

Welcome to our latest newsletter, keeping our customers and partners up-to-date with the latest developments at Sensonics. New projects, new products and case-studies, all helping to protect your critical rotating plant.



## UPGRADE AT USKMOUTH

Sensonics has recently completed a major upgrade of turbine supervisory and vibration monitoring equipment at the Uskmouth Power Station in Newport, South Wales. This coal fired power station, originally owned by Welsh Power, but now a Scottish and Southern Energy facility, has three 131 megawatt generators which supply power to the Newport and surrounding area.



Prior to the upgrade, other types of monitoring equipment was being used, including GEC Type 6 turbine supervisory systems and Alstec Type 7 equipment for vibration monitoring. Engineers at Uskmouth acknowledged that both these systems were obsolete

and this was causing problems in terms of support and reliability of operation. As part of the upgrade, Sensonics supplied and fitted their Aegis VME (Vibration) and Sentry turbine monitoring systems to the turbine and alternator.

The vibration sensors fitted included Sensonics PZV2 piezo-electric velocity transducers. These units were selected, rather than accelerometers, based on their superior noise performance in heavy industrial environments and unique internal signal processing which eliminates the potential for resonances through such causes as steam noise. They also offer an advantage over traditional moving coil velocity transducers with a superior frequency response and no moving parts. As a result of installing the new monitoring equipment the problems associated with the previous system have been eliminated and the engineers at Uskmouth are appreciating the reliability and state-of-the-art features of the Sensonics equipment.

John Phillips, Instrumentation Engineer at Uskmouth added, "The high build quality of

the Sensonics equipment is particularly appreciated and the modular design of the units makes the system easy to support and expand if needed in the future".

## SENSONICS AT MICONEX CHINA

During October we joined our exclusive Chinese partners, **Star Royal Industry and Engineering**, for our third year of exhibiting at the **Miconex** exhibition, held in Shanghai.

Although this year was not particularly well attended by UK companies, the show represents one of the largest instrumentation exhibitions in China. Visitor numbers were excellent with many enquiries to follow up from system integrators, OEM equipment manufacturers and end users from the oil & gas and iron & steel sectors.



Russell King, Managing Director at Sensonics commented, "Although exporting measurement equipment to China is becoming a rarity these days, there is still a good demand for high integrity vibration monitoring equipment for critical plant processes. The home market cannot offer the same level of technology or quality of product"

## SENTRY G3 SETTING THE STANDARD

Built on the success of Sensonics established API 670 compliant Sentry vibration monitoring and supervisory system, the new Sentry G3 sets the standard for rotating machinery and supervisory measurements and provides a universal module for a wide range of sensor inputs.



An upgrade of the intuitive display to a colour LCD also provides additional features not possible with the previous generation, such as the display of all measurement values and alarm colour coded bar graphs. The vibration spectrum can also be viewed at a touch of a button; combined with channel parameter trending displays, these additional facilities will prove invaluable to instrumentation engineers in evaluating and keeping track of critical rotating plant performance.

With harmonic and phase analysis provided as standard for vibration measurements, the flexible filtering options also permit the setting up of various frequency band alarms. Measurements include; bearing and shaft vibration, thrust position and differential expansion, speed and reverse rotation, temperature and valve position plus dynamic displacement measurements such as compressor rod drop and hydro generator air gap.



Mr Tahir Saeed from G.A.Sons with the Sensonics team

## MULTI-CHANNEL SYSTEM FOR PAKISTAN

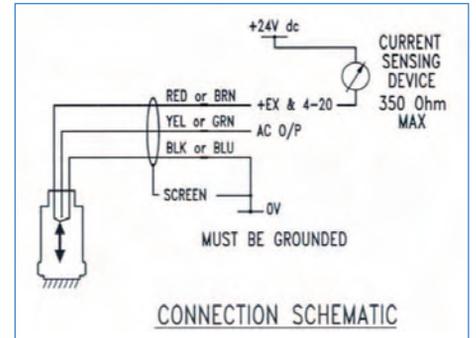
During September, Sensonics delivered a **33 channel seismic monitoring system** to Pakistan following completion of customer acceptance tests. Representing one of the most complex systems we have delivered to date, the equipment will provide vital protection to critical plant assets through initiating safe shutdown procedures in the event of an Earthquake.

The system was provided with event recording and analysis capabilities for all 33-channels, allowing the customer to carry out detailed post event examination. The delivery of this system is another example which underlines Sensonics position as a leading supplier of high integrity systems for seismic protection.

## PRODUCT FOCUS – Dual Output Vibration Transmitter

Sensonics PZDC range of velocity vibration sensors are available with a buffered raw acceleration output in addition to the standard 4 to 20mA vibration signal. Loop powered vibration transducers are used extensively throughout industry to provide a cost effective method for monitoring bearing vibration to international standards on a wide range of rotating plant. A simple solution for providing a direct interface to a PLC or DCS system for long term trending and alarming.

The PZDC2 transducer offers the additional capability of a detailed analysis of the vibration signal waveform should an increase in overall velocity vibration be detected. By simply connecting a portable analyser to the additional buffered output a band analysis can be performed to provide further understanding of the impending fault (bearing lubrication, imbalance, etc). The PZDC2 connection diagram is illustrated below, the AC O/P would normally be terminated to a BNC connector in a junction box local to the machine.



Available in connector or integral cable options, the sensor can also be provided with IP68 protection for submersible applications.

## RECENT CONTRACT AWARDS

- Full Turbine Supervisory system calibration and refit for Nuclear Power Facility  
**Location UK**
- Extended 25mm range proximity probes for turbine rotor differential expansion  
**Location Singapore**
- Governor Valve LVDT replacements.  
**Location South East Asia**
- Seismic System upgrade for Nuclear facility.  
**Location UK**

Take a look at our all-new web site: [www.sensonics.co.uk](http://www.sensonics.co.uk)

Sensonics are a leading supplier of turbine supervisory and high integrity protection equipment to industry. With 30 years experience in providing vibration, displacement and speed instrumentation solutions in demanding environments, not only do they supply a full range of sensors and API 670 compliant measuring and protection equipment, but also offer design through to installation & commissioning services.



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