



Machinery Health Monitoring

Rotating machinery, such as this pump motor bearing in a power plant, can also benefit from periodic high frequency acoustic monitoring. Shown here is the AED-2000 with a high frequency contact probe designed for use at 100 kHz. Problems with inadequate lubrication and material defects (spalling, cracked races, etc) are easily detected at a much earlier stage than with conventional vibration monitoring, and interpretation is aided by the multi-mode output of the AED-2000. Envelope detection (RMS) is most commonly applied in this application. The Avg RMS level and the ratio of Peak to Avg RMS is an indicator of relative health. The higher either value strays from the normal baseline is an indication of a growing problem. The demodulated audio output is a valuable interpretational aid. Preventative maintenance programs will benefit from periodic sampling of all rotating and moving machinery. The AED-2000 has the ability to store different measurement setups, and over 200 readings for later upload to a computer database. Trend analysis can identify machinery with developing problems, and interrupt the process before serious damage, or an unplanned failure, occurs. A sample audio segment from this inspection can be heard by double clicking on the icon below.

