



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.



Guided wave testing using new MST

We welcome your inquiries.
For more information, please contact:

Sergey Vinogradov, PhD
 Staff Engineer
 210.522.3342
svinogradov@swri.org

Adam Cobb, PhD
 Principal Engineer
 210.522.5564
acobb@swri.org

Sensor Systems & NDE Technology
 Structural Engineering Department
 Mechanical Engineering Division

ndesensors.swri.org

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Southwest Research Institute is a premier independent, nonprofit research and development organization using multidisciplinary services to provide solutions to some of the world's most challenging scientific and engineering problems. Headquartered in San Antonio, Texas, our client-focused, client-funded organization occupies 1,500 acres, providing more than 2.3 million square feet of laboratories, test facilities, workshops, and offices for more than 2,600 employees who perform contract work for government and industry clients.

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210.522.2122

ask@swri.org



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