

Case Study *TempVision*

High Accuracy Online Boiler Temperature Profiling



The Customer.

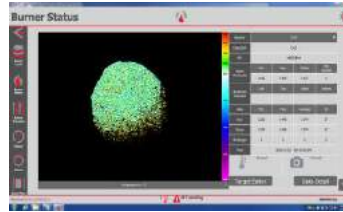
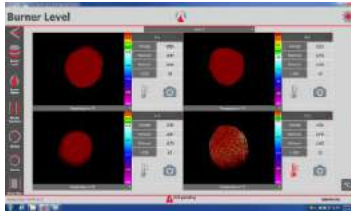
Datong International Nide Power Generation Co. Ltd. Unit #2 660MW, located in Fujian province China, has a front-rear fired boiler manufactured by Dongfang Boiler Works. Using two-stage ignition method This unit has 30 igniters and 30 coal burners. -

The Challenge.

Unit #2 has poor combustion performance with significant temperature fluctuations. Without any accurate temperature profiling data, the plant operators could only adjust the combustion based on their experiences, thus ineffective measures and uncertain results could not be avoided.

The Solution.

In October of 2016, Safe-Fire's engineering team installed TempVision online boiler temperature detectors at the four view ports on level F, complete with air purging to block ash and excessive heat to the detectors. The temperature data from the four detectors is relayed to the Engineer Station, where the temperature data are processed and analysed. From the built-in GUI interface, engineers and plant operators can see the current individual and overall burners temperature distribution profile, alarm signals and historical data.



The Results.

Since the running of the TempVision temperature profiling system on unit #2, the accurate flame temperature distribution data provided has been helping the plant operators to understand the real-time combustion situation inside the furnace and to have a sound basis to identify where the underlying combustion issue resides. This has greatly improved the adjustment effectiveness allowing tuning of the combustion process helping the plant improve their combustion performance and energy management competitiveness.