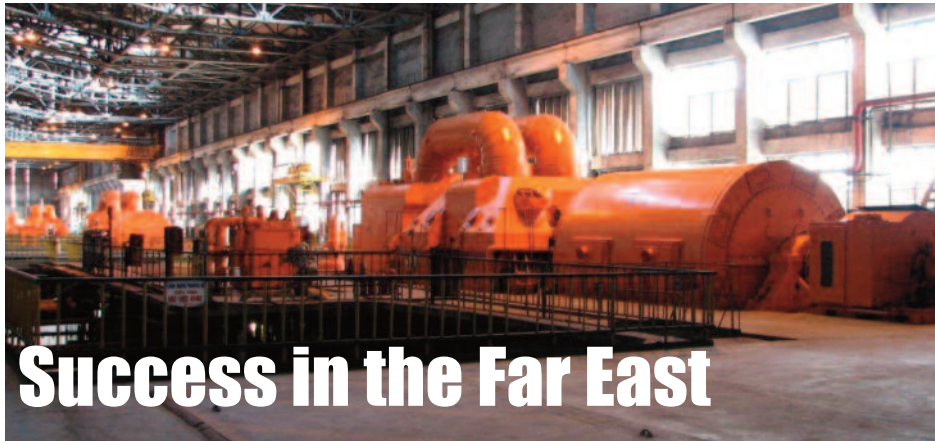




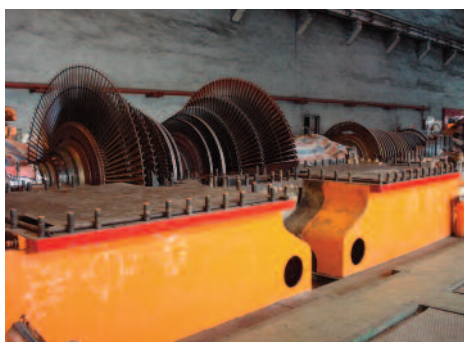
Welcome to our latest newsletter, keeping our customers and partners up-to-date with the latest developments at Sensonics. New projects, new products and case-studies, all helping to protect your critical rotating plant.



Success in the Far East

Sensonics are enjoying continued success both at home and in Asia with new contracts for their innovative Sentry G3, high performance machine protection system. In addition to a number of successful installations at power plants in China is another project in Vietnam at the PhaLai Thermal Power Plant. In conjunction with local agents AKA Vietnam, Sensonics supplied transducers and a Sentry G3 Turbine Monitoring / protection system for the 110MW Russian built turbine operating at the PhaLai Power Plant. These were for a wide range of applications including; shaft position, high & low pressure cylinder expansion, turbine block expansion, shaft vibration, eccentricity and speed.

The 'retrofit' project was fairly complex and included a number of measurement modes that the Sentry G3 system was required to monitor. For example, shaft position measurement and protection; where the relative position of the turbine shaft is monitored within the bearings. The system automatically shuts down the turbine if the relative position moves



outside a pre-set window. The measurement was implemented on the turbine utilising proximity sensors mounted opposite a collar machined as part of the shaft. A similar technique was also utilised for both the HP (high pressure) and LP (low pressure) cylinder expansion channels.

A Sentry G3 module is capable of implementing a range of measurement algorithms, for the PhaLai project one module hardware type was used to cover all channels (24 channels in a 3U x 19" footprint) drastically simplifying the customer spares holding. Another example of the system flexibility is the HP eccentricity interlock, the algorithm was loaded in to the module and configured to measure true peak to peak shaft eccentricity between speeds of 3RPM and 300RPM. The algorithm processes the signal with a 50-pole digital tracking filter when in this speed window to eliminate the effects caused by shaft imperfections.

A speed algorithm was loaded in to last channel to cover the measurement range of 0-4000 rpm, providing 2 alarms for over-speed of 10% and 16% in comparison with the rated speed; in addition this channel provides a phase marker output for harmonic analysis of the vibration signals. Following the installation of the Sensonics system on the older Russian built turbine, engineers at the PhaLai plant have been very satisfied with the performance and as a result are keen to use Sensonics monitoring systems in the future on other machines.

Looking after your critical machines

Sensonics has introduced a vibration data collection and analysis service for the benefit of all industrial plant users.

For over 30 years our engineers have installed and calibrated fixed vibration monitoring equipment and advised customers of best practice, this expertise is now available on a continual basis. Where no fixed machine condition monitoring system is available for critical plant, we recommend periodic (typically monthly) vibration data collection is implemented to monitor and trend the operational condition of machinery.



Minimising Downtime Maximising Productivity

Offline analysis by our vibration experts can then identify faults and impending failures enabling the scheduling of repairs to minimise downtime and loss of productivity.

The clear advantage of this service is that no upfront capital investment is required to add regular monitoring to all your machinery, as our fully trained engineers provide the required equipment and analysis software. A no obligation site visit can be arranged and **until the end of 2012 we are offering the first data collection visit and analysis report free of charge to new customers.** Contact our Sales team for further details.

