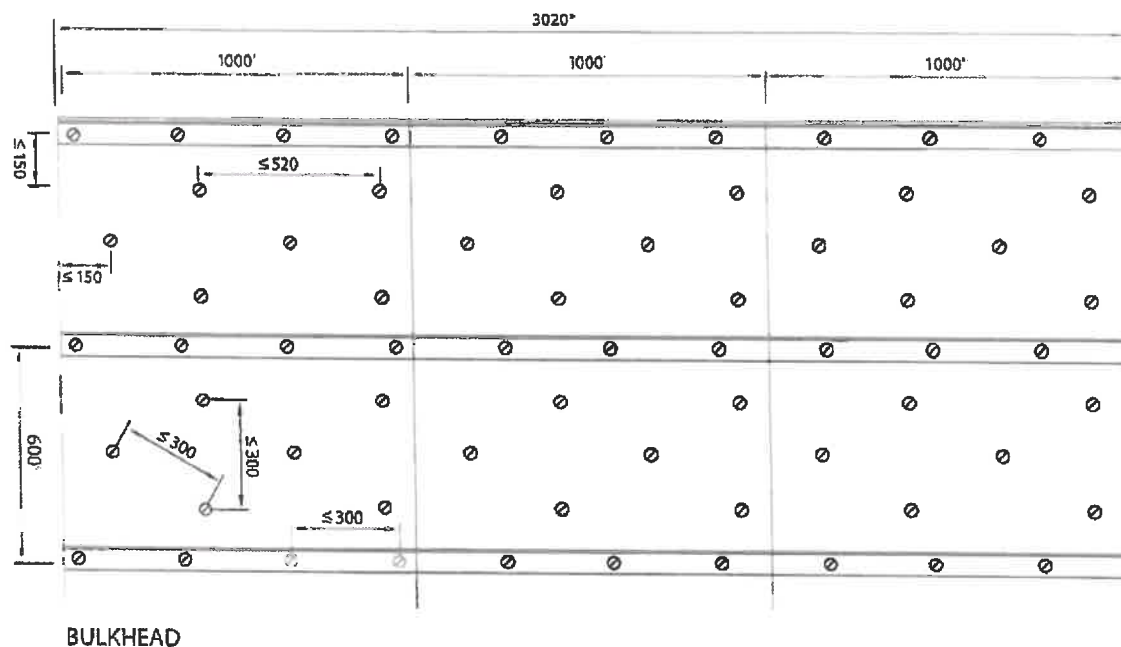
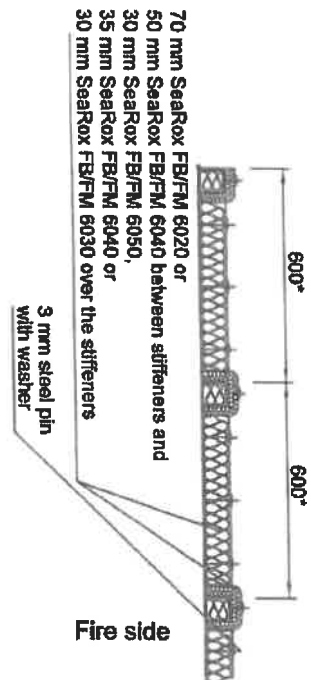
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Subject: A-30 Bulkhead SeaRox FB 6020/ SeaRox FB 6050

Date: 2015/07/02

Drawing No. 160-5

ROCKWOOL®
TECHNICAL INSULATION



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

All measurements in mm



TECHNICAL INSULATION

Subject: A-30 Steel Bulkhead:

