

Reference	FM 4.70 Rev 6
Release Date	October 2013



Fire Protection Systems Information

A60 Steel Bulkhead

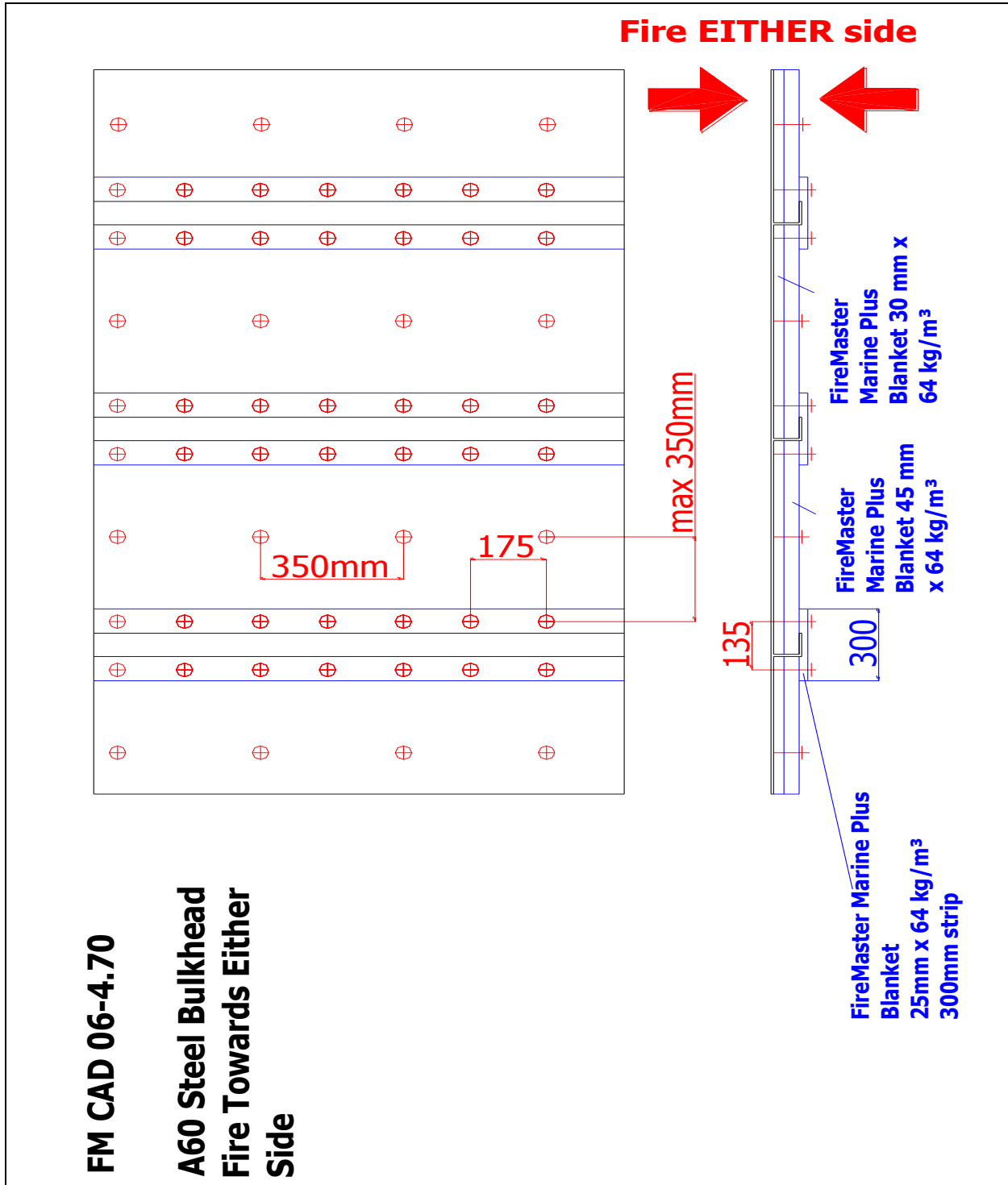
Fire towards EITHER side

Flat Layer and alternative Profile Wrap layer System

Accompanies Method Statement FM-MS 01 PW

Product	FireMaster Marine Plus Blanket
Application Requirements	<p>75mm x 64 kg/m³ applied onto bulkhead plate. 25mm x 64 kg/m³ applied over stiffeners. The insulation may be applied in any one of the alternative configurations shown in the drawings attached.</p> <p><u>Application on 4.5mm corrugated plate</u> (subject to Class Society Approval on each application) Two layers of blanket to make total thickness of 75mm (e.g. 40mm +35mm, 45mm + 30mm or 50mm + 25mm)</p>
Anchoring	CD welded steel pins 3mm diameter 12 to 25mm longer than blanket thickness. Friction fit retaining washers.
Weight	4.8 kg/m ² on bulkhead plate. 1.6 kg/m ² over stiffener.
System Drawing Reference	<p>FM CAD06-4.70 (Flat plate) FM CAD12-4.70_2 and FM CAD12-4.70_3 (Flat plate alternative insulation arrangements) FM CAD12-4.70_1 (Corrugated Plate)</p>
