FAQ

How can Distress know the difference between good and bad if it has no history, speed or design data to refer to?

Of course there are some commercial secrets behind the exact formula of Distress, but how it works is not a total mystery requiring unquestioning faith on your part. First of all we know that rotating machinery is designed to run smoothly (ie low level of impacts) and with low losses (ie low friction). This means that machinery in good condition tends to produce low levels of AE activity. As contacting surfaces start to deteriorate the impacts and momentary rubs give rise to isolated transients. The AE signal from a machine in good condition doesn't have these features and the AE signal from a machine in poor condition does. Its difficult to imagine anything simpler more direct or more plausible as a basis for measuring machine condition.

The beauty of the Distress parameter is that it builds upon this observation with a specific analysis algorithm which does not require you to input machine specific parameters. What's more the Distress parameter has been very extensively proven across the whole of industry to provide a common interpretation on virtually all rotating machinery (including motors, pumps, fans, gearboxes and roll support bearings).

Because Distress homes in directly onto the fundamental difference in AE signals between good and bad rotating machinery the same approach is equally applicable to rolling element bearings, plain bearings and gearteeth (Note: for the case of gearboxes activity associated with gear teeth condition is detected on the casing adjacent to the shaft-end bearings).