DN26 G3 Machine Protection Monitor

The DN26 G3 unit is a Din rail mountable module which has been designed specifically for machine monitoring and protection applications such as, fans, pumps, motors, centrifuges, turbines or any small to medium industrial machinery requiring reliable protection.

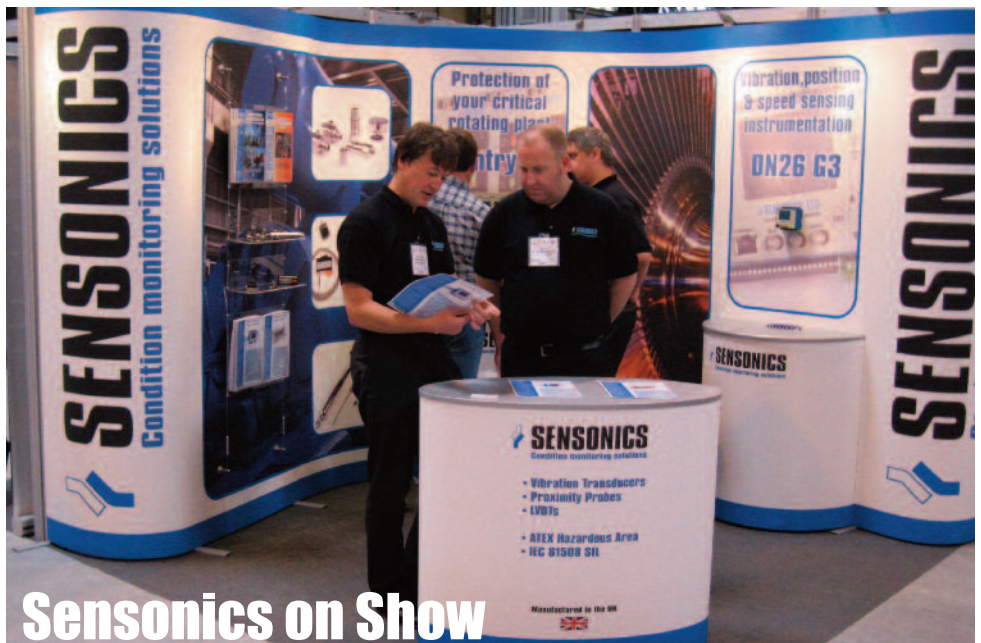
The high performance DN26 G3 unit offers fully programmable signal conditioning with a range of measurement algorithms and sensor modes including, absolute vibration, relative vibration and shaft position (or thrust bearing wear). In addition the module offers a dedicated speed monitor channel which can also be utilised as a phase reference for harmonic analysis of the vibration signals.

Optimum Flexibility, Field Upgradeable



The unit is designed for optimum flexibility as it can be configured as a universal module for all measurements, it is field upgradeable, can be programmed for warning and danger alarms and also transducer integrity monitoring. The sensor interface is programmable to accept IEPE type accelerometers / velometers, proximity probes (API 670 standard), and active / passive speed probes.

Three alarm relays are available, one dedicated to indicate module and sensor integrity, the other two relays are fully programmable across the alarm criteria selected. Each DN26 G3 module features a built-in intuitive colour LCD display and menu drive facility to provide immediate viewing and access to settings and the machine measured parameters.



Sensonics on Show

Sensonics recently exhibited at the 2012 Plant and Asset Management Exhibition at the NEC. At the show we demonstrated the Sentry G3 machine protection system capabilities and offered the first look at our new DN26G3 monitor. Our experienced team of sales engineers were also on hand to discuss

specific customer condition monitoring applications. The quality and quantity of visitors to the stand was high and with a number of follow-up contacts now arranged for the months ahead we are hopeful of benefiting further from this exhibition.

New Product Releases

Vibration Sensor Simulator

This battery operated unit provides a signal output which replicates the response from accelerometers, velocity transducers and proximity probe systems for the testing of connecting monitoring equipment. Essential for carrying out plant signal injection tests to verify cabling and system calibration.



Extended Range Disk Probe

Our Senturion range of proximity probes has been extended to include a 30mm range eddy current system. Developed for large steam turbine rotor expansion measurements the 60mm diameter tip is suitable for use in harsh environments.



Robust Probe Armouring

Our standard range of 8mm proximity probes are now available with convoluted stainless steel armour. This offers additional crush protection of the cable assembly in comparison with stainless steel over braid and provides a very flexible alternative to standard conduit solutions.



RECENT CONTRACT AWARDS

- Sentry G3 Vibration, Expansion and Overspeed Monitoring and Protection Equipment for 4 new power turbine installations at an Iron and Steel Works. **Location South West China**
- Seismic protection switch upgrade for nuclear power plant. **Location U.K.**

- Sentry G3 monitoring and protection system and sensors for steam turbine, fans, pumps and motors (2 Units) for a new power station. **Location Vietnam**
- Sentry G3 monitoring and protection system for fans, pumps and motors (4 units) for a new nuclear power station. **Location Middle East**

For more details about Sensonics go to: 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.

 **SENSONICS LTD**

Tel: +44 (0) 1442 876833

Email: sales@sonsonics.co.uk

www.sensonics.co.uk