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National Grid switches to Alcad Vantex batteries for backup power for gas compressor stations

Vantex batteries offer tried and trusted nickel-based battery technology with the added advantage of low maintenance

Oskarshamn, Sweden, April 7, 2011 – National Grid, owner and operator of the gas National Transmission System (NTS) for Great Britain, is installing Alcad Vantex rechargeable nickel-based batteries in a programme to upgrade the DC power backup systems at some of its gas compressor stations. The Vantex batteries, developed specifically to ensure maximum reliability and optimum TCO (total cost of ownership) in stationary industrial installations, will support vital control and safety functions at the compressor stations in the event of a loss of mains power.

National Grid has 25 compressor stations in Great Britain that boost gas pressure up to 85 bar to increase transmission capacity and move gas through the pipelines. They are driven either by industrial gas turbines fuelled by gas taken from the pipeline or by electrical compressors.

The programme to upgrade the DC backup power systems at the compressor stations is focussing on three main types of battery systems: fire and gas detection; switchgear control; emergency power. The first two systems are supported by 24 V batteries, while a 110 V battery provides the emergency power.

One of the main contractors for the upgrade programme is PE Systems. Explaining the reasons why Alcad Vantex batteries have been selected, Mark Wilson Project Manager for PE Systems said: *'National Grid had received excellent service from Alcad nickel-based batteries in previous compressor installations, where in some cases they were still going strong when replaced after 30 years. So the customer was keen to use them again for the current programme.'*

'By making the change to the latest Vantex design we have been able to provide a very low-maintenance solution. At the same time, the wide range of capacity steps available in the Vantex range offers greater flexibility that enables us to optimize the battery system for each site.'

The first compressor station to have been fitted with the Alcad Vantex batteries is in Scotland. The next site to be upgraded will be in the east of England. Alcad is supplying and installing the Vantex batteries complete with battery stands.

Vantex delivers industry-leading performance

Vantex batteries feature the same robust construction and unique electrochemistry that has enabled Alcad *nickel-based* batteries to establish an unrivalled track record for reliability and long-life. They take this a stage further by delivering exceptional performance and low-maintenance requirements combined with a long service-life – even at operating temperatures as high as +40°C.

Vantex is designed for ease of transportation, installation and operation. The cells are assembled in blocks of up to six cells to facilitate transportation and are delivered ready-filled with electrolyte to make installation fast and simple. When filled, Vantex batteries can be stored for up to two years in normal conditions.

A key feature of the Vantex is its high-technology, low-maintenance design that ensures a very high level of gas recombination (around 90 percent) and very low gas emission levels. This low-maintenance concept means that the Vantex battery may require just one topping-up operation throughout its entire service life.

In addition, Vantex offers very good chargeability, reaching over 95 per cent of its capacity in less than 15 hours using single-level low-voltage charging.

Wide range of capacities and high levels of reliability

Vantex is available in a wide range of capacities, from 15 to 1700 Ah, with a choice of L type plates - for relatively long discharge periods, or M type plates - to sustain loads from between 30 minutes to 3 hours.

In common with all Alcad batteries, Vantex offers exceptional reliability thanks to its robust *nickel-based* construction and engineered electrolyte. This ensures a long and predictable service life in contrast to VRLA batteries that can suffer from 'sudden-death' failure, especially in high temperatures.

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