

**Where
valuable assets
are at risk**

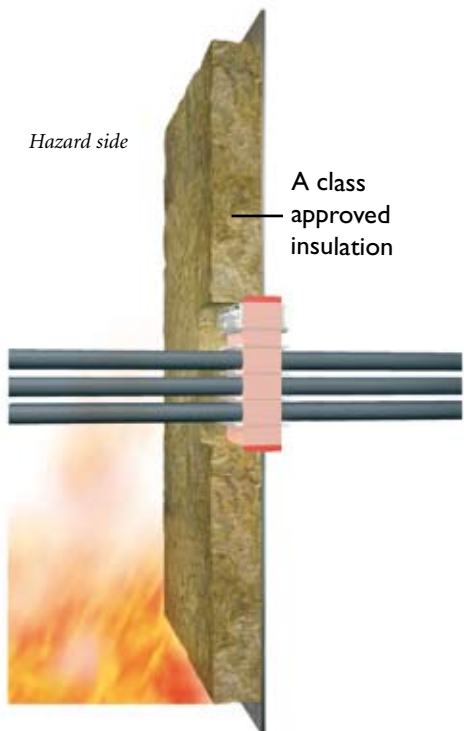
Type approvals



Our products are tested and certified by a long list of customers, laboratories and certification organisations.

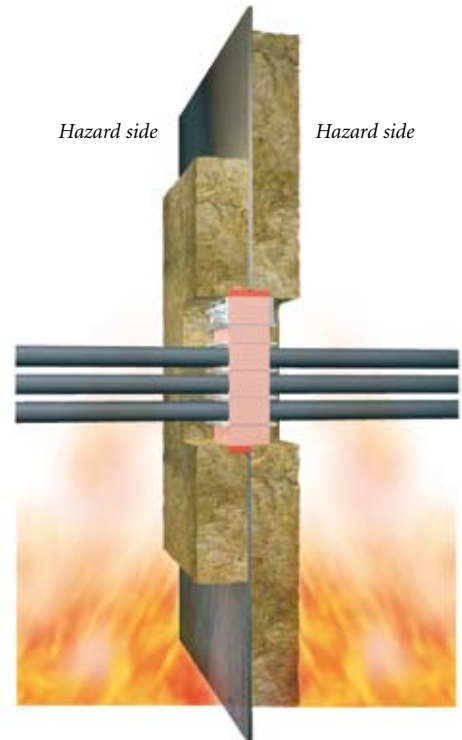


Four approved installations for two different situations, hazard on one side and hazard on both sides



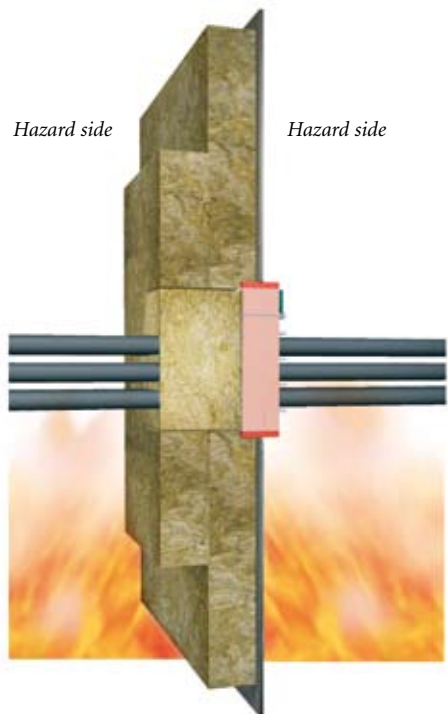
Hazard on one side

No additional insulation is required around the penetration if the frame is centre line welded in the steel bulkhead.



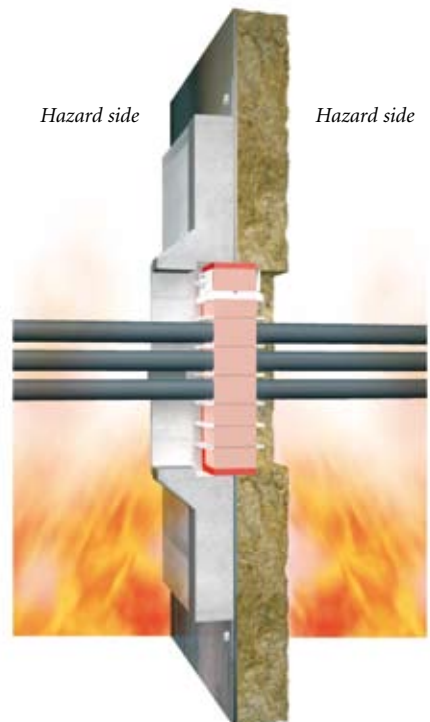
Hazard on both sides

Additional insulation must be installed around the penetration on the opposite side of the insulated bulkhead (200 mm picture frame). There is no requirement for insulation between the cables. This is the most typical internal installation.



