

Reference	FM-MS 01 PW Rev 1
Release Date	August 2006

METHOD STATEMENT

FireMaster Profile Wrap Systems for Steel Bulkheads and Decks

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1. Systems To Which This Method Statement Applies

This method statement applies to any fire protection system that is installed using the profile wrap method onto either steel bulkheads or decks using any one of the following two FireMaster products:

- FireMaster 607 Blanket
- FireMaster Marine Plus Blanket

2. General Design Principles Common To All Systems

2.1 Design Considerations

2.1.1 System Data Sheet

This method statement must be read in conjunction with the relevant System Data Sheet for the system being used. The System Data Sheet specifies the exact thickness and density of FireMaster Blanket required; the number of layers that should be installed and the anchor type and spacing required. It also details any other requirements such as the need to use retaining chicken mesh.

Specific information on the System Data Sheet has precedence over any general information given in this document.

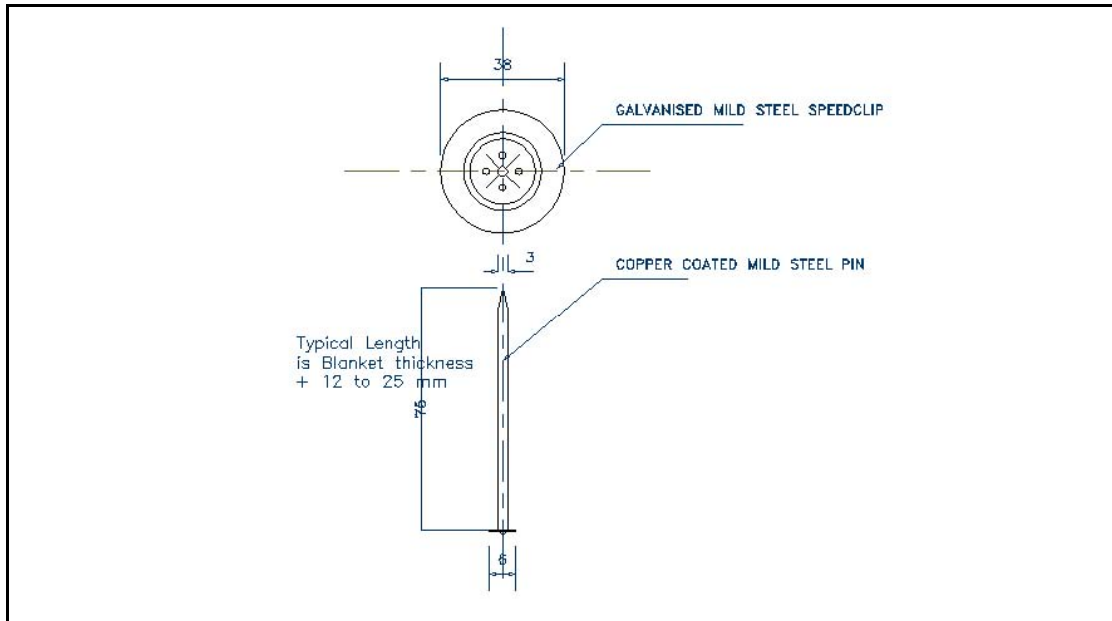
2.2 Fixing Anchors

2.2.1 Anchor Types Used

FireMaster Blanket is normally held in place using 3mm diameter fixing pins over which the Blanket is impaled. A 38mm diameter friction fit washer secures the blanket onto the pin. In certain circumstances the use of a threaded fixing pin with a washer and locking nut may be necessary (for example in areas of high vibration). If in any doubt reference should be made to Thermal Ceramics.

The standard recommended standard fixing pin for steel substrates is a 3 mm diameter copper coated mild steel CD welded anchor with a 38 mm diameter zinc coated friction fit washer.

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2.2.2 Recommended Anchor Lengths

The anchor length should be about 12 to 25 mm longer than the total Blanket thickness. If a weather protection coating and protective mesh is being used then the anchor length needs to be increased to ensure there is sufficient length available to give grip to the friction fit washer. See the separate section on weather protection for details.

