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# Metal Jacketing

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Metal jacketing is the optimal solution for industrial insulation jacketing, cladding or lagging of pipework and equipment. With a variety of uses including, weather and damage protection, aesthetics, and where applicable, fire protection. The system is designed to be used on the insulation as a primary barrier. Surrounded by metal jacketing as an outer cover, secured with stainless steel banding and seals. A key factor for using metal jacketing is the prevention of corrosion under insulation (CUI).

## Base Material

The base metal in metal jacketing is generally stainless steel or aluminium; selected for their anti-corrosive properties. The aluminium is supplied according to ASTM B209 standard, and the stainless steel according to ASTM A240 standard. Other materials available as a base metal are Aluzinc, Galvanised Steel and Aluminized Steel Types 1 and 2.

## Coatings

We supply a number of solutions that are produced in-house to further enhance the traditional insulation system. This is achieved by the lamination of high-performance coatings on the metal. They can be applied to the base metal in various combinations to provide an effective metal jacketing solution to safety critical applications.

## DryMet®

DryMet® is a moisture barrier that is applied to the underside of the jacket. The benefits of this lamination process are to isolate the layers of insulation from the jacketing material, therefore avoiding moisture ingress. It also prevents metal-to-metal contact that could lead to crevice, pitting and galvanic corrosion. The effectiveness of DryMet® lies in its makeup, a 175µm thick, 3 layered coextruded system that uses DuPoint™, Surlyn® and polyethylene to ensure an effective barrier, free of pin-holes, imparting excellent moisture resistant properties to the film. Standard DryMet® is available in a blue colour.

## SoundMet®

SoundMet® is an acoustic damping barrier applied to the underside of the jacket. As well as helping to prevent moisture ingress and corrosion, SoundMet® is a mass loaded vinyl (MLV) loaded with Barium Sulphate; a non-toxic, high-density mineral effective at dampening sound waves. Alternative SoundMet® products are available depending on our customers' needs: SoundMet® Low Temp retains superior acoustic properties at -50°C (-58°F) or SoundMet® Fire,

an MLV with a high fire rating. All our SoundMet® jacketing solutions meet ISO 15665 standards and are an effective solution for all classes of acoustic insulation.

## CoolMet®

CoolMet® uses an innovative Poly Vinylidene Fluoride (PVDF) paint system that is applied to the topside of the jacket. Its primary focus is to radiate heat away from the insulation system. It achieves this by improving the two thermal properties, emissivity and reflectance, drawing heat away from the system to ensure a lower surface temperature. Not only does CoolMet® achieve excellent radiative properties, but also exhibits exceptional weather resistance. Other benefits of CoolMet® include high abrasion and corrosion resistance, and high resistance to chemical attack. This makes CoolMet® the best choice for a metal jacket. Applications, where CoolMet® is effective, are extensive and include oil and gas processing, transportation, petrochemical plants, power stations and any jacketing application within highly corrosive environments.

## TedMet®

TedMet® uses a Polyvinyl Fluoride (PVF) film with DuPont™ Tedlar® laminated on the topside of the jacket using an innovative process developed by BS Stainless Ltd. TedMet® is available in a range of colours and exhibits exceptional abrasion and weather resistance properties. Additional features are its high resistance to chemical attack making it the optimal choice for the outdoors and within extreme conditions. The thickness of the film is 1.5mil (37.5 µm) and can be used on corrugated, embossed and various other profiles to achieve an aesthetically pleasing finish.

## Combinations

DryMet® or SoundMet® can be applied to the underside of the barrier. CoolMet® or TedMet® can be applied to the topside of the barrier. Any underside barrier can be combined with any topside barrier for optimal performance. Depending on the specification, polyester paint or other paint systems can also be applied to the underside or topside with any combination of Met products on the other side.

## Quality

As with all BS Stainless products, quality is assured, we work to ASTM C1729 and ASTM C1676 standards to produce our high quality, efficient metal jacketing systems. Our professional team can provide help with requirements and all ancillaries can be supplied to go with the packaging.

## International Customer Base

We are proud to supply metal jacking products to over 50 countries and with our continuously growing client base, we continually work with our range of customers to update and improve our products and services.



## BS 5970:2012 Thickness of Metal Jacketing

| Type of area  | Protected mild steel          |              | Aluminium |              | Stainless steel |              |
|---|-------------------------------|--------------|-----------|--------------|-----------------|--------------|
|   | Flat, mm                      | Profiled, mm | Flat, mm  | Profiled, mm | Flat, mm        | Profiled, mm |
| Large flat areas over flexible insulation   | 1                             | 0.8          | 2         | 0.9          | 1.0             | 0.6          |
| Smaller flat areas over flexible insulation, or large areas over pre-formed slabs (including large curved surfaces) | 1.0                           | 0.8          | 1         | 0.9          | 0.8             | 0.5          |
| Removable insulated manhole and door covers   | 2                             | -            | 2         | -            | 1.0             | -            |
| Flange and valve boxes  | As metal on the adjacent pipe |              |           |              |                 |              |
| Pipes with an insulated diameter of more than 450 mm  | 1.0                           | -            | 1         | -            | 0.8             | -            |
| Pipes with an insulated diameter of 150 mm to 450 mm  | 0.8                           | -            | 0.9       | -            | 0.6             | -            |
| Pipes with an insulated diameter of less than 150 mm*   | 0.6                           | -            | 0.7       | -            | 0.5             | -            |
| Recommended thickness for reinforcing plates and where foot traffic is likely                                       |                               |              |           |              |                 |              |
| For pipes with an insulated diameter of less than 1 000 mm  | 0.3                           | -            | 0.3       | -            | 0.3             | -            |
| For pipes with an insulated diameter of 1 000 mm or more  | 0.4                           | -            | 0.4       | -            | 0.4             | -            |

\*For insulation diameters of 150 mm or less, the thickness of reeded aluminium should be not less than n 0.25 mm. For insulation diameters in excess of 150 mm it should be 0.4 mm or greater.