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The complete range of Signal and Alarm products from Cooper Industries

Cooper MEDC designs and manufactures a comprehensive range of audible, visual and communication devices for harsh and hazardous areas.

Approved to wide-ranging global standards, the products are suitable for the toughest of environments, where the risk of explosion from gas and dust may be present.

The rugged, corrosion-free construction and high levels of ingress protection ensure that life safety systems operate effectively in all situations.

Products are available from stock or may be engineered to project specification.

Cooper Industries' Hazardous Area Signals and Alarms:

As tough as your environment



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Hazardous Area Signals and Alarms

Cooper's complete range of Signals and Alarms for Hazardous Locations

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Cooper Hazardous Area Signals and Alarms:
The focus for all your Notification needs.



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A new composite material for manufacturing explosion-proof electrical equipment used in harsh and hazardous areas is significantly lowering cost of ownership in the Oil and Gas Industry.

Installations in the Oil and Gas industry require life safety systems to inform workers of potential life threatening hazards. Key components of fire and gas detection and public address systems, include products such as: manual alarm call points, warning beacons (strobes), sounders (horns) and loudspeakers which are vital to safety on oil platforms, refineries and other such facilities.

The Oil and gas industry encounters one of the harshest environments on earth for man-made equipment and demands the most rigorous standards of safety and effectiveness. Products for use in such areas therefore require long lifetimes and the need to operate effectively and reliably when it matters the most.

These products have traditionally been manufactured from cast aluminium alloy and stainless steel, as only these materials were thought to be strong enough to meet the required standards in explosion proof testing. These however, may not be ideal for harsh environments as although alloys are light, they are also susceptible to corrosion, which can impair the performance of important safety equipment at vital times; stainless steel, meanwhile, offers better corrosion protection, but is heavy and expensive to manufacture because of the machining process and increasing raw materials costs.

A new alternative has emerged for such products, in the form of Glass Reinforced Polyester (GRP). GRP is a composite material made of a polymeric reinforced by fine glass fibers. As with many other composite materials, the two components act together to enhance the overall properties. Whereas the plastic resins are strong in compressive loading but relatively weak in tensile strength, the glass fibers are very strong in tension but have little strength against compression. By combining the two components together, GRP becomes a material that has good resistance to both compressive and tensile forces. The exact combination of glass and plastic used has a strong bearing on the properties of the final product. The ability to tailor the properties of GRP have led to its use in diverse products, from the sails on advanced yachts to the rotor blades of large turbines. A GRP explosion-proof enclosure when designed correctly will have the same impact, vibration, shock and explosion resistance as an equivalent metal enclosure. It is similar in weight to products made from alloys and significantly lighter than stainless steel, while offering the improved resistance to corrosion.





As a leading manufacturer of explosion proof equipment for over 30 years, Cooper MEDC have pioneered the use of GRP in explosion-proof products. Key advantages of GRP products include a **lower capital cost** combined with **minimal maintenance** and **extended lifetime thus lowering the cost of ownership**.

ATEX

The innovative use of GRP has now been extended to include a range of uncertified (safe area) equipment for use in harsh industrial & marine environments.

MEDC first launched their GRP products in 1993 and whilst the company continues to offer a choice of metal, alloy or GRP for its range of fire and gas safety products, an increasing number of customers are switching to GRP. Brian Walder, the managing director of MEDC, states: "customers have benefited from MEDC's innovative technology by replacing traditionally used alloys and stainless steel. The lower purchase price combined with reduced maintenance and longer lifetimes have significantly reduced the cost of ownership. For our key partners, GRP has become the material of choice for their oil and gas installations".



MEDC has spent almost 15 years researching, designing and manufacturing GRP products for the precise environments encountered in the oil and gas sector, giving them the appropriate combination of properties. The range of products available includes manual alarm call points, heat detectors, beacons, status lamps, loudspeakers and sounders.

In addition to corrosion resistance, GRP will resist attack by most acids, alkalis and chemicals. It is just as resistant to concentrated acids and alkalis as most metal products. GRP meets the flammability requirements of the BSI standard EN60079

Tests for UV stability have also shown that a service life of over 50 years can be expected. Neither is GRP prone to temperature-related degradation, as thermoplastics can be, allowing it to perform under the most arduous temperature extremes over many years.

GOST



MEDCs GRP products are explosion-proof certified for many standards, including ATEX, UL, CSA, GOST R&K, Chinese and Inmetro approvals.

With no corrosion, users can practically 'fit and forget' GRP field equipment. Brian Walder says "We know that maintenance routines still need to be carried out, so that adherence to local requirements can be demonstrated. However we have found that our users need fewer inspections to comply, reducing maintenance costs". "The combined properties of strength, lightness and corrosion resistance are increasingly making GRP the preferred choice of many end users"

Cooper MEDC Limited is a UK manufacturing company, operating under the Cooper Notification platform, which is part of Cooper Industries;

A global manufacturer with 2007 revenues of \$5.9 billion, approximately 87 percent of which are from electrical products.

Incorporated in Bermuda with administrative headquarters in Houston, Cooper employs approximately 31,500 people and operates eight divisions:

- Cooper B-Line
- Cooper Bussmann
- Cooper Crouse-Hinds
- Cooper Lighting
- Cooper Power Systems
- Cooper Safety
- Cooper Wiring Devices
- Cooper Tools

Cooper Connection provides a common platform to better serve our electrical distributors, specifiers and end user customers across all Cooper.

For more information, visit the website at www.cooperindustries.com