

Safewrap

A Modern, Wire Free, Easy to Install Jet Fire Protection System

Many applications in the petrochemical, oil & gas industries require flexible, user-friendly fire protection systems that can be easily fitted without specialist tools. For ease of maintenance, such systems should be simple to remove and refit, yet be of durable construction able to withstand the rigours of service duty.

Safewrap is a modern, wire free, easy to install flexible jacket system which meets these requirements and provides full protection of components when subjected to a 2 hour jet fire.



A Modern, Wire Free, Easy to Install Jet Fire Protection System

Safewrap Testing & Certification

Safewrap is a fully certified system tested to the new and more onerous jet fire standard ISO 22899-1:2007 (“Determination of the resistance to jet fires of passive fire protection materials”).

Safewrap has been successfully tested in both tubular and planar configurations providing an extensive scope of applications. For example, the tubular test only provides certification for small valves and pipes up to a maximum of 500 mm diameter, whereas the planar test certification allows for larger more complex equipment such as valves, actuators, vessels, structural steelwork and planar surfaces. Having completed both tests enables **Safewrap** to be applied to any configuration.



Tubular test - before



Tubular test - after

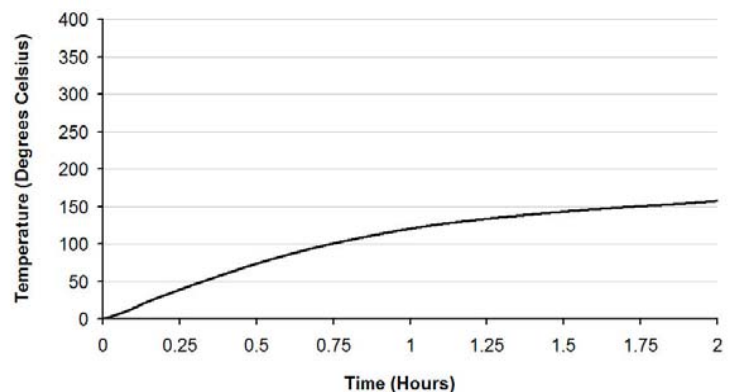


Planar test - before



Planar test - after

Average Temperature Increase of Planar Test



Safewrap

A Modern, Wire Free, Easy to Install Jet Fire Protection System

Safewrap

Safewrap J120 PFP is a best of breed flexible fire protection jacket system with quilted construction to facilitate complex structural shapes.

Safewrap has been developed by Mech-Tool to provide high performance insulation and jet fire resistance for process equipment where frequent maintenance access is required.

Safewrap is designed to be tight fitting around critical equipment and comprises an assembly of pre-shaped jackets secured together using the MTE safe-lock wire free system.

Manufacture

To meet the requirements of the client, Mech-Tool Engineering offers a full bespoke service including survey, design, manufacture and installation.

Safewrap J120 is of a quilted core composite construction consisting of multiple layers of high temperature fire resistant fibre encased within a weatherproof outer cover.

Safewrap is manufactured in the form of a jacket, nominally 50mm - 60mm thick. The thickness of the jacket can vary to suit the requirements of the application and duties.

Thickness of Safewrap

Safewrap is available in a variety of thicknesses which may be selected based on the limiting temperature criterion.

Weatherproofing

The outer weatherproof cover is made of high quality silicone coated glass cloth with very high tolerance to UV exposure and reduced discolouration.

Bespoke Design, Manufacture and Technical Support

Mech-Tool provides a full turnkey package for **Safewrap** from survey, design, manufacture, delivery, installation and maintenance support if required.

