

1.8.9. CRITICAL MACHINERY VIBRATION CONDITION MONITORING

König T., “E-PRO, GmbH”, Germany

There is a variety of measuring methods for evaluating the running condition and running quality of a machine. Many of them have already been used for decades as standard procedures. The measuring and analysis methods have hardly changed over the years. However, there were changes in signal recording - e.g. from inductive sensors to eddy current sensors and signal processing - because of the transition from analog to digital technology. The different measurement types will be sketched out briefly below and the equipment required for measuring is presented in a basic overview: shaft vibration (relative and absolute), bearing vibration, position measurement, eccentricity, reference pulse, differential expansion, valve position, speed measurement, over speed protection, axial position protection and process variables.