



Under cover

Pyrotek's thermal insulation blankets were custom-made to suit the exhaust manifolds, turbocharger and turbocharger air outlet plumbing to completely wrap any heat sources in this installation.



This engine, used in the gas exploration industry, has the turbocharger, exhaust pipe and muffler thermally covered to reduce the chance of fire and to protect maintenance personnel.

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EXPOSED hot exhaust manifolds, pipes, mufflers and turbocharger housings are a safety hazard.

A glowing turbo exhaust housing can reach well in excess of 800 deg C, which far exceeds the flash point of diesel and even heavy engine oil.

Any such fluid leaking or spraying onto such a surface can result in a significant fire that can jeopardise expensive machinery and worker safety.

The answer is to cover those dangerously hot components with a custom-fitted thermal blanket to insulate them from ignition sources and maintenance personnel.

Pyrotek designs and fabricates a wide range of thermal blankets and exhaust covers for use in the mining and oil and gas industries.

Mine-approved covers

Pyrotek's mine-approved covers are made to meet strict criteria and have proven themselves in the harshest environments across the industry.

One criterion for mine approval is that they must be totally non-absorbent.

That is, the covers will not absorb fuel or oil – on the contrary, with an outer layer made of PTFE (teflon) or silicone-coated fibreglass, any liquid simply beads and runs off the surface.

Pyrotek actually goes one step further in its thermal blanket construction, by adding another layer of PTFE under the outer layer, just in case the top surface is worn or cut at any stage.

This extra layer of protection provides both added protection and longer service life for the covers.

To add strength, structural integrity and even longer life, Pyrotek's covers feature an inner layer of knitted stainless steel mesh that sits directly against the hot face of the exhaust pipe.

For marine applications, IMO certified silicone-coated cloth can be used, which still repels fuel, oil and other chemicals, but has low smoke and low spread of flame characteristics that make it ideal for the confined engine room of a ship.

A fire at sea can be deadly, so thermally insulating any possible heat source is essential.

Laser cut patterns

All Pyrotek's thermal blankets are custom-made to suit the particular application, ensuring perfect coverage of high temperature components.

The covers are tailored to fit, which is important in cramped engine compartments.

Once a template is made, it is digitised and stored on file so that it can be re-created at any future point in time.

When it comes time to fabricate the cover, each layer of each panel of material is precision laser cut for a perfect fit each time.

The cover is then assembled and stitched together by qualified tradespeople at Pyrotek's ISO9001 compliant manufacturing plant in Queensland.

Faster fitment and removal

The beauty of thermal blankets and exhaust covers is that they are easy to install, easy to remove (with the use of lacing hooks and wire, or springs and rings, belts and buckles, hook and loop, zippers or snaps) during maintenance work and easy to refit.

This translates directly to less labour hours required to complete a given job and therefore lower operating expenses.

Removal and replacement time savings of up to 70pc are regularly achieved when compared to conventional steel heat shields.

Energy efficiency

Thermal insulation has a number of benefits for

both hot and cold applications.

Containing the heat in an exhaust system can lead to higher gas speed and greater engine performance – ask any race car engineer.

Keeping gases at a constant temperature is vitally important and that is why the pipework at gas plants is wrapped in foam glass and sheet metal insulation.

However, the valves and flanges cannot be covered in this way because access must be retained for bolts and valve controls during repairs and maintenance.

In order to insulate these areas, custom-made covers are used, which can be easily removed and replaced before and after servicing, and provide the required levels of thermal insulation to maintain the correct temperature for LNG in the pipe, for example.

Valve and flange covers are also used extensively in oil refineries, process plants and waste plant generators.

Pyrotek's thermal insulation blankets are fuel and oil repellent, highly effective at insulating hot exhaust plumbing and turbocharger housings.

They not only significantly reduce the chance of fire but also protect personnel from burns and help reduce engine compartment temperatures to keep engine inlet temperatures down and improve the life of proximally mounted electronics.

They are also widely used for cryogenic applications where pipes, tanks and valves need to be insulated from external ambient temperature.



In marine applications, fires can be deadly, so Pyrotek uses IMO certified silicone-coated fibreglass covers that not only repel fuel and oil but also have low smoke and low spread of flame characteristics.

MORE INFORMATION: Pyrotek | 1300 928 322 | www.pyroteknc.com.au

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