

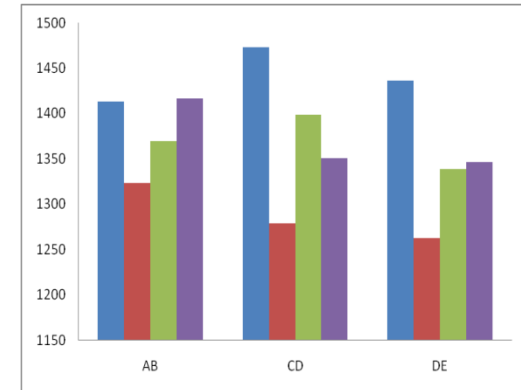
High Accuracy Temperature Profiling on Tangential Boiler

Huxian Second Thermal Electric Plant, China

300MW Tangential Coal-Fired Boiler

Boiler supplied by Harbin Boiler Works (China)

12 Observation Ports were used to view inside the furnace



Challenges

- Off-centered firing problems
- High temperature corrosion observed on sections of the water wall
- High emissions during normal operations
- No method for accurately measuring temperature distribution in the furnace

Procedures

- Field testing engineers evaluated site conditions and 12 view ports were selected for measurement on Dec 7th 2016.
- TempVision 1000 Portable Temperature Measurement System was utilized to capture flame profiles via each of the selected view ports

Results

- Results identified major differences between CD1 and CD2, as much as, 194°C that severely affected the furnace temperature distribution
- Plant operators now have a tool to troubleshoot combustion and temperature distribution problems, as well as, a method to check their corrective actions