



SPM Instrument presents HD ENV® - a new era in vibration monitoring

SPM Instrument, Sweden, leading worldwide provider of condition monitoring technology and products, now announces the launch of HD ENV®, a new high definition vibration enveloping technique for detection of early stage gear and bearing faults.

A new achievement in vibration monitoring technology, HD ENV® is an ideal complement to traditional vibration analysis. Capable of detecting at a very early stage such machine problems which are generally difficult to find in good time with conventional non-enveloping techniques - for example gear and bearing damages - the method utilizes cleverly engineered and patented algorithms for digital signal processing, preserving the true highest peak of the vibration signal. Signals buried in machine noise are revealed through high definition digital enveloping, extracting and enhancing the signals of interest from the overall machinery vibration signal.

Building on over four decades of experience and innovation, HD ENV® provides outstanding performance with the latest innovative technologies. The unit of measurement is HD Real Peak, a scalar value expressed in decibels. Representing the true amplitude levels found in the envelope signal, HD Real Peak is the primary value to use for determining the severity of a given damage. It is also used for triggering alarms. Using order tracking and symptom enhancement, applying FFT on the signal is very useful to determine the source of the signal. Spectrums and time signals are marvels of clarity, providing a snapshot of machine condition to give the maintenance department a heads-up on potential problems.

The setup of HD ENV® measurements in the diagnostic software is straightforward. A set of predefined filters are available for easy selection; each designed to detect damages or anomalies in different stages of development. HD ENV can be used to monitor applications in the 15-20,000 RPM range.

HD ENV® enables the detection of gear and bearing faults very early on in the damage process, making it possible to closely monitor the development throughout the stages. Significantly extending the planning horizon for predictive maintenance, the method is a boost to maintenance efficiency. The HD ENV® technique can be used with existing vibration transducer installations and thus quickly and easily integrates into existing industrial infrastructures.

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Press release