

BAC GRANTED EXCLUSIVITY FOR AL-ZN-IN METAL SPRAYING

BAC Corrosion Control Ltd have recently been granted exclusivity in the UK, Scandinavia, Libya and Saudi Arabia for distribution of a new Al-Zn-In Metal Spraying wire.

Metal Spraying or Thermal Spraying is the process of spraying molten metal onto a surface to form a coating. Achieved by melting either pure or alloyed metals in a flame the molten metal is then subjected to a blast of compressed air which has the joint effect of creating tiny droplets of metal and then projecting them towards the surface to be coated. The end result is a solid metal coating on the treated surface. The thickness of the coating is dictated by the number of layers applied.

Metal spraying is a long-standing method for applying sacrificial coatings with either zinc or aluminium being sprayed. Aluminium forms a good, hard barrier but sometimes becomes passive in mildly corrosive conditions whilst Zinc forms a very poor barrier to erosion or mechanical damage and almost always behaves sacrificially.

Recently, a new alloy of Aluminium, Zinc and Indium (Al-Zn-In) has been developed to bridge the gap between Aluminium and Zinc and also to take advantage of the following:

- 95% of the material is aluminium so that the density is still only 40% that of zinc.
- The sacrificial reaction involves the loss of three electrons as with pure aluminium.
- If anything, the alloy is harder than pure aluminium which is also harder than zinc.
- The combination of small amounts of zinc and indium keeps the alloy sacrificial in the presence of chloride ions.
- Al-Zn-In anodes have been used successfully for many years in marine environments.

This new alloy makes metal spraying an ideal solution for corrosion of steel

reinforcement in concrete where an electrolyte (such as salt water) can leach into the structure as well as atmospherically exposed steel structures.

BAC hopes to market this new protection method using the existing branch offices in Libya, Saudi Arabia as well as their other international partners. Managing Director, Tony Gerrard commented "This exciting new material offers an alternative to existing products and also strengthens our existing product range. Channelling it through our partners and distributors, we are confident it will be successful in the current market".



NEW SCADA SYSTEM IS A HIT FOR BAC

BAC Corrosion Control Ltd have completed a contract to design, manufacture and supply 40 SCADA controlled Transformer Rectifier (TR) units for a prestigious project in the Kingdom of Saudi Arabia (KSA).

SCADA (supervisory control and data acquisition) is a computer system for gathering and analysing real time data. SCADA systems gather information, such as operating levels of Cathodic Protection equipment, transfers the information back to a central site, alerting the home station in the form of an alarm if faults arise, carrying out necessary analysis and control, and displaying the information in a logical and organised fashion. SCADA systems can be relatively simple, or more complex, such as this system where 40 TR units are all monitored and controlled by a single centralised computer.

The system will ultimately be held by the Royal Commission in Yanbu, KSA for the protection of steel reinforcement in concrete structures. The TRs contain new Switch Mode Power Supplies which have been designed and developed by BAC along with DC Surge Suppressors and 1GΩ Impedance Buffers, all manufactured by BAC at their facility in Telford, UK.

The project is worth in the region of £75,000 for BAC and it is anticipated that it will be the start of new things to come with the introduction of new technology into the already successful TR operations within BAC.

BAC LAUNCHES INTO INDIAN RAILWAY MARKET

BAC Corrosion Control Ltd has recently launched their range of Pin Brazing products and equipment into the Indian railway market by appointing a local Indian company as their distributor.

Vedanta Signals Pvt, Limited, based in Lucknow, India, is a well established company working within the Indian Rail Industry. Vedanta distributes prestigious railway products into the Indian market which are manufactured by other local and international companies. Over the last few years, Vedanta has developed a strong relationship with the Research Designs and Standards Organisation (RDSO).

The RDSO was set up in 1957, under the Ministry of Railways, by the Government of India in Lucknow. The quality policy of the RDSO is to develop safe, modern and cost effective railway technologies complying with statutory and regulatory requirements, through excellence in research, designs and standards and continual improvements in quality management systems to cater to growing demand of passenger and freight traffic on the railways.

