Municipal water authorities oversee a vast range of infrastructure, including wastewater treatment plants, water treatment plants, lift stations, pump stations, storage tanks and miles of sewer/water pipelines. The efficient and uninterrupted operation of the system is essential in order for water authorities to stay in compliance with local and federal drinking water and wastewater discharge/treatment laws.

The infrastructure system includes a variety of rotating assets, including blowers/fans, motors and pumps. Performing vibration analysis on this equipment can detect developing faults early so they can be addressed before causing catastrophic failure.

- Blowers/Fans- Friction, imbalance, looseness/misalignment
- Motors- Bearing issues, electrical issues, imbalance, looseness/misalignment
- Pumps- Cavitation, imbalance, looseness/misalignment

Many water authorities already utilize a SCADA (supervisory control and data acquisition) system to monitor and control the process. Vibration transmitters with a current output can be easily integrated into that existing system in order to collect and record vibration data. Vibration transmitters output an overall value, which does not require extensive mathematical analysis to interpret and is well suited for the knowledge level of process control generalists within a facility.

For those facilities with vibration analysis capabilities and resources, a wide variety of accelerometers are available that can be used for route-based measurements in conjunction with a third-party handheld data collector or for permanent installations in conjunction with online data acquisition systems.
VIBRATION TRANSMITTERS

4-20 mA OUTPUT SENSOR
SERIES 640/641/642/643
- Peak or RMS velocity
- 0-0.5, 0-1, 0-2 ips measurement ranges available
- Intrinsically safe versions available

4-20 mA OUTPUT SENSOR
SERIES 645/646/647/648
- RMS Acceleration
- 0-5, 0-10 g measurement ranges available
- Intrinsically safe versions available

VIBRATION TRANSMITTER
MODEL 682C03
- Outputs 4-20 mA signals for overall vibration and temperature
- ICP® accelerometer input
- Analog vibration output via front BNC

BEARING FAULT DETECTOR
MODEL 682C05
- Provide early warning of bearing and gear faults
- ICP® accelerometer input
- Outputs 4-20 mA signals for true peak acceleration and overall vibration

ICP® ACCELEROMETERS

THE SWIVELER® ACCELEROMETER
MODEL 607A11
- Waterproof housing, ideal for submersible applications
- Patented 360° swivel mount
- Small footprint and low-profile design
- Intrinsically safe version available

HIGH-FREQUENCY TRIAXIAL ACCELEROMETER
MODEL 639A91
- Frequency response on all three axes up to 13 kHz (±3dB)
- Extremely small footprint
- Intrinsically safe version available

DIN RAIL VIBRATION TRANSMITTERS
MTS Sensors, a division of MTS Systems Corporation (NASDAQ: MTSC), vastly expanded its range of products and solutions after MTS acquired PCB Piezotronics, Inc. in July, 2016. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp.; IMI Sensors and Larson Davis are divisions of PCB Piezotronics, Inc.; Accumetrics, Inc. and The Modal Shop, Inc. are subsidiaries of PCB Piezotronics, Inc.

IMI Sensors, a division of PCB Piezotronics, Inc. manufactures industrial vibration monitoring instrumentation, such as accelerometers, vibration transmitters and switches that feature rugged stainless steel housings and survive in harsh environments like paper and steel mills, mines, gas turbines, water treatment facilities and power plants. Integrating with portable analyzers and PLC’s, IMI instrumentation helps maintenance departments reduce downtime and protect critical machinery. Visit IMI Sensors at www.pcb.com. PCB Piezotronics, Inc. is a wholly owned subsidiary of MTS Systems Corp. Additional information on MTS can be found at www.mts.com.