System Features	<p>No anchors required on stiffeners No chicken mesh required</p>
Certification	<p>EU Marine Equipment Directive (DNV) DNV US Coastguard (MRA+)</p>

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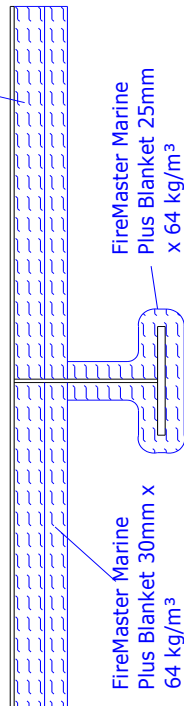


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FM CAD12-4.70_2
 Installation on Flat Bulkheads
 Alternative Arrangements of Insulation

Two layers applied to bulkhead with separate 25mm single layer application over stiffener

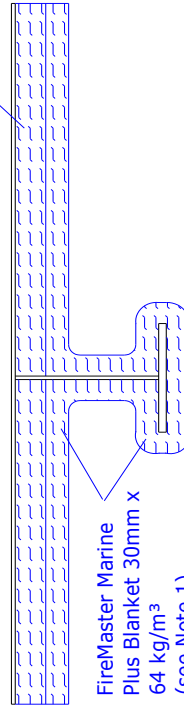
FireMaster Marine Plus
 Blanket 45mm x 64
 kg/m³



FireMaster Marine Plus Blanket 30mm x 64 kg/m³
 FireMaster Marine Plus Blanket 25mm x 64 kg/m³
 (see Note 1)

Two layers applied to bulkhead with second 30mm layer applied over stiffeners as a continuous profile wrap

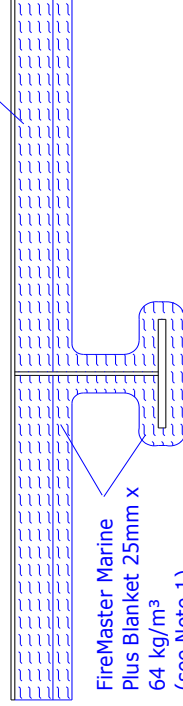
FireMaster Marine Plus
 Blanket 45mm x 64
 kg/m³



FireMaster Marine Plus Blanket 30mm x 64 kg/m³
 (see Note 1)

Two layers applied to bulkhead with second 25mm layer applied over stiffeners as a continuous profile wrap

FireMaster Marine Plus
 Blanket 50mm x 64
 kg/m³



FireMaster Marine Plus Blanket 25mm x 64 kg/m³
 (see Note 1)

