

## **Centers of Excellence** Combined Cycle Plant Review

- How good is your plant chemistry?
- How many hot, warm and cold starts is the HRSG designed for? Will it reach this number before thermal fatigue failures occur?
- Is your chemistry program world class or below average?
- Is your feedwater treatment optimized to minimize corrosion product transport and single phase flow-accelerated corrosion (FAC)? Do you meet the rule of 2 ppb iron in the feedwater and 5 ppb iron in the evaporators? Do you use a reducing agent and have an all ferrous system?
- Do you operate the proper evaporator water treatment program?
- Do the operators have startup procedures which minimize thermal transients and their impacts on fatigue life?
- Do you have the fundamental level of online instrumentation?
- Do you have the proper alarms and responses to out of specification conditions?
- Have you experienced any chemistry influenced failures including FAC?
- Have you collected any evaporator tube samples or performed a chemical cleaning of the HRSG?
- Do you apply optimal shutdown and layup practices?
- Are the HRSG drains positioned and sized adequately?
- Has the plant staff received adequate training?
- Has a thermal fatigue damage assessment been conducted?

**Have Structural Integrity conduct a complete one day review of cycle chemistry program**



For information contact:

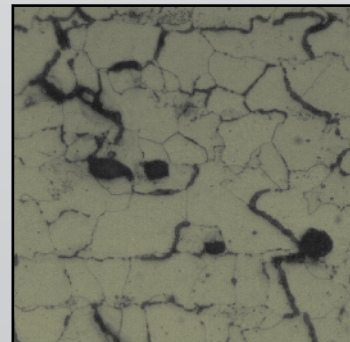
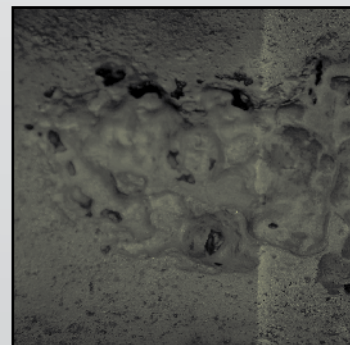
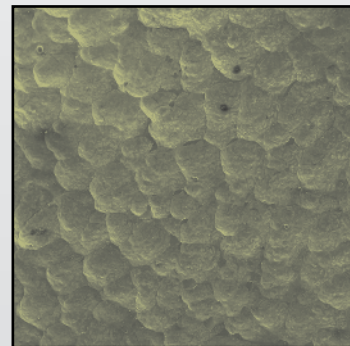
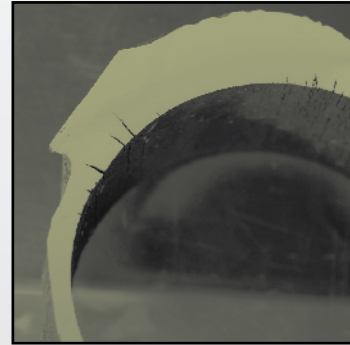
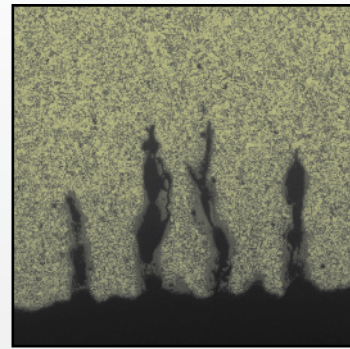
Dr Barry Dooley (704) 502-5081 [bdooley@structint.com](mailto:bdooley@structint.com)

Kevin Shields (443) 798-4785 [kshields@structint.com](mailto:kshields@structint.com)

Stephen Shulder (410) 571-0861 Ext. 213 [sshulder@structint.com](mailto:sshulder@structint.com)

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Combined Cycle Chemistry Review