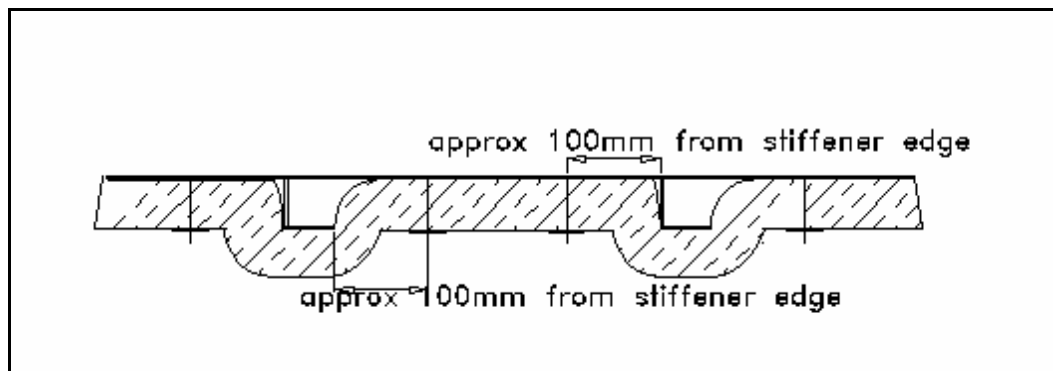
2.2.3 Number of Anchors Needed

Reference must be made to the individual system information sheets for the exact anchor layout for each system.

Generally three anchors are used along the width of the blanket, one at each edge near the joint and one in the middle. Along the length of the blanket the anchors are usually spaced at a maximum distance of 350 mm on bulkheads and 300mm on decks.

Anchors should not be spaced more than 75 mm from the edge of the Blanket otherwise the joint between adjacent blankets may sag and expose the steel substrate or joint in underlying Blanket layers to heat from the fire resulting in localised excessive temperature rise.

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2.3 Installation of FireMaster Blanket

2.3.1 General Principles

The Blanket is usually supplied in rolls of 610 mm width. The length of roll varies depending on the thickness of Blanket so that one standard size carton can be used for all thicknesses.

The Blanket is easily cut with a sharp insulation knife. The use of a straight edge is recommended as a guide when cutting. The Blanket carton can be used as a clean surface on which to lay the Blanket, if required, whilst cutting.

A compressed butt joint is used between adjacent Blanket widths. This is achieved by designing the anchor pattern for a theoretical blanket width of 580 mm. This allows an overlap of Blanket at the edges of each adjacent roll. This overlap is opened outwards and the edges of the Blanket are squeezed together to form a compressed butted joint. FireMaster Blanket is soft and compressible and is ideally suited to this type of installation technique.

2.3.2 Installation of FireMaster Blanket on Underside of Steel Decks

On under-deck areas the blanket is always installed using the "Profile Wrap" technique.

The Blanket is installed lengthways along the deck allowing the stiffeners to be wrapped without having to cut the Blanket. Normally an anchor is fitted either side of the stiffener (there is no need to install an anchor on the stiffener itself). The Blanket is fixed to the anchor pins at either side thus allowing the stiffener to be wrapped in a "box" profile without having to pack inside the stiffener void.

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2.3.3 Installation of FireMaster Blanket on Steel Bulkheads

On bulkheads the Blanket is usually installed vertically. Stiffeners may be insulated using strips of Blanket while the Blanket is installed between the stiffeners which are spaced at 600mm centres, about the same width as the Blanket. Some designs require the stiffeners to be wrapped in the same way as for installation on decks, i.e. the Blanket is applied horizontally rather than vertically and the stiffeners are wrapped in a box profile. Refer to the individual bulkhead system data sheet for exact requirements.

Some bulkhead designs require the cavity of the stiffener formed by box profile wrapping to be packed with Blanket strips before installing the Blanket on the bulkhead. Refer to the individual data sheet for more details. For steel bulkheads where the fire is towards the insulated side, the same design as the corresponding deck system is used, and the Blanket is installed in exactly the same way.

For bulkheads designed for fire risk either side, a layer of chicken mesh is normally installed over the outermost layer of blanket. The mesh is held in place with the friction fit washers, and should overlap by about 100 mm at the edges of adjacent strips.

2.3.4 Installation of Multiple Layer Systems

Where more than one layer is required in order to make up the required thickness of FireMaster (refer to the System Data Sheet to determine if multiple layers are required) then joints between adjacent blankets in one layer should not occur in the same place in the next layer. Joints must be offset by a minimum of 150mm. The ideal joint offset is half the width of blanket as this ensures maximum economy of material. If this cannot be achieved then joints must be offset by at least 150mm.

2.3.5 Avoidance of heat bridging

Where the deck / bulkhead connects with another division of a lower fire rating then the higher rated lining should be continued for 450 mm along the length of the lower rated division.

Where penetrations pass through it is usually recommended that the Blanket is continued along the member / penetration for a distance of 450 mm.

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2.4 Installing the washers

Washers are simply pressed over the end of the anchor pin and pushed down until they come into contact with the Blanket surface. Care should be taken not to press with too much force as this may over-compress and damage the Blanket local to the washer. If required, after installing the washer, a plastic protective cap may be fitted over the end on the anchor pin to avoid the sharp point at the end causing injury.

END.