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Model Modules to Assist Assessing and Controlling Stress Corrosion Cracking #126
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During this characterization of the field effects on different SCC scenarios the results from the parametric analysis via technologies used for monitoring and detection for high-pH SCC and NN-pH environments have demonstrated different criteria between both environments. This was done contrasting similarities and differences for field cracking developed by SCC in NN-ph and high-pH environments. Data determined for hundreds of cracks did not indicate clear differences. Regardless of the circumstances compared, field cracking from dense to sparse colonies, and at failures do not imply any difference in the cracking as a function of environment. As such, the fracture mechanics-based technologies and modeling results developed for high-pH scenarios could be adapted for NN-pH applications with only limited case-specific validation for that cracking environment.

Theoretical modeling based on mechanical parameters is developed by field condition results that helped to design the algorithm for HpHSCC conditions whereas the model that will describe the electrochemical parameters was based on laboratory results that helped to correlate mechanical parameters that could not be followed by field condition technology. The High pH SCC model will be the basis for the development for the NNSCC model in future work.