



SOUTHWEST RESEARCH INSTITUTE



## New Magnetostrictive Transducer (MsT-PM™) for Structural Health Monitoring

Southwest Research Institute® (SwRI®) has developed a new, more powerful generation of a compact magnetostrictive transducer (MsT™) that withstands extreme temperatures, automatically adjusts frequencies, and offers the next level of signal strength. The circular, hard-shell sensor clamps around pipes and other cylindrical structures such as pipelines, storage tanks, and anchor rods.

The new MsT-PM™ is specifically profiled for long-term structural health monitoring. It more accurately detects flaws, corrosion, and areas at risk of developing cracks and leaks in metal and nonmetal structures. This extremely reliable, state-of-the-art, durable sensor can be installed virtually anywhere from subsea to open space.

### Features

- Easily installed at multiple, hard-to-access locations
- Uses a custom-developed couplant
- Automatically adjusts frequencies without changing hardware
- Available in circumferences from one-half inch to 70 inches
- Withstands temperatures below freezing and up to 100°C (212°F)
- Probe can be permanently installed to provide ongoing monitoring
- Probe can have up to 16 independent segments depending on pipe size
- Probe is built-in for assessment of pipe condition under the probe
- Automated functions reduce human error
- Meets oil, gas, and chemical industry safety standards

SwRI's MsT sensor received the 2018 Research Recognition for Innovation Award from the American Society for Nondestructive Testing (ASNT).



*MsT-PM sensor installed on buried pipe*

Advanced science. Applied technology.

