ULC ENERGY SERVICES

ROBOTIC CASED PIPELINE INSPECTION

REMOTE VISUAL INSPECTION
AND INTEGRITY DATA COLLECTION

CASED PIPELINE INSPECTION SERVICE

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ROBOTIC CASED PIPELINE INSPECTION

New federal pipeline integrity rules require utility companies to evaluate thousands of gas mains buried beneath highways, railroad tracks and airport runways – each and every one cased inside a larger pipe. We utilize our robotic inspection tools to **visually inspect** cased pipe while gathering **critical integrity data**.

OUR EQUIPMENT

The Micro Magnetic Crawler (MMC) is a remotely controlled robotic device developed to directly assess cased gas mains. The robot magnetically attaches to the interior wall of the casing and travels in the annular space between the gas main and the casing; a space as small as 1.25" high by hundreds of feet long.

The ultra-compact MMC is capable of gathering data by utilizing an array of advanced sensors and can obtain high resolution video viewable in real-time, allowing potential defects and features to be instantly analyzed. Using the MMC, our team can gather data from within the annular space in order to assess and locate damaged spacers, shorts, pipeline coating defects, water infiltration and pipe wall thickness.

REAL-TIME VISUAL ASSESSMENT

Front and rear mounted cameras provide real-time, full motion video of the outer surface of the cased gas main. The video feed is viewable and recorded remotely for onsite and post inspection review.

The control system incorporates integrated video measurement software that enables the operator to acquire dimensions of features found during the inspection; such as the size and location of delaminated coating.

REMOTE DATA COLLECTION
The MMC can travel up to 250' to gather both visual and senor data about your pipeline.

ULTRA-COMPACT
The MMC is 1.25" tall, making it small enough to travel past spacers and in tight annular spaces.

NDT
Our cased pipeline service reduces the amount of excavation needed to access cased piepline.

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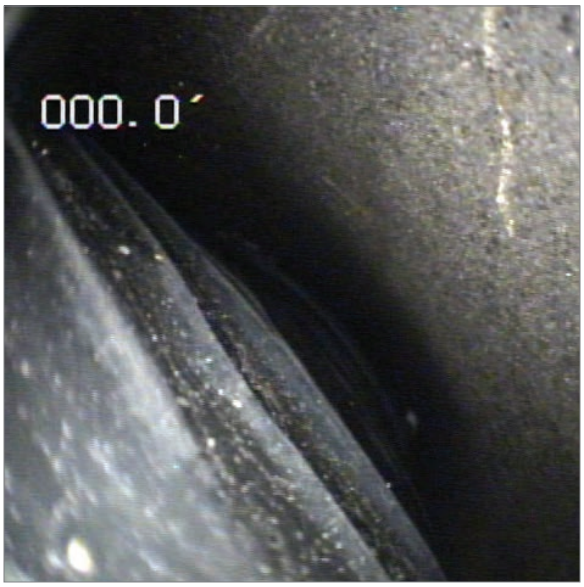
APPLICATIONS

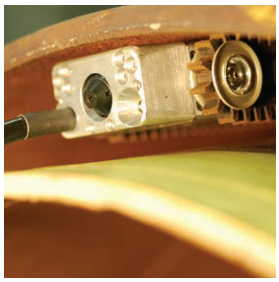
- Integrity of pipeline coating including delamination, holes and other defects
- Integrity, composition and spacing of pipeline insulators
- Pipeline wall thickness
- Atmospheric conditions of the annular space
- Quantity and location of debris and water in the annular space
- Location of electrical shorts

INTEGRATED SENSOR PACKAGE

The Micro Magnetic Crawler's pitch and roll sensors allow for remote navigation and provide the precise circumferential and linear location of defects and anomalies while integrated temperature and humidity sensors capable of remotely determining environmental conditions within the casing.

Using a double echo, ultra-sonic thickness gauge, the MMC is also capable of taking spot wall thickness measurements. The UT sensor can measure the pipe wall thickness through a variety of coatings including coal tar TGF-3, enamels and epoxies and PE two-layer coatings such as PRITEC.





READY TO INSPECT YOUR CASED PIPELINE? GIVE OUR TEAM A CALL AT 631-667-9200.

COMPREHENSIVE AND ACCURATE DATA

The comprehensive reports we provide detail the exact location of all your pipeline features and data. Using spreadsheets, we record the distance from the access point and the features located. The result is highly accurate and complete details of all your pipeline features. Lastly, all visual footage is recorded onto DVDs for future reference.

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PIPELINE ROBOTICS | ENERGY RESEARCH & DEVELOPMENT | UTILITY FIELD SERVICES

On a daily basis, energy and utility companies face infrastructure, technical and operational challenges that range from government mandates to public concern and budget restrictions. At ULC Robotics we help develop and deploy technology which assists our clients in overcoming these issues, allowing them to get more done with less resources.

Our team develops advanced robotic tools and cameras capable of entering live pressurized gas mains to perform inspection and repair. We can analyze and redesign standard processes in order to decrease the time and costs associated with planning and performing routine work. The results we produce enable utility companies to reduce disruption to the public by minimizing excavation and simplifying the engineering process. ULC Robotics can even supply a supplemental workforce to tackle technical services; such as meter exchanges and inspections.