



# Guest Comment

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President, PRCI

**P**ipeline Research Council International (PRCI) is the global leader in collaborative energy pipeline research. Unique among all pipeline research organisations, PRCI brings together leading pipeline companies from around the world to engage in a collaborative process that is truly 'of, by and for' the industry.

All research at PRCI is guided by established research objectives, to ensure that the projects are strategically aligned with the overall objectives of the member companies and to make certain that we are addressing the key challenges facing the oil and gas pipeline industry. PRCI members have consistently supported research studies that will enhance pipeline integrity. As one of many areas of research PRCI focuses on, corrosion control is a significant piece of that objective. Several recent research projects highlight this focus and newly identified needs will continue this mission.

In September, PRCI published a report titled 'Field Techniques for Determining Corrosion Status'. The report includes a field guide, complete with photographs, which will help operators identify the source and appropriate remediation for corrosion features. These procedures will help to develop consistency in reporting corrosion status and rates and will greatly benefit efforts to establish re-assessment intervals. They will also improve preventive and mitigative measures based on technical procedures. The field guide is an example of a broad approach to addressing the issues associated with identifying likely corrosion zones and the identification of the source of those defects.

A recent report titled 'Assessment of Corrosion Model Error for Metal-loss Defects in Pipelines' addresses another approach to that issue. The goal was to minimise the error and to reduce the conservatism in current Level 1 corrosion assessment models. Implementation of these recommendations will reduce unwarranted maintenance efforts without increasing operator risk. Extensive finite element analyses were performed on corroded pipes in 3D conditions for a range of corrosion defect shapes and sizes, pipe geometries and material properties. The results of this project will contribute to the development of improved pipeline operating guidelines that seek to balance model conservatism and minimise maintenance required to keep a pipeline fit for service.

In August, a report was published titled 'Review of Self-Healing Pipeline Coatings for the Prevention of External Corrosion'. The project investigated the potential of existing self-healing coating solutions for pipeline applications. Self-healing technologies are common in other applications, such as

automotive paint and cell phone screen repair. It is hoped that self-healing coatings will improve pipeline reliability and reduce operating expenses by reducing excavations, coating repairs, pipe repairs and replacements.


The 2016 report titled 'Improving the Performance of the ECDA Methodology' addresses another aspect of this issue. The report provides information about the effectiveness of the ECDA process, suggestions for improvement to the process, leading practices within the pipeline industry and specific recommendations to standards development organisations.

PRCI published a 2016 report titled 'The Impact of Fluctuations in AC Interference on the Corrosion Risk'. Addressing AC interference, its effects on pipelines and potential mitigation techniques, is an important issue for PRCI members. This project studied the effect of fluctuating AC interference on the corrosion risk to pipelines. This research

extends the discussion started in the 2013 report titled 'Develop a New Unique AC Corrosion CP Mitigation Criterion'. Currently underway are projects focused on evaluating AC corrosion coupons for pipeline monitoring and determining the minimum safe separation distances between pipelines and AC grounding systems.

PRCI members continue to support corrosion control research through current and proposed projects. The 2017 and 2018 research portfolio includes significant efforts to address stress corrosion cracking as well as DC interference.

It is important to emphasise that research is as valuable when it determines what cannot be done, as it is when it results in successful new approaches to issues. The review and evaluation of current and potential practices is a vitally important part of improving pipeline integrity programmes. PRCI project teams address tough questions that have the potential to have a significant effect on the industry. Individual companies are generally not positioned to pursue these studies on their own. Industry and regulatory acceptance is only available through the presentation of a sound, unbiased and rigorous research portfolio. PRCI will continue to lead this research on a collaborative basis through its member directed programme.

I would like to thank our members for their valuable contributions and encourage you to actively explore how your company is engaged in the work, and putting into practice the valuable results available from PRCI. If your company is not currently a member of PRCI, I challenge you to join us in our mission to collaboratively deliver relevant and innovative applied research to continually improve the global energy pipeline systems. 

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