

BAC SECURES CONTRACT WITH NATIONAL GRID

Cathodic Protection (CP) and electrical engineering specialists, BAC Corrosion Control Ltd (BAC), have secured a top contract with National Grid, owner and operator of Great Britain's high pressure natural gas pipeline network, to manufacture and supply Switch Mode Power Supply (SMPS) units.

Design engineer Jason Peters explains what the new innovations of the units are.

"We have worked very closely with National Grid's engineers to develop a new design which incorporates our SMPS units which provide a fully integrated system with the existing National Grid CP infrastructure. SMPS units have excellent controllability, and low output ripple and are lightweight. The units are designed to integrate fully with National Grid's remote monitoring system, which allow the units to be synchronously switched remotely and instantaneous off potentials collected."

The units will be housed in a glass reinforced plastic roadside kiosk for easy and safe access.

An initial order of 151 of the specialist units have been ordered as part of a 3 year contract. The new units will begin to be installed in early 2011 by National Grid as part of their replacement programme.

Following many years of working together, the contract (potentially worth initially in excess of £1 million) between BAC and National Grid proves the credibility of BAC as a company and its products, some of which are new to the market. The contract will allow BAC to showcase its range of electrical engineering products as the SMPS units will eventually be rolled out over the whole gas network.



BAC IN TOP 25 CONTRACTORS FOR JN BENTLEY

BAC has recently been awarded a prestigious accolade by civil engineering leaders JN Bentley. In the recent Subcontractor Performance Awards BAC was ranked in the top 25 contractors out of a total of 452 contractors currently on Bentley's approval system.

To compile the league table, JN Bentley's project teams applied a simple weighted scoring system to every completed order against a set of categories to calculate an overall performance score.

Only a very small minority failed to meet the minimum acceptable standard in 2009, and with many more exceeding it than in previous years, the minimum score to achieve a place in the Top 25 list increased by 10%.

BAC hopes to build on their relationship with JN Bentley in the future, working together on continuing projects and progressing onto new opportunities in the future.

BAC LAUNCHES GSC SUPERANODES

BAC has recently launched GSC SuperAnodes – high potential galvanic Zinc anodes for use in protecting steel reinforcement in concrete.

As yet another addition to the steel in concrete range, GSC SuperAnodes, are specifically designed to inhibit the corrosion of concrete reinforced structures. The anodes are typically embedded within the concrete or repair mortar and are electrically connected to the reinforcement.

GSC Superanodes are made of laminated zinc with a 99.99% purity covered by two layers of zinc-anode-activator-paste (ZAP). This paste, which has been developed specifically to keep the zinc surface moist and active, contains a unique blend of moist-binders and Zinc surface activators which increases anode efficiency and guarantees a continuous current density even in dry environments.

The anode's designed service life is between 10 years and 20 years depending upon selected size and correct system design. Each anode is vacuum sealed in a plastic bag to avoid contamination during shipping and storing which is removed prior to installation.



Advantages of GSC SuperAnodes include:

- Needs no anode wiring.
- Simple installation
- When correctly designed will give enough current in dry and arid environments.
- Pre-stressed or post-tensioned tendons will not be subject to hydrogen embrittlement due to unacceptable operating potentials.
- Suitable for new builds and retrofit
- Current densities are naturally self-adjusting depending on the current required by the structure.
- Current densities are comparable with impressed current systems.

Anodes are available in various sizes and weights depending upon application criteria.

FORTHCOMING EXHIBITIONS

The UK Concrete Show 2011

23rd-24th February 2011
Ricoh Arena, Coventry, UK

NACE Corrosion 2011 Conference and Expo

13th-17th March 2011
George R Brown Convention Centre, Houston, Texas, USA

KEEP IN TOUCH

You can now stay in touch with the latest BAC news using the following methods:

- Sign up for news via our website
- Facebook - search for BAC Corrosion Control
- Twitter - search for BACCorrosion

BAC MANAGEMENT SAYS...

Although 2010 has been a challenging year for BAC, sweeping changes across the company and continued hard work by our employees have ensured that we have operated profitably and not let the recession bite too hard. Thanks, of course, go to our customers, many have dealt with us for the first time in 2010, and also to our suppliers who have continued the valued service of past years. Since our last Protection and Connection newsletter, we have achieved ISO 14001:2004 accreditation for our environmental management system – something the whole company is extremely proud of as it completes our certification hat-trick with the existing ISO 9001:2008 and OHSAS 18001:2007. We know these will provide BAC with a robust framework to our business as well as a competitive advantage in these hard trading times. I hope that you find this newsletter interesting and we all look forward to your new or repeat business in 2011.

