OTD
Operations
Technology
Development

Casing-Related Research Supported by OTD

> Presented to
> Cased Pipeline Integrity Management
> Assessement Workshop- R&D Panel

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Operations Technology Development (OTD)

- OTD is a stand-alone, 501c (6) not-for-profit, member-controlled company where gas utilities work together to develop technology solutions to common operations issues
  - Membership dues are based on the number of customers
  - Each company votes and allocates their own dollars towards specific projects
  - All members have access to all project information
  - Established in 2003
- Currently 19 members
- 2008 Dues are approx. $8mm

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Research Program Areas

- **OTD Funds 6 Program Areas**
  - **Pipe and Leak Detection**
  - **Pipe Materials, Repair, and Rehabilitation**
  - **Excavation and Restoration**
  - **Pipeline Integrity Management and Automation**
  - **Operations Infrastructure Support**
  - **Environmental Science and Forensic Chemistry**
- **18 new projects starting in 2008**

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Pipeline Integrity Assessment/ Management Research

- Development of a New RFEC Sensor (GTI)
- Robotic Inspection Platforms for Unpiggable Pipelines with MFL and RFEC Sensors (cofunding NYSEARCH programs)
- Guided Wave Validation as a Hydro Equivalent (GTI)
- North American Casing Research Program (GTI and NYSEARCH)
- Structural Liners and Sleeves (GTI)

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Pipeline Integrity Assessment/ Management Research, cont.

- Broadband Electromagnetic Technology for Pipeline Inspection (Rock Solid Group and GTI)
- Camera Inspection of Live Mains through Keyholes (ULC Robotics and GTI)

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Broadband Electromagnetic Technology for Pipeline Inspection

- Direct assessment tool for ferrous pipelines that does not require the removal of pipe coatings
- Identifies wall thinning, graphitic corrosion, and cracks
- Developed by Rock Solid
- Full encirclement tool being integrated with the inspection platform

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Broadband Electromagnetic Technology for Pipeline Inspection, cont.

- Selected by PHMSA for funding to validate capability through field evaluations with GTI
- Final enhancements to the system will be completed
- Bring the technology to the U.S. market
- Can be used in keyhole excavations

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Camera Inspection of Live Mains through Keyholes

- Internal video inspection of live gas distribution pipelines through a keyhole excavation
- Perform thorough internal corrosion investigations
- Look for water or debris in the pipeline
- Locate joints, services, taps, or other features to enable precise location and mapping through a keyhole

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Camera Inspection of Live Mains through Keyholes, cont.

- ULC Robotics is the technology developer
- Camera is commercially available now
- OTD is funding additional work on precise locating, centering, increasing the traveling distance, and improving the camera for for use in plastic pipe

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