

External Corrosion Direct Assessment

With confidence levels approaching those based on in-line inspection data

GE Energy offers pipeline operators a comprehensive approach to all four stages of the ECDA process. Our techniques are based on 30 years of industry best practices and an extensive corrosion database. In all our operations, we seek to deliver the highest levels of confidence achievable with the fewest number of digs – for a more thorough understanding of your pipeline's integrity.

You always have the flexibility to choose only those service areas of specific interest to you, or to utilize our expertise for the entire process.

These ECDA services execute the complex requirements identified in NACE RP 0502, simplifying the entire process and yielding results which help to ensure pipeline safety and prolong asset life.

Service Overview

We combine the in-field and analytical experience of our NACE-certified corrosion professionals with advanced data-integration and visualization capabilities and innovative inspection technologies to achieve highly reproducible results in each of the following areas:

Pre-Assessment & Region Design is a critical stage that sets proper evaluation criteria and objectives. We perform a comprehensive assessment of existing records including pipeline design, age, operating history, geographic and environmental conditions, as well as information from previous inspections. Based on this, we select the indirect inspection techniques that will optimize the deletion of external corrosion threats.

Indirect Inspections quantify the current characteristics of the pipeline. Our field specialists quickly and efficiently survey the pipeline to ensure information accuracy, modifying decision criteria and implementing contingency plans where needed. This stage yields a Direct Examination plan that will minimize your excavation costs while achieving the optimal desired confidence level. Data visualization and integration is completed in the field, allowing the GE Energy and the pipeline operator's teams to jointly examine the results – enhancing data quality, facilitating selection of alternate investigation techniques and reducing duration of in-field activities.

Direct Examination translates our advanced deterministic and statistical expertise into highly efficient predictive models. Unlike other methods which may require unnecessarily large numbers of digs, our approach can result in fewer excavations to more accurately locate regions which require particular attention. Advanced ultrasonic examination techniques are utilized to quickly gather detailed, high-resolution data on discovered anomalies. Susceptibility screening and supplemental NDE are performed on all ECDA projects to explore for potential Internal Corrosion and Stress Corrosion Cracking threat mechanisms.

Post Assessment Analysis begins immediately. Our field crews have the ability to complete preliminary data analysis at the excavation site, initiate immediate remediation actions if required, and upload data to our main system for a full range of engineering critical analyses. Our world-class reputation for defect detection and evaluation, corrosion growth rate analysis and process validation rigor will ensure a successful ECDA project – from data to final documentation.



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Comprehensive Service

ECDA is a complex, time-consuming and technology-heavy process. GE Energy's single-source solution offers pipeline operators a comprehensive range of industry best practices and frees up significant amounts of valuable time and resources for other important business operations.

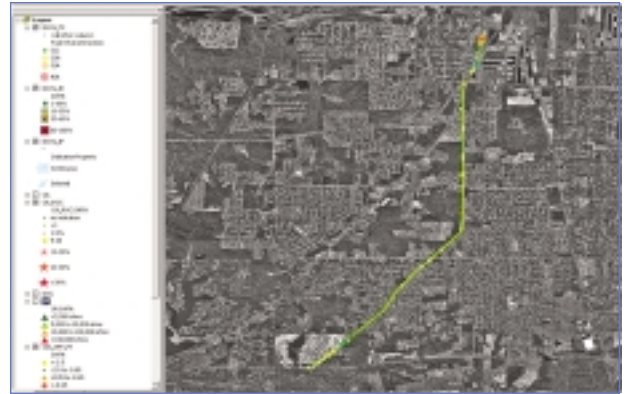
- One point of contact gives you access to all our in-field, analysis and project-management services
- We maintain the highest level of specialized training in all ECDA disciplines so your people and internal training budgets don't have to
- Our expertise includes corrosion engineering, above-ground inspection, in-ditch NDE, repair, statistical and confidence-interval analysis, and project management

Key features

- NACE-certified corrosion professionals and engineers perform all activities, from pre-assessment region design to definition of post-assessment re-inspection intervals, effectiveness and reporting
- Integrated engineering and in-field data alignment reduce project cycle time and increase correlation confidence
- Rigorous ECDA region definition more quickly identifies project feasibility, contributing to lower cost/higher value solutions
- Extensive modeling experience and advanced statistical algorithms produce more rapid detection of complex interactions among features
- Visualization software allows operators to verify observations by toggling between inspection data and calculated results in a user-friendly mapping environment
- Excavation site selection, based on proven statistically sound practices, controls validation costs and maximizes assessment effectiveness
- Decades of corrosion growth-rate experience affords more realistic remaining life predictions
- Staff corrosion engineers are able to immediately engineer and install optimal remediation solutions based on best practices
- Thorough written documentation is provided for all stages – for internal operator use and to satisfy regulatory compliance requirements

Contact

For more information on this service, contact your GE Energy representative, or visit www.gepower.com/pii



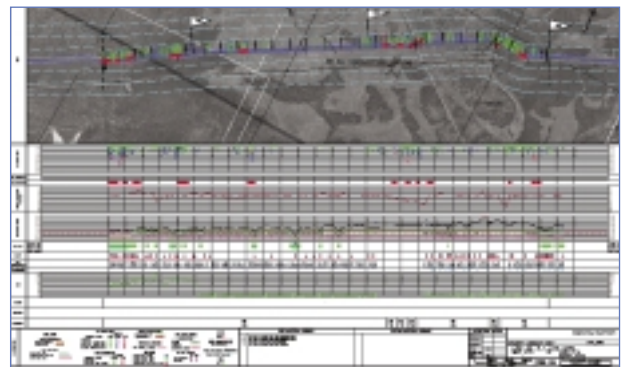
Visualization of the pipeline through DA Viewer.



Collecting indirect inspection information.



GE Energy's ECDA services can help lower excavation costs and prolong asset life.



DA SheetGen summarizes all data and decision-support information.