

Specifications for Acoustic Emission Sensor System

Application

Condition Monitoring of Gear Boxes and Bearings.

Requirement

1. High Frequency Acoustic Emission Sensor [Quantity -2]

Operating Frequency Range	100-1000 kHz
Peak Sensitivity	50 dB, (Ref V/(m/s))
Resonant Frequency	125 kHz (Ref V/(m/s))
Directionality	+/- 1.5dB
Temperature Range	0 to 100°C
Shock Limit	500g
Case Material	Stainless Steel
Connector Cables	2m Length (Low noise)

2. 2-Channel Data Processing Unit with Pre-Amplifier and Time Synchronous Cable [Quantity -1]

3. Data Acquisition and Analysis Software with Manual [Quantity - 1]

Should be compatible with workstation of following specification:

i7 processor, 16GB RAM, 500 GB HDD, 2 GB Graphics Card

Should perform following Time Domain Feature analysis:

Time, Amplitude, Rise-time, Events Duration, Energy, RMS, Sampling hits, counts, Threshold, ASL, Initial frequency, Signal Strength, Counts to peak, Absolute Energy, Average Frequency, Reverberation Frequency, Source Amplitude, Cycle counter, Parametric pressure etc.

Should perform following Frequency Domain Feature analysis:

Partial Power Spectrum, Peak Frequency, Waveform analysis, Frequency Centroid, Power Spectral Density etc.

Should include following AE Location Features:

Zonal Location, Linear Location, 2D- Planar Location.

4. Optional Accessories

The supplier shall submit list of optional accessories along with complete specification with the technical offer.