Following hard work and close testing, BAC and Vedanta have managed to secure an approval from the RDSO to cover all Pin Brazing equipment that is used on the Railways. This includes the BB2 and BB3 Pin Brazing machines as well as the pins and ferrules which are all integral to the Pin Brazing process. It is expected that Vedanta can now target railway maintenance and construction companies in India using the RDSO approval to gain a foothold in the Indian market. Through working closely together in the future, it is hoped that the approved BAC equipment can be offered as a reliable and cost effective alternative to existing track bonding processes and techniques.

ISOZIN ZINC TAPE PROVES TO BE THE IDEAL SOLUTION AT NUCLEAR POWER STATION

BAC Corrosion Control Ltd have recently completed a project for the British Energy owned Heysham 1 Nuclear Power Station in Morecambe, UK.

Since installation, the power station's back up cooling water system corrosion control provisions and some sections of the pipeline, over the 25 years of life, required material enhancements and enhanced corrosion protection. BAC was commissioned to install Isozin Zinc Tape and Zinc sacrificial anodes at various valve pit locations around the site to extend the service life of this back-up system.

Isozin Zinc Tape comprises a layer of 99.99% pure zinc 80 microns (0.08mm) thick with 25 microns (0.025mm) of adhesive which is protected by siliconised paper until installed. It is available in 50 metre long rolls and in widths ranging from 10mm up to 300mm.

The product is designed to cover unpainted iron, steel and light alloys to provide local corrosion protection that, in most cases, will last longer than the life of the structure being protected. The tape achieves both passive protection due to the Zinc Tape acting as a barrier coating, and active protection as the tape acts as a sacrificial anode which will corrode instead of the substrate.

The project negotiations lasted for nearly 18 months during which time visits to site were made and stringent vetting of both BAC as a company and the personnel involved had to be undertaken by British Energy. Five members of the BAC staff were involved during the installation work which lasted 4 weeks in total.

The work carried out included the removal of any existing sub-standard coating, surface cleaning of the pipe work and valves and finally installation of the Isozin Zinc Tape, sacrificial anodes and surface tolerant epoxy paint. Thickness testing was conducted after the installation to confirm that the work carried out met the original specifications by British Energy.



BAC ADDS HEALTH & SAFETY TO CERTIFICATION PORTFOLIO

BAC Corrosion Control Ltd has achieved OHSAS 18001:2007 certification with BM TRADA. The group transferred its ISO 9001:2000 certification to BM TRADA earlier this year.

A market leader in providing Cathodic Protection and Pin Brazing electrical bonding for the oil, gas and utilities industries, BAC offers pre-installation designs and surveys, installation testing, commissioning surveys, maintenance and inspection programmes.

BAC is already working in 30 countries worldwide, including branch and joint venture offices in Tripoli (Libya), Dubai (UAE) and Dammam (Saudi Arabia). 'In industries such as ours it is essential to maintain the highest standards in health & safety. We are proud to be able to prove our commitment to clients and staff by achieving this certification,' said Managing Director Tony Gerrard.



'The continued progression of BAC is integral to the future success of the company and building the reputation of BAC is an essential part of that. Clients often look at a supplier's accreditations before they consider anything else. This means that the way BAC is viewed by current and potential clients can often be make or break in projects where competition from both UK and overseas competition is fierce'

BAC MANAGEMENT SAYS...

Since our last newsletter, we have achieved full OHSAS 18001 health and safety accreditation to go alongside our long established ISO 9001 quality certification. We hope that this provides our customers with even more confidence in our operations and systems.

We have launched into new Pin Brazing markets with the appointment of distributors in India and Australia and also launched new products including small cable 'Stinger' connections for Pin Brazing, Al-Zn-In metal spray for protecting steel and steel in concrete and Sensorguard for lightning protection of remotely located electrical equipment.

I hope that you find something of interest in this newsletter and we look forward to your new or repeat business.

Tony Gerrard
Managing Director

FORTHCOMING EXHIBITIONS

Concrete Protection and Repair
24th September 2009
Loughborough, UK

7th Libyancorr Conference and Exhibition
9th - 11th November 2009
Benghazi Libya

NACE Corrosion 2010
14th - 18th March 2010
San Antonio, Texas, USA

Offshore Technology Conference
3rd - 6th May 2010
Houston, Texas, USA

BAC BECOMES DISTRIBUTOR OF SENSORGUARD - A NEW ELECTRICAL SURGE PROTECTION SYSTEM

BAC Corrosion Control Ltd, have become distributors for SensorGuard – a new electrical surge protection system.