Plate: SeaRox FB/FM 6020 or SeaRox FB/FM 6040

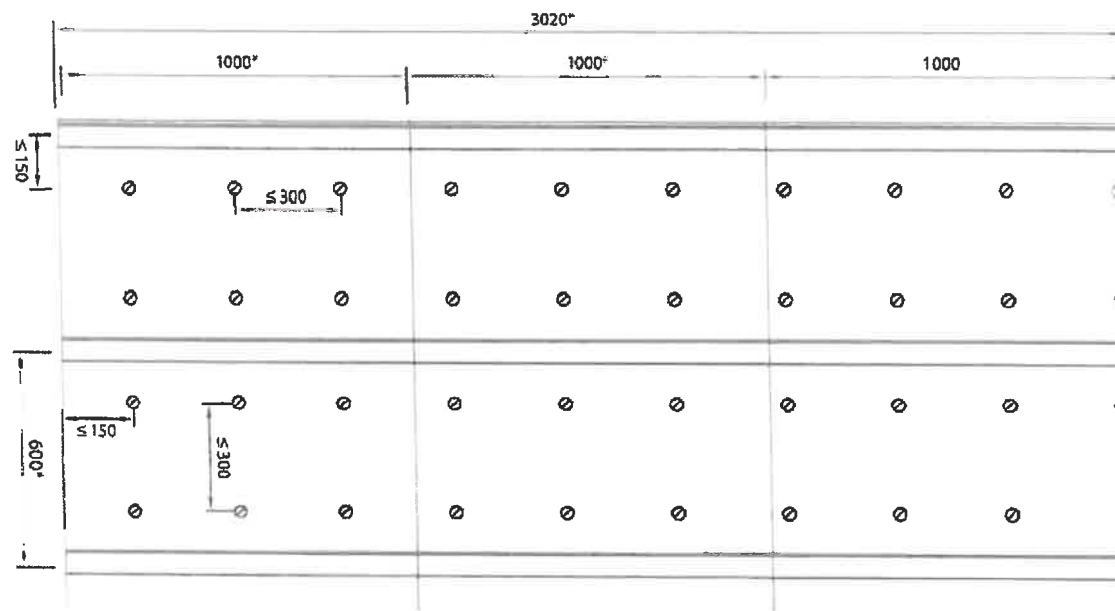
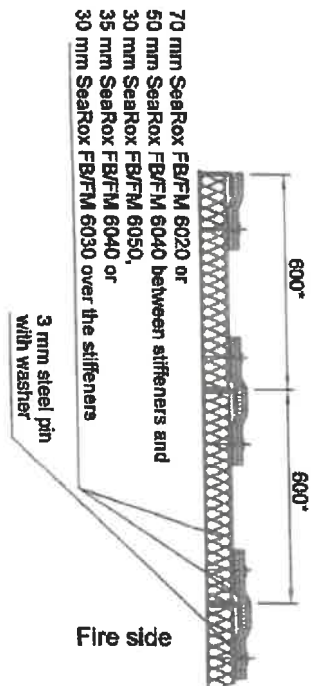
**Stiffener: SeaRox FB/FM 6050, SeaRox FB/FM 6040 or
SeaRox FB/ FM 6030**



Date: 2023/07/12

Designer: DG

Drawing No. 170-1 / Rev 3



Bulkhead

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

All measurements in mm



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

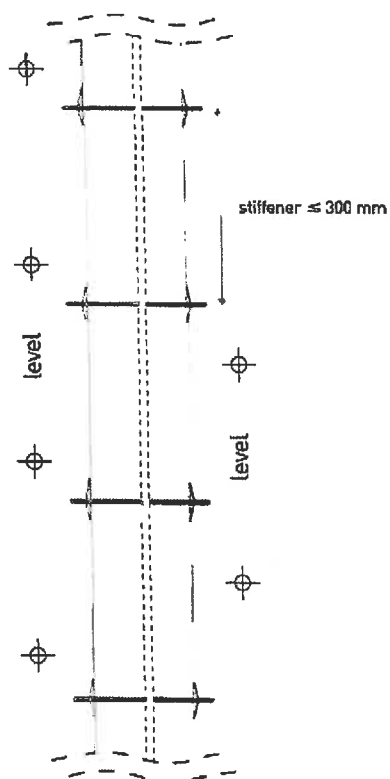


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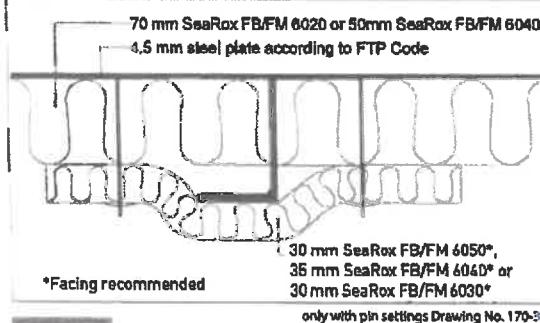
Designer: DG

