

### **Nooter/Eriksen** *Aftermarket Services*

# Retrofit Design for Cyclic Service 2008 through 2010 – Alabama



In 2008, **Nooter/Eriksen Aftermarket Services** was contacted by a power producer that had just purchased a plant with (2) **Nooter/Eriksen** HRSGs that were 95% erected but never completed or commissioned. The new owner requested assistance from **Nooter/Eriksen** to complete the plant erection and also provide advice on how the existing equipment could be modified to incorporate current technology. Cyclic service was not considered when the specifications were written for the plant in 2000.

As the first step, the client contracted **Nooter/Eriksen** to perform a complete inspection of both HRSGs and identify all remaining work required to complete the erection of the HRSGs and any existing components that would need service. Additionally, the client requested that **Nooter/Eriksen** evaluate the entire design of the HRSGs and develop a comprehensive list of suggested design modifications/improvements that have been implemented in the **Nooter/Eriksen** HRSGs since 2000.

### Nooter/Eriksen, Inc. USA

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### **Nooter/Eriksen Aftermarket Services** provided the following:

- Re-design of the Reheater and HP Superheater coils drain systems including development of the drain valve logic for all the HRSG start-up conditions.
- Re-design of the Reheater #1 and #2 coil support systems. The new support systems incorporate springs to increase the flexibility and improve the reliability of the coils for cyclic operation.
- Re-design of the Reheater and HP Superheater attemperator piping to include the requirements of ASME Section 1 Code, Part PHRSG.
- An evaluation of the distribution grid and recommendations for modification of the grid support system.
- Re-evaluation of the HRSG emissions for permitting requirements. This included supply of an additional layer of SCR catalyst.
- Start-up and shutdown curves for the HRSG using EN 12952 as a guide.

**Nooter/Eriksen** also provided the installation plan and procedures for some of the field modifications.

Additionally, a **Nooter/Eriksen** Field Technical Advisor supported the field erection for the client during the entire scope of the project.

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