Hazard on both sides

Additional insulation is installed on the insulated bulkhead side. Shredded insulation must be fitted between the cables. This method can be used when one side of the bulkhead is outdoors or cannot be insulated.



Hazard on both sides

Additional insulation must be installed around the penetration on the opposite side of the insulated bulkhead. There is no requirement for insulation between the cables. This is MCT's "ultimate" solution for external installation.

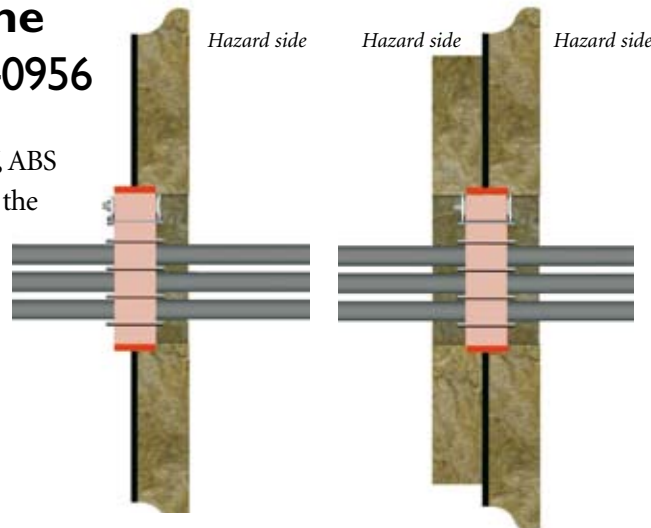
Steel bulkhead A-60

All tests are carried out using the new installation instructions, contained in IMO 754 pt.18. These regulations specify that the test frame must be centred in the bulkhead opening. This means that the installation instructions are now the same regardless of which side is the hazard side.

The penetrations below are certified by Lloyds, DNV, ABS, USCG and most other major classification bodies. Testing and certification is taking place continuously. Contact MCT Brattberg for information on the latest certification.

Welded frame Drawing no. I40956

In line with Lloyds DNV, ABS and USCG certifications the frame, insert blocks and components must be manufactured by MCT Brattberg.



Welded frame Drawing no. I40954

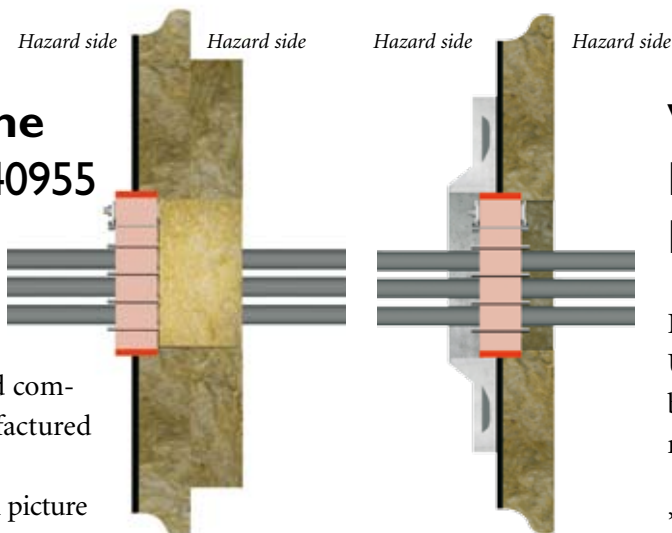
In line with Lloyds, DNV, ABS and USCG certifications the frame, insert blocks and components must be manufactured by MCT Brattberg.

An additional 200mm picture frame of insulation must be installed around the penetration on the uninsulated side of the bulkhead.

Welded frame Drawing no. I40955

In line with Lloyds, DNV, ABS and USCG certifications the frame, insert blocks and components must be manufactured by MCT Brattberg.

An additional 200 mm picture frame of insulation must be installed around the penetration on the insulated side of the bulkhead with shredded insulation fitted between the cables.



Welded frame and MCT Ultimate Drawing no. 800 I

In line with Lloyds, DNV, ABS and USCG certifications the frame, insert blocks and components must be manufactured by MCT Brattberg.

