

## Downhole Corrosion Inhibition Treatment for Water Supply Wells

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**Abstract :** Field-wide, a water supply wells' downhole corrosion inhibition program is being applied to maintain downhole component integrity and keep the fluid corrosivity below 5 MPY. Batch treatment is currently used to inject the oil field chemical. This work is a case study consisting of analytical procedures used to optimize the frequency of the good corrosion inhibition treatments. During the study, a corrosion cell was fitted with a special three-electrode configuration for electrochemical measurements, electrochemical linear polarization, corrosion monitoring, and microbial analysis. This study revealed that the current practice is not able to mitigate material corrosion in the downhole system for more than three months.

**Keywords :** downhole corrosion inhibition, electrochemical measurements, electrochemical linear polarization, corrosion monitoring

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