BAC ACHIEVES ISO14001:2004 CERTIFICATION

BAC has been awarded United Kingdom Accreditation Service (UKAS) accreditation ISO14001:2004 for their Environmental system by BM TRADA Certification Ltd. BAC's head office in Telford, UK, and operations managed from there are now part of an elite group of companies that has attained all three integrated management system certifications.

Cathodic protection specialists BAC, market leader in providing corrosion control and pin brazing electrical bonding for the oil, gas, civil and utilities industries, has added this certification to its existing ISO 9001:2000 Quality and OHSAS 18001:2007 Occupational Health & Safety Management Standards.

UKAS is the sole body recognised by the Government for the assessment and verification against international standards of certification, inspection and testing in both the private and public sectors. Certification by BM TRADA recognises BAC's credibility of products and services throughout the United Kingdom.

UKAS accreditations in the corrosion control industry are paramount with asset protection and safety being high on client's priority lists and to be given this accreditation is testament to our commitment to improving overall standards for the workforce.

The scope for the certifications are:

Design, manufacture, supply and installation of cathodic protection systems and components, power control systems and pin brazing equipment. Provision of Cathodic protection and pin brazing services. Product stockholder, specialist distributor and supplier of cathodic protection and pin brazing equipment.

NEW IMPRESSED CURRENT ANODE FOR STEEL IN CONCRETE

BAC have added to their steel in concrete protection range yet further by introducing a new specialist anode system which is manufactured by Italian anode manufacturer Chemical Newtech.

The relationship between BAC and Chemical Newtech has progressed over the last few months and it is expected to be developed yet further into the future enabling both sides of the partnership to offer the other one opportunities and benefits.

The mixed metal oxide (MMO) coated titanium mesh anode is a durable product designed for impressed current cathodic protection systems. The MMO coating, with industrially proven lifetime characteristics, ensures an even and high performance current distribution.

The high purity titanium metal substrate has proven chemical corrosion resistance, low system electrical resistance, and high mechanical integrity against breakage. These mesh anodes are tested to, and meet, NACE TM0108-2008 and TM0294-2007 test methods as a minimum, and can be installed in such a way so as to achieve a long term service life. The mesh is available in several standard widths or can be specially sized.

It is anticipated that this anode will lead the way in a revised range of MMO coated anodes to be offered by BAC, which are also manufactured by Chemical Newtech, for use in various markets including steel in concrete, alongside this mesh system, and also tank protection, power stations and buried structures.

BAC FURTHER EXPANDS STEEL IN CONCRETE PROTECTION RANGE

BAC continue to expand their steel in concrete protection range following recent positive feedback with existing products in their portfolio.

BAC now offers a number of both Galvanic and Impressed Current CP (ICCP) systems which can be applied to different specification and customer requirements.



Zinc Layer Anode (ZLA) – the most established product in the range, is a galvanic anode system which is suitable for all atmospherically exposed reinforced concrete structures which are suffering from, or are susceptible to corrosion caused by chloride ingress and/or carbonation.

ISOMMO Discrete Anodes utilise an innovative mixed metal oxide and titanium composition with an integral gas venting system and are specifically designed for use in ICCP.

Procion Metal Spraying is a technologically innovative type of a galvanic anode system. Metal spraying is the process of spraying molten metal onto a surface to form a coating. This is achieved by melting alloyed metals, typically Al-Zn-In (Aluminium Zinc Indium), in a flame and passing it through a blast of compressed air. This can also be sprayed on metals.

BAC Switch Mode Power Supply Units (SMPSU) are high efficiency power supplies with a tightly regulated output control and high immunity against electrical disturbances from the mains which provide a reliable power source for low power ICCP systems.

GSC SuperAnodes are high potential galvanic Zinc anodes which are the simplest product in the range and have been detailed earlier in this issue.

RollAnodes are galvanic Zinc anodes specifically designed for application in pre-drilled holes which are then embedded in an ion-conductive self moistening paste (Zinc Anode Activation Paste 'ZAP'). The RollAnodes are based on rolled layers of Zinc with ion-conductive gel which, after being installed with the paste, are kept active during their entire service-life.

Mixed Metal Oxide (MMO) Mesh is a durable anode for ICCP systems. The MMO coating, with industrially proven lifetime characteristics, ensures an even current distribution. The high purity Titanium metal substrate has proven chemical corrosion resistance, low system electrical resistance, and high mechanical integrity against breakage.

Multi depth, multi element Linear Polarisation Resistance (LPR) Probes are used for monitoring corrosion rates in new structures. The embeddable probes, with their unique design – four independent LPR electrodes at varying levels of concrete cover – allow the determination of a variety of parameters relating to the condition of the structure with the use of BAC's LPR corrosion rate meter. This data can be analysed to provide an indication of the rate of ingress of corrosive substances into the concrete and hence estimates can be made regarding the potential life of the structure.