MCT Brattberg can supply the "Ultimate" as an alternative additional insulation system on the uninsulated side of the bulkhead.

Complete information about conditions of certification, see appendix to the type approval.

Aluminium bulkhead A-60

All tests are carried out using the new installation instructions, contained in IMO 754 pt.18. These regulations specify that the test frame must be centred in the bulkhead opening. This means that the installation instructions are now the same regardless of which side is the hazard side.

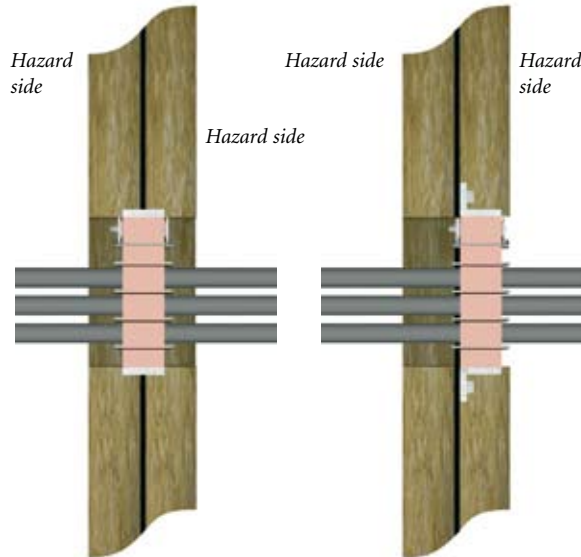
Aluminium bulkheads are insulated on both sides, in order that the core temperature rise will not exceed 200 C°.

The penetrations below are certified by Lloyds, DNV, USCG and most other major classification bodies. Testing and certification is taking place continuously. Contact MCT Brattberg for information on the latest certification.

Welded frame

Drawing no. I40963

Lloyds, USCG and DNV: the frame, insert blocks and components must be manufactured by MCT Brattberg.



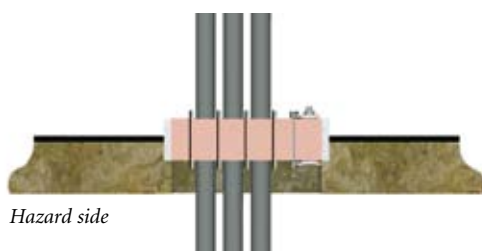
Bolted frame

Drawing no. I40964

Lloyds, USCG and DNV: the frame, insert blocks and components must be manufactured by MCT Brattberg.

DNV specify that additional insulation must be installed on the penetration side using a Class A insulation frame around the penetration.

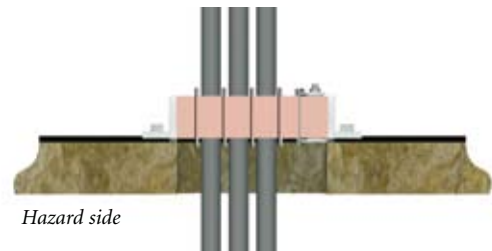
Steel and Aluminium deck Rates A-60



Welded frame

Drawing no. I40961

Lloyds, USCG and DNV: the frame, insert blocks and components must be manufactured by MCT Brattberg.



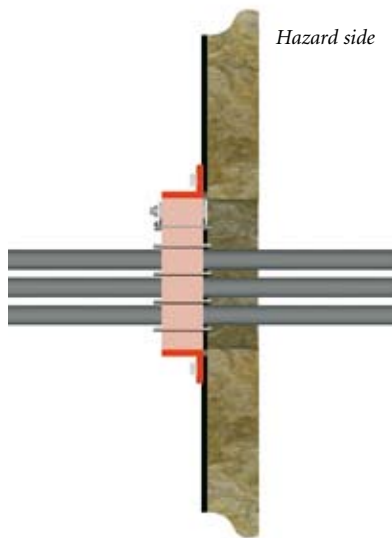
Bolted frame

Drawing no. I40962

Lloyds, USCG and DNV: the frame, insert blocks and components must be manufactured by MCT Brattberg.

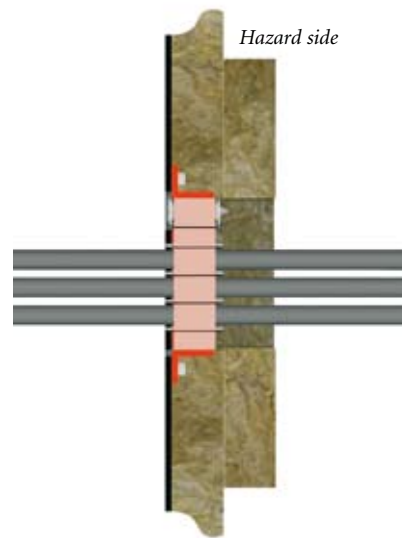
Steel bulkhead A-60

The penetrations below are certified by Lloyds, DNV, USCG, ABS and most other major classification bodies. Testing and certification take place continuously. Contact MCT Brattberg for information on the latest certification.