Throughout the company's extensive experience, BAC has recognised the need for electrical surge protection in sensitive electronic equipment such as transformer rectifiers which are integral to the successful operation of the cathodic protection (CP) systems designed by BAC.

SensorGuard is designed to provide the highest level of protection for sensitive electronic devices against unstable AC power, surge events caused by direct lightning strikes and Ground Potential Rise (GPR) due to ground strikes. It also protects from power supply voltage drops (brown outs) which cause current surges leading to equipment malfunction and/or failure.

SensorGuard is fitted in conjunction with any Surge Protection Devices (SPD's) already deployed, delivering significant reductions in down time and costs incurred due to equipment damage and maintenance costs.

SensorGuard consists of two integral components: the central control module which controls the power, monitors the power grid and activates the power interrupt circuit; and the lightning sensor which is fibre optically linked to the control module.

SensorGuard's unique feature is that it automatically provides open line isolation before a surge occurs. It is activated by sensing either fluctuations in the AC power system (voltage stress or brown outs), surge events caused by direct lightning strikes or GPR due to ground strikes.

Upon detection of a surge event the central control module energises a contactor which will provide open line isolation to the protected equipment (both AC & DC). Open line isolation to the protected equipment will present an extremely high resistance to any surge causing the voltage and current to follow the path of least resistance which is

provided by surge protection devices or ground earthing. SensorGuard then continues to monitor the surge condition and maintains the open line isolation until no further strike or power anomaly events are detected. The power to the protected equipment will then be automatically restored by the central control module closing the contactor.

In the future, BAC propose to offer to optionally fit these units into the transformer rectifiers that are designed and manufactured at the Telford facilities, and to also offer to retro fit them into existing CP systems that are currently in operation across the world.



BAC LAUNCHES 'STINGER' TO CONNECT SMALL DIAMETER ANODE CABLES TO PIPES

BAC Corrosion Control Ltd have launched 'STINGER' – a special washer that allows small diameter anode wires to be connected directly to pipelines.

'STINGER' has been specifically designed for use with small diameter cables and negates the need of a conventional cable lug and copper sleeve.

The new process, which has been granted a patent, consists of a specially alloyed washer which allows the cable to be pushed through a hole in the wall to allow a standard BAC 8mm direct pin to be used to braze the cable, washer and pin onto the pipe in one process. The uniquely designed chamfer inside the washer allows the solder to pool inside ensuring a sound connection.

Previously, when brazing a small diameter cable a conventional BAC cable lug – usually for 10mm² cable – was used with the addition of a sleeve to fill the gap between cable and lug. The whole lug would then have to be crimped using a compression tool to secure the 3 pieces together. Only then, could the braze be completed. With 'STINGER' both time and money are saved as the insert and crimp are not required



BAC APPOINTS AUSTRALIAN DISTRIBUTOR

BAC Corrosion Control Limited is continuing their expansion plan by appointing a Pin Brazing distributor in Australia.

Tremco Pipeline Equipment Pty Ltd is an Australian owned, family run company based in Brisbane, servicing the Pipeline equipment requirements of the Oil, Gas, Water, Mining and Petrochemical Industries within Australia.

The excellent reputation of Tremco Pipeline Equipment Pty Ltd has been built by supplying quality products supported with the best possible back up service. Major customers include British Gas, Santos, Woodside, Arrow Energy, Oil Search, Shell, Caltex, Esso, McConnell Dowell Constructors, NACAP, Saipem and Tyco Water to name just a few.

Tremco Pipeline Equipment Pty Ltd's existing product range targets new construction, reconditioning, and maintenance companies and it is hoped that BAC's Pin Brazing range of products and equipment will run alongside these and enhance the overall portfolio offered.

With several interested customers already lined up, it is hoped that this new venture will provide an avenue into various markets of interest and with the local manpower offered by Tremco Pipeline Equipment Pty Ltd a close and successful relationship can be forged.