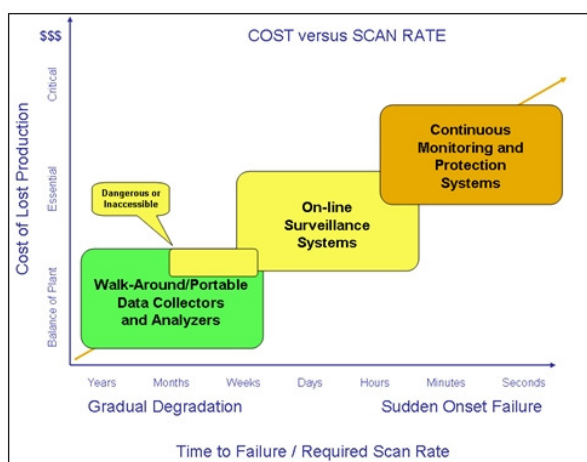


Considerations for On-line PdM Systems

By Commtest

A primary consideration for an online monitoring system is to determine which machines warrant surveillance monitoring as compared to what can be accomplished with walk around (portable) or protection monitoring systems. The figure below provides a good representation of where surveillance monitoring has traditionally fallen in a vibration measurement condition-monitoring program.



As this graph indicates, on-line surveillance systems are most commonly employed on assets that are costly to maintain and those that negatively impact production efficiency when out of service. Another key consideration is the anticipated time from the first indication of a developing problem to the actual onset of failure. For instance, if the asset is likely to fail in days or weeks, then an on-line surveillance system is the most cost effective approach. Studies have shown that an on-line surveillance system is more cost effective than walk-around (portable) systems when the required data collection interval more frequent than every four weeks. Note, however, that a typical surveillance system uses polling and input multiplexing; and it is not intended to take the place of a high-speed, quick reacting protection system with shut-down capability. Another application for on-line surveillance is that represented by the small area on the chart area designated as “Dangerous or Inaccessible”.

Surveillance systems have found widespread use in dangerous and inaccessible locations in a factory environment. Machinery that had been left out of programs in the past due to the expense of manual data acquisition in dangerous and inaccessible locations is now being added to these types of systems. This is primarily due to the attractiveness of the installed cost per point and the ease of installation of surveillance systems.