ARMADILLO
NOISE & VIBRATION

ARMATHERM™
THERMAL BREAK CONNECTION PLATES

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Independently Accredited by the Steel Construction Institute (SCI), Armatherm™ Thermal break pads have been employed for over a decade throughout Europe and more recently in to the USA. With increased awareness for energy efficiency in buildings, more projects are demanding they be included within the design. It is now apparent that in addition to large penetrations through the insulation envelope, thermal break pass should also be considered in masonry supports, lintels and cladding details.

Armadillo NV, offer a complete thermal modelling design service to fully evaluate the building wall build up, not just the large section steel penetrations. Contact us today with details of your project.

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- Cut to size and pre drilled for easy installation.
- High friction coating for high shear slip critical applications.
- Design and supply of steel fixing brackets.
- Masonry Support Isolation.
- Grade 500 for Column Base Isolation in cold room applications.

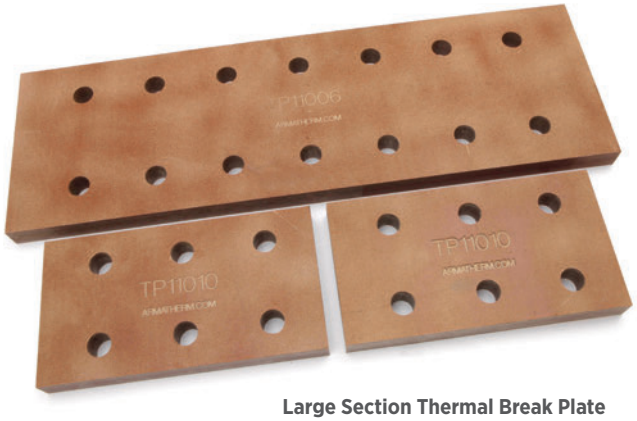
ARMATHERM™ Bolt-through structural thermal breaks

Why not just use GRP?

Cold bridging is now a recognised problem in any location the building insulation envelope is penetrated by steel work. While bespoke custom made thermal break connections offer excellent performance, they are often cumbersome to fit and more often cost prohibitive especially on large section connections.

Armatherm™ supply both Europe and the USA with over 10 years service in the industry and offer a simple bolt through solution. The high thermal resistance offers excellent cold break performance. The advantage of a bolt through design is ease of installation, fast production and simplicity of the connection detail.

Given these advantages there is an increasing trend for engineers to specify a simple high strength “plastic” with a low thermal conductivity. The assumption here being this will effectively address the issue.



Large Section Thermal Break Plate

In such an application, the thermal break plate is subjected to compression, shear, and flexural loads. In some applications these loads can be excessively high. While some materials will have an acceptable compressive strength to withstand these loads originally there is little concern or data to support the creep behaviour of the product. In the event of a material exhibiting even minimal creep, the tension in the fixings of the connection will be compromised.

Armatherm™ FR is the only structural thermal break offering a close woven

fabric reinforcement to eliminate this concern. Armatherm™ has undergone independent structural testing to not only confirm the thermal break pads will resist any creep, but more importantly the isolation washers, which on the tension side of the connection see a much higher compressive stress than the pad, also perform sufficiently well to ensure connection tension is maintained. Copies of this full report are available by emailing sales@armadillonv.com

A further element of connection design which may not be addressed with low cost solutions is the degree of friction offered in a shear connection detail.

The coefficient friction value of Armatherm™ material can be used in conjunction with the applied compressive stress on the material to help resist shear load transfer through the connection.

Help in designing the thermal connection is available at sales@armadillonv.com

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