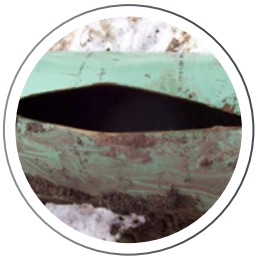
ARE CRACKS APPEARING?

- **CRACKING THREATS:** Cracks are often present in pipelines from manufacturing, transportation and operation. Many cracks and crack-like features can be innocuous, but if there are pressure cycles or environmental conditions, then cracks can pose a threat to pipeline integrity. It is important to detect, size and characterize cracks – and then assess their criticality.

CRACK ASSESSMENT



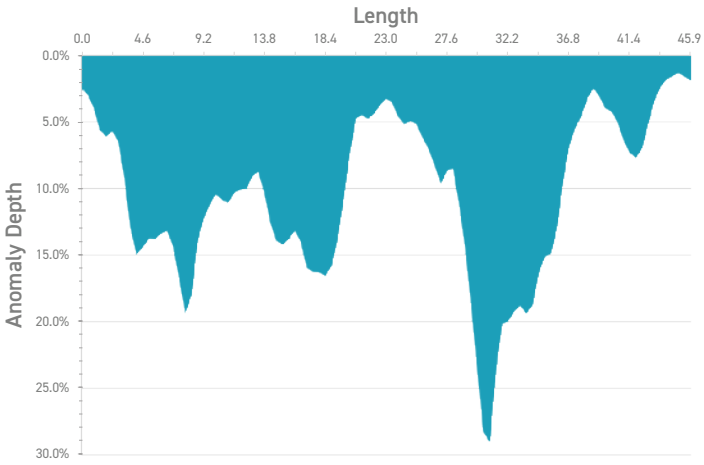
TDW utilizes two types of in-line inspection (ILI) technology, electromagnetic acoustic transducer (EMAT) for true cracks and multiple dataset technology for crack-like features such as hook cracks and sharp-sided corrosion. TDW takes all datasets and can provide a prioritized list of anomalies that require further assessment or repair.

APPROACH

Crack priority to failure assessment

We use current industry-accepted approaches to prioritize all crack anomalies and then assess each crack, investigating the crack profile, material properties and loading, to provide a failure prediction and hence a safe working pressure or repair action.

EXAMPLE EMAT PROFILE

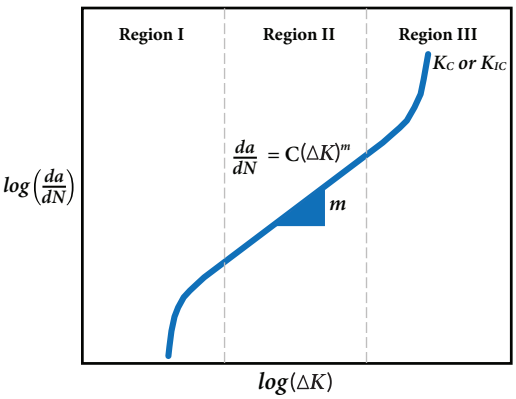


VALUE

Focusing on the right crack features

We focus on the critical few crack features that require attention and help operators make decisions on immediate and future repairs, thus minimizing the threat and optimizing expenditure.

CRACK GROWTH



EXTENDING BEYOND INSPECTION

- Improving safety, efficiency and productivity throughout the life of your pipeline.

ASSESSMENT SERVICES

Immediate Integrity Assessment

IMMEDIATE THREATS:

- Metal loss
- Dent strain
- Bending strain
- Selective seam weld corrosion
- Cracks
- Mechanical damage

Future Integrity Assessment

TIME-DEPENDENT THREATS:

- Corrosion growth
- Line movement
- Crack growth
- Dent fatigue
- Other changes in pipeline conditions

Advanced Integrity Assessment

MORE COMPLEX THREATS:

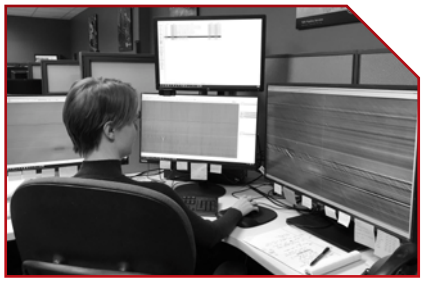
- Non-axial stress corrosion cracking
- Branch connection loading
- Wrinkle bends
- Hard spots
- Other threats requiring finite element analysis (FEA)

Using the right approach

The right assessment approach, consistent with codes, industry-accepted methods and operator mandates, ensures compliance and auditability.

Focus on the right decisions

By focusing on the anomalies that matter most, you can make the best integrity decisions for your pipeline.



Contact your TDW sales representative for more info.

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