Drawing No. 170-2 / Rev 3

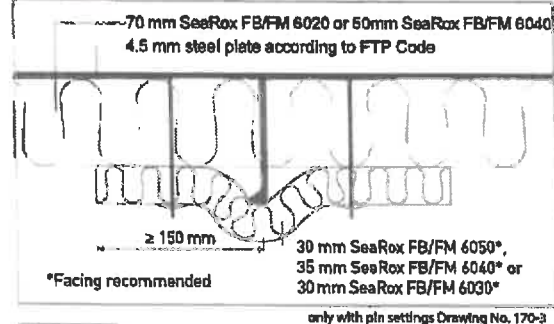
TOP VIEW



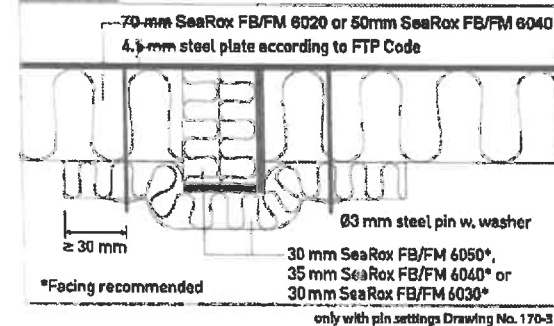
SECTION A



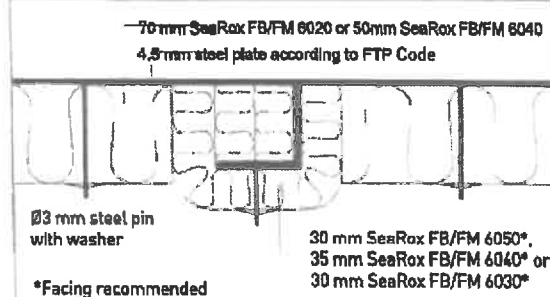
SECTION B



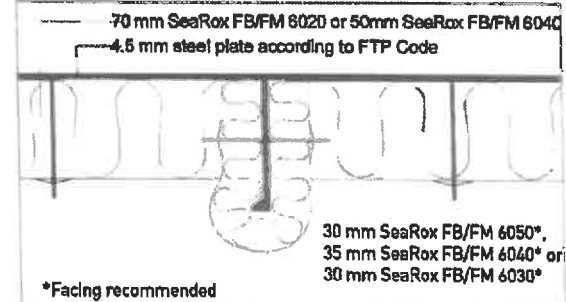
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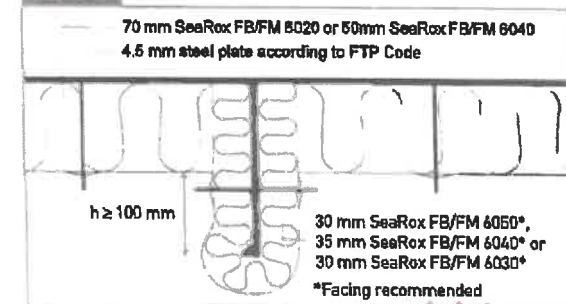
SECTION D



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

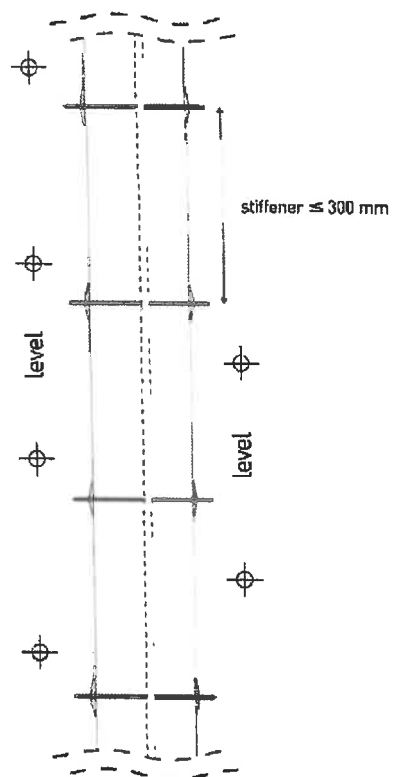


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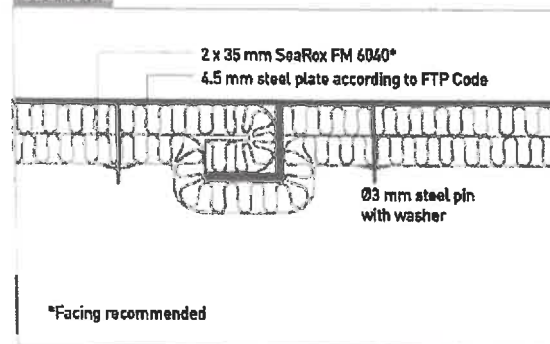
Designer: DG