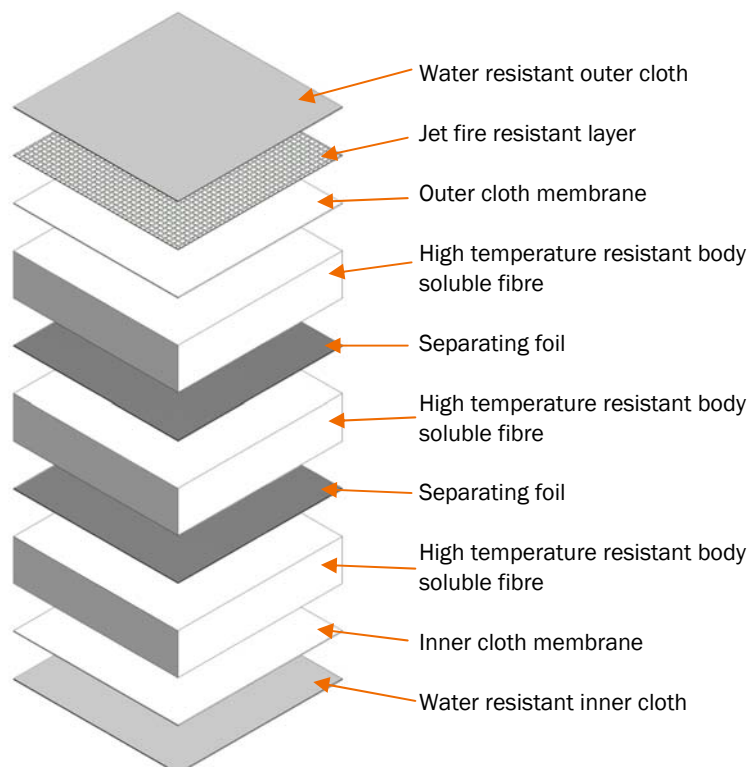
As a part of the initial survey we can offer a dismantle and disposal service for any existing fire protection in order to fit **Safewrap**.

Typical Applications

Safewrap PFP jacket systems provide at least two hours jet fire protection to the installation.

Typical applications include:

- Valves and actuators (ESDV MOV etc)
- Manways
- Cable trays, conduits and instrument lines
- Junction boxes and circuitry
- Air receivers
- Process vessels
- Hot equipment exhausts
- Pipework & flanged joints
- Pipe supports
- Riser protection



Safewrap

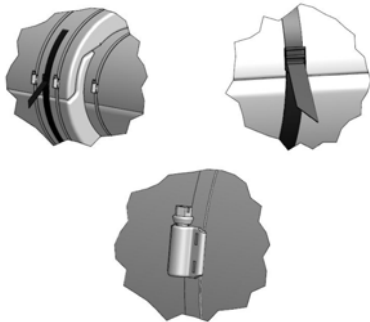
A Modern, Wire Free, Easy to Install Jet Fire Protection System

Installation

Full installation instructions are supplied with each jacket, detailing how the components fit together around the protected equipment.

The jacket system is easy to install and remove using a combination of quick release fasteners and the MTE safe-lock securing system.

Safewrap is designed to be easily removable in a maintenance situation, yet suitable to withstand exposure at the installation site.



Safewrap has been designed to be entirely water resistant thereby reducing the likelihood of Corrosion Under Insulation (CUI). All permanent fixings are corrosion resistant Stainless Steel.

Advantages / Benefits of Safewrap

- Tested to ISO 22899-1:2007 (“Determination of the resistance to jet fires of passive fire protection materials”) standard and certified by Lloyd’s Register
- Simple to install & remove
- NO lacing wire
- Inspection hatches can be incorporated
- Manufactured using NON RCF fibre
- Blast protection up to 2 bar
- Water resistant
- Tailor-made
- Full technical support

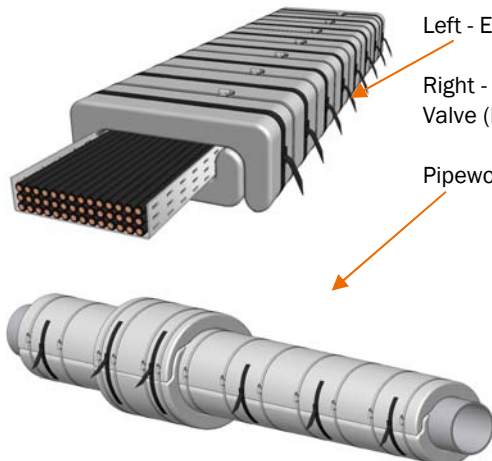
Testing and Certification

- Tested at Spadeadam Laboratory UK
- Certified by Lloyd’s Register
- Tested to ISO 22899-1 standard Determination of the resistance to jet fires of passive fire protection materials

Thermal Performance

Following extensive research Mech-Tool Engineering Ltd has developed a jet fire resistant composite layer with thermal conductivity values as low as 0.035 Wm-1K-1.

Typical applications



Left - Electrical Raceway

Right - Emergency Shutdown Valve (ESDV)

Pipework & Flanged Joint

