PRODUCT APPLICATION PRESS RELEASE

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For Immediate Release

INNOVATIVE VIBRATION SENSOR FOR LOW SPEED ROTATING MACHINERY

Effective monitoring of **slow speed rotating industrial applications**, such as **wind power generation** and **hydro-electric turbines** is a critical requirement, just as it is on standard speed applications, especially given the increasing importance of 'green-energy' alternatives. Reliable and effective **vibration measurement** of low speed machinery (typically less than 300 RPM) helps to ensure that machinery and plant is functioning at optimal levels and is one of the areas that **Condition Monitoring specialist SENSONICS** provides effective solutions.

In all situations the focus should be; understand the dynamic behaviour, establish a baseline vibration performance and then detect the early onset of failure in rotating parts, which if left unchecked, has the potential to result in more serious damage affecting overall performance.

While using accelerometers is commonplace on standard speed machinery (usually 1500 RPM) this becomes problematic at lower speeds as the absolute accelerations measured are much smaller in value for similar vibration displacements. In recognition of the need for a sensor to meet these specific requirements Sensonics developed its low frequency velocity vibration sensor the **VEL/GLF**.

The VEL/GLF is an electro dynamic sensor which has become established as the preferred option for measuring vibration on slow speed rotating machinery. It offers a superior performance compared to piezo-electric devices by combining high measurement sensitivity with a frequency response down to 0.5 Hz making it ideally suited to measuring velocity vibration on equipment with speeds below 300 RPM.

The sensor offers a standard IEPE type interface to enable easy integration with existing plant protection and monitoring equipment. Furthermore, the VEL/GLF provides advantages over traditional piezoelectric based velocity vibration sensors which are susceptible to many forms of interference in low frequency applications that can result in spurious readings and alarms.

Typical causes of these unwanted readings and alarms include; base strain effects due to temperature changes amplified through the internal signal processing, high frequency and high g vibration events caused by auxiliary machine items resulting in transducer saturation. Also mains voltage interference due to a combination of a poor local plant earth and insufficient transducer internal isolation.

Thanks to its robust design, the VEL/GLF combats these effects, offering high noise immunity due to the low impedance electro dynamic nature of the sensor assembly. In addition to the filtering of high frequency events and since no electronic integration is required, the design is immune to the saturation problems that impair the reliability of piezoelectric devices.

Typical applications for the VEL/GLF will be found in wind power generation, hydro-electric plants and cooling towers, on slow speed pumps and also structural monitoring. ENDS

Further details on VEL/GLF sensors are available from: Russell King, Sensonics Ltd, Berkhamsted, Hertfordshire UK. Tel: +44 (0) 1442 876833.
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