Bolted frame Drawing no. I40958

Lloyds, DNV, USCG and ABS: the frame, insert blocks and components must be manufactured by MCT Brattberg.



Bolted frame Drawing no. I40959

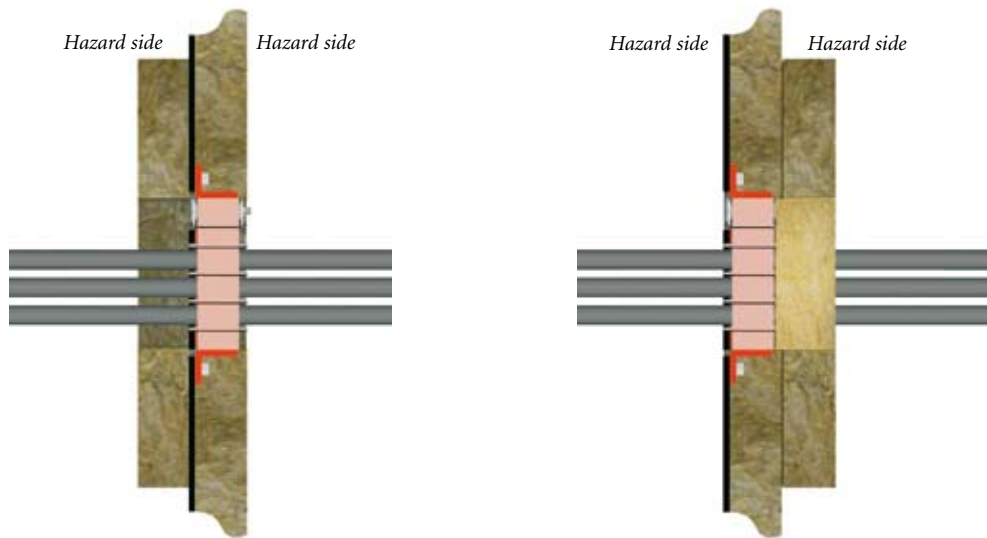
Lloyds, DNV, USCG and ABS: the frame, insert blocks and components must be manufactured by MCT Brattberg.

An additional 200 mm picture frame of insulation must be installed around the penetration on the insulated side of the bulkhead.

Complete information about conditions of certification, see appendix to the type approval.

Steel bulkhead A-60

The penetrations below are certified by Lloyds, DNV, USCG, ABS and most other major classification bodies. Testing and certification take place continuously. Contact MCT Brattberg for information on the latest certification.



Bolted frame

Drawing no. I40960

Lloyds, DNV, USCG and ABS: the frame, insert blocks and components must be manufactured by MCT Brattberg.

An additional 200 mm picture frame of insulation must be installed around the penetration on the uninsulated side of the bulkhead.

Bolted frame

Drawing no. I40957

Lloyds, DNV, USCG and ABS: the frame, insert blocks and components must be manufactured by MCT Brattberg.

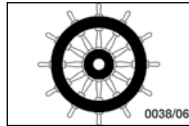
An additional 200 mm picture frame of insulation must be installed around the penetration on the insulated side of the bulkhead with shredded insulation fitted between the cables.

Complete information about conditions of certification, see appendix to the type approval.

*ABS, American Bureau of Shipping - Canadian Coast Guard
Bureau Veritas - China Classification Society
Australian Maritime Safety Authority - DNV, Det Norske Veritas
Korean Register of Shipping - Lloyds' Register of Shipping
Nippon Kaiji Kyokai - Polski Rejestr Statkow - Germanischer Lloyd
Swedish Adm. of Shipping and Navigation
Croatian Register of Shipping - RINA, Registro Italiano Navale
Russian Maritime Register - US Coast Guard - US Navy
Underwriters Laboratories Inc. Underwriters Laboratories of Canada*

MCT Brattberg is also certified according to MED, Marine Equipment Directive (via Lloyds' Register Verification (LRV))

Please consult MCT Brattberg for latest updated certificates and approvals.



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Visit our website or contact MCT Brattberg for details of your nearest distributor.

MCT Brattberg reserve the right to alter product specification without prior notice.