Drawing No. 170-3 / Rev 3

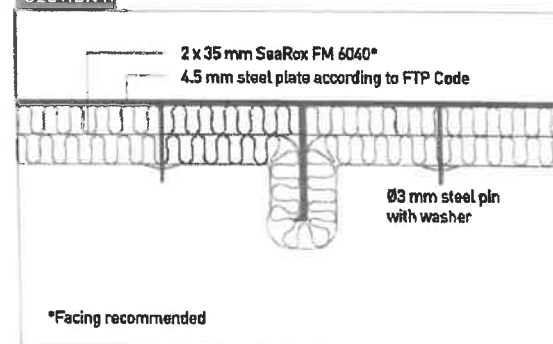
TOP VIEW



SECTION C



SECTION H



TECHNICAL INSULATION

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

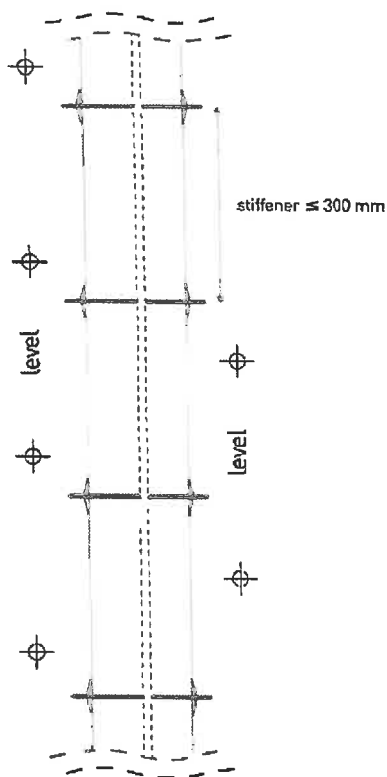
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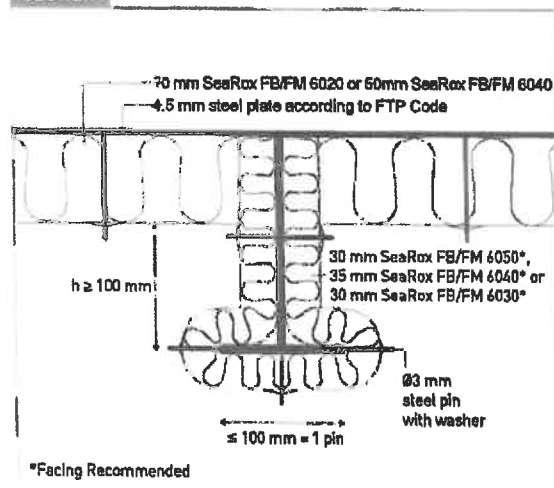
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Drawing No. 170-4 / Rev 3

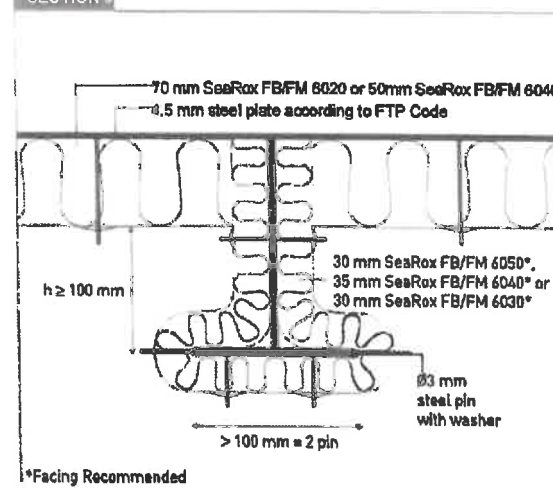
TOP VIEW



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