NOTE 1

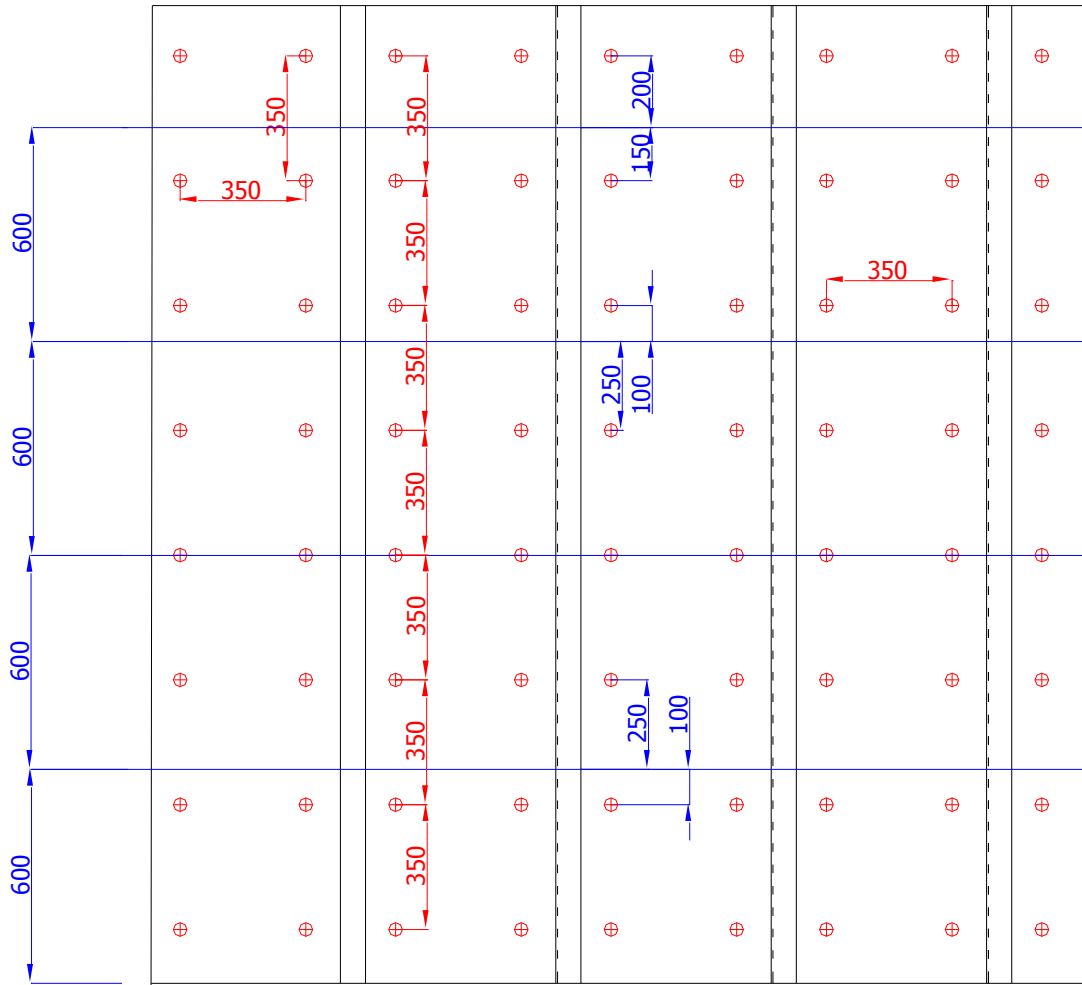
Fixing pin length approx 10 to 15mm longer than blanket thickness. Blanket may be compressed by maximum of 20% of thickness on pin area.
 Pin length may be reduced to less than blanket thickness to ensure cap-type fixing washers are fully in contact with blanket surface.

Refer to Method Statement FM-MS 01 PW for details of anchor fixing pin length, anchor placement and blanket joint arrangements on large stiffeners.

