

Online Monitoring of Undercoating Corrosions Utilizing Coupled Multielectrode Sensors

CORROSION/2004, Paper #04033 by X.S. Yang, Corr Instruments, LLC

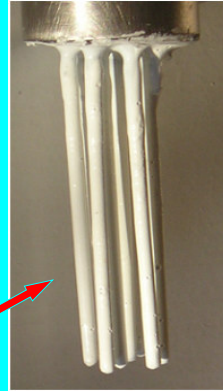
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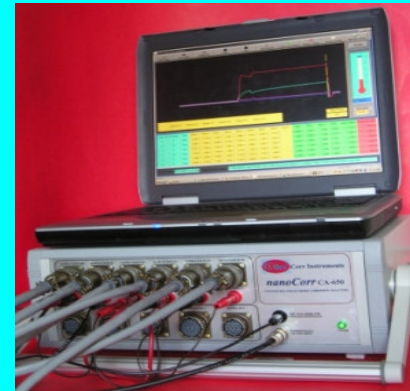
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Coated Multielectrode Probes



- Carbon steel electrodes of probes were painted with different coatings
- Coatings in some areas of selected probes were mechanically damaged to simulate initial defects
- Probes immersed in simulated seawater

nanoCorr™ A-650 Analyzer



Corr Instruments nanoCorr Model A-650 Coupled Multielectrode Sensor Analyzer was used to simultaneously measure the signals from 6 coated probes

Test Results and Posttest Probe Appearances



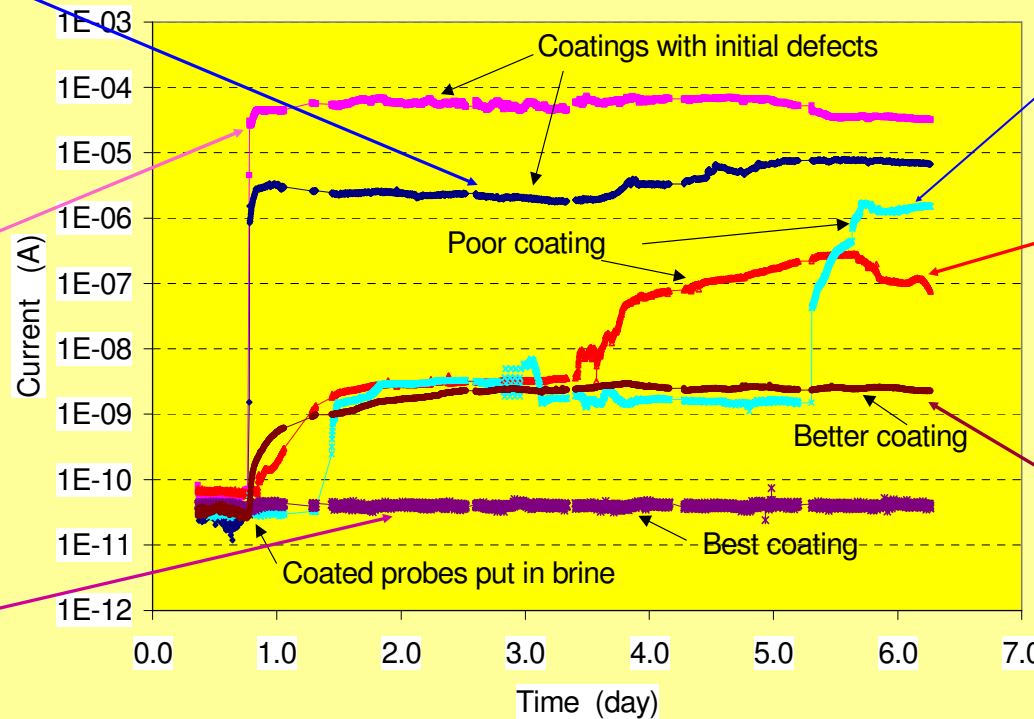
Rust observed on all defected areas after 7-day exposure



Rust observed on defected areas after 7-day exposure



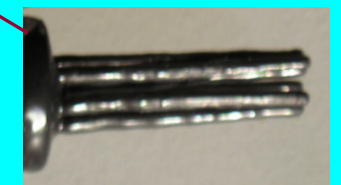
Coating appeared intact after 14-day exposure



A small area of coating peeled off after 7-day exposure



Signal was significant even though coating appeared intact after 14-day exposure



Coating appeared intact after 14-day exposure