

# DARMATT

## Flexible passive fire protection systems

**Fire Condition: Hydrocarbon Pool Fire tested (UL-1709, BS476 Pt 20 Amendment 6487)**

**Danger and damage from fire at refineries, petrochemical and offshore installations can be minimised by efficient protection of the systems controlling the plant.**

**Darchem Engineering has developed DARMATT to provide a flexible fire protection system, which can dramatically reduce fire loss or damage by allowing a controlled shutdown of critical facilities.**



**DARMATT** is designed for the protection of actuators and valves, cable routes, conduits and signal lines, junction boxes, solenoid stations, air receivers, process vessels and other equipment applications requiring fire protection.

**DARMATT** flexible mattress systems provide excellent fire protection due to their unique construction of compressed layers of insulating fibre combined with layers of metallic foil.

**DARMATT** is renowned for its durability at very high temperatures. The **DARMATT** system is entirely asbestos free.

Darchem Engineering has carried out extensive development work which, confirmed by test data, enables combinations of infill material to be specified to suit individual customer requirements.

Designs are computer generated using Darchem Engineering's own Lloyd's certified programme.

**DARMATT** is fully tested and certified for use in high-rise hydrocarbon fires such as denoted in the UL1709 and BS476 (Pt 20 Amendment 6487) fire test curves. Such fires reach approximately 1100°C within minutes.

**DARMATT** has also been successfully explosion tested to 1.6 bar overpressure.

Testing of the **DARMATT** system has been witnessed and approved by Lloyd's, and has letters of compliance from DNV and other licensing authorities.





**DARMATT has been in use worldwide throughout the petrochemical industry for over 25 years.**

Typical **DARMATT** installations range from 15 minutes of certified fire protection up to a full 2 hours which can be adapted to individual project/customer requirements.

Each DARMATT PFP system is specifically engineered to fit closely around the protected equipment providing a removable, compact and user friendly enclosure. The DARMATT PFP system is constructed from pre-shaped panels designed to fit together around the equipment to be protected.

The versatility of **DARMATT** is demonstrated by a wide variety of applications on petrochemical plants.



**DARMATT** has been tested and accepted by a number of major oil and petrochemical companies including Exxon-Mobil, Chevron, Dupont, Texaco, Aramco, British Petroleum and Shell.

**DARMATT** is durably constructed under strict quality control procedures (Darchem Engineering is BSEN 9001:2000 accredited).

The **DARMATT** composite often recommended for petrochemical plants provides a protection window from between 15 minutes to 120 minutes in a 1100 °C Hydrocarbon fire.

These approvals have given process plant operators the confidence to specify **DARMATT** as an integral part of their policy to protect installations against the effects of fire and blast.

**The DARMATT PFP (Passive Fire Protection) System has been supplied extensively to the Oil and Gas Industry for both onshore and offshore applications. It is designed and manufactured as a removable, compact, flexible system, which has been tested and certified to provide protection against hydrocarbon fires.**

The specific composite for each application is dependant upon the time / temperature requirements, geometry and mass of the protected equipment, and site conditions such as ambient temperature, fuel sources, air flow etc.

Our Lloyd's approved Thermal Transient Programme addresses each of these variables to determine the optimum solution. The sacrificial exterior layer is weather protective, usually either vinyl-coated polyester or a coated fibreglass cloth, depending on environmental and process conditions.

**DARMATT** is ideal for all process applications including non-petrochemical. Installation is readily undertaken. **DARMATT** can be easily removed and re-installed during equipment maintenance or inspection periods.

Inspection hatches and access areas can be incorporated if required.

The **DARMATT** system is held together by highly flexible nylon coated stainless steel multi strand wire lacing that helps to keep the jacket compact and maintains integrity.

This fastening system has been used on all **DARMATT** systems supplied by Darchem to date. There have not been any problems experienced with either installation or removal / re-installation of these systems.

The installation is described in the erection procedure supplied with each system. These tailor made documents describe the steps to follow for installation and are always adapted to the supply and the equipment protected.