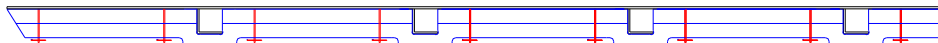
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Drawing FM CAD 12-4.70_3 Alternative Profile Wrap Installation

Blanket and anchor pin arrangements for application as a profile wrap installation as detailed in FM CAD 12-4.70_2 drawing.
 First layer applied on stiffened side of bulkhead plate between stiffeners. Second layer is fitted over stiffeners. Stiffeners always filled with insulation. Note: Blanket joint locations shown on this drawing are typical examples of where joints may occur in the lining. Joints may be placed anywhere and not exactly as shown in the drawing below.



Fire Exposed Side

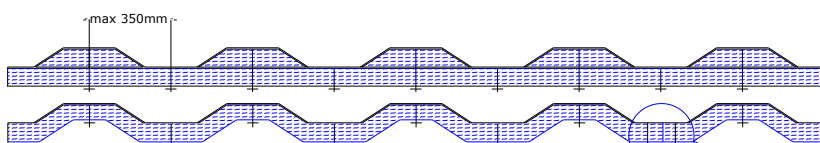


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FM CAD 12 4.70-1

A60 Bulkhead - Use on Corrugated Plate Bulkheads
Minimum plate thickness 4.5mm

FireMaster Marine Plus Blanket 75mm x 64 kg/m³ applied in two layers of suitable thickness to make a total of 75mm and installed horizontally as shown.

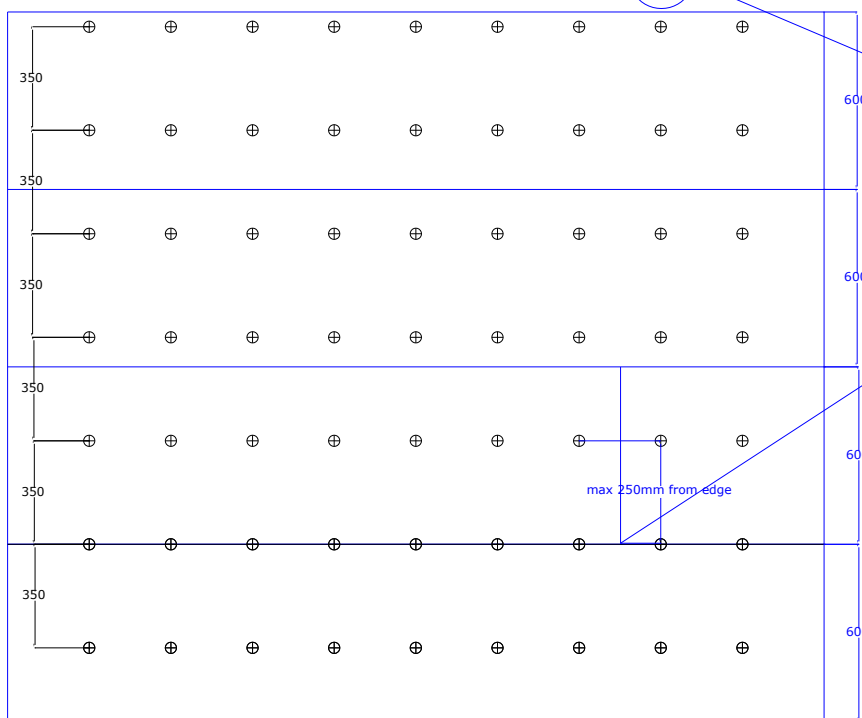


Alternative blanket layouts:

Insulation applied flat behind corrugations

OR

Insulation wrapped to profile of corrugations where possible



Where blanket is installed following the contours of the corrugations, joints between lengths of blanket are made by adding one extra anchor at a convenient point as shown

Example of joint between lengths of blanket where blanket is installed flat under the corrugations