

Case study Coal fired power plant

Plant information

Suralaya, Indonesia

Plant:	Power plant
Boiler manufacturer:	Babcock and Wilcox, 1984
Fuel:	Sub-bituminous Indonesian coal
Capacity:	400 MW_e

Cleaning area:

Ljungstrom Air Preheater, size 28, manufacturer Gadelius

Infrasound generators:

1 x APX2000, installed 2006

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Situation description

There are two size 28 secondary Air Preheaters (APH) and two size 22,5 primary APH on the 400 MW boiler. Infrasound cleaning is installed on one of the secondary APHs.

All APHs are equipped with four steam soot blowers each, which were operated every 12 hours. The steam soot blowers however cannot keep the APHs clean, resulting in efficiency of APH being lower than optimal.

The need for manual cleaning of the APHs varied quite much, sometimes once a year and sometimes after 3 months. APH elements were exchanged approximately every 3 years.



The infrasound generator installed on the corner of the APH flue gas outlet duct.

Results

Reduced flue gas outlet temperature and increased air outlet temperature, i.e. increased efficiency of the Air Preheater. See graphs below.

Reduced need for steam soot blowing. The steam soot blowers are reduced by 50 % on the Air Preheater equipped with Infrasound cleaning. Further reduction is possible but it has never been tested.

Under references, at www.infrafone.se, you can read about our technical and economical results for several heat and power plants.

We have also gathered our knowledge based on our long experience of infrasound technology compared to conventional methods as steam soot blowing, shot cleaning, compressed air soot blowing and audible sound (sonic or acoustic horns) in several "white papers" that are available under Knowledge base at Infrafones homepage.

More information about the infrasound technology and its benefits as well as technical features and functions of the Infrasound System can be found in several brochures under Products at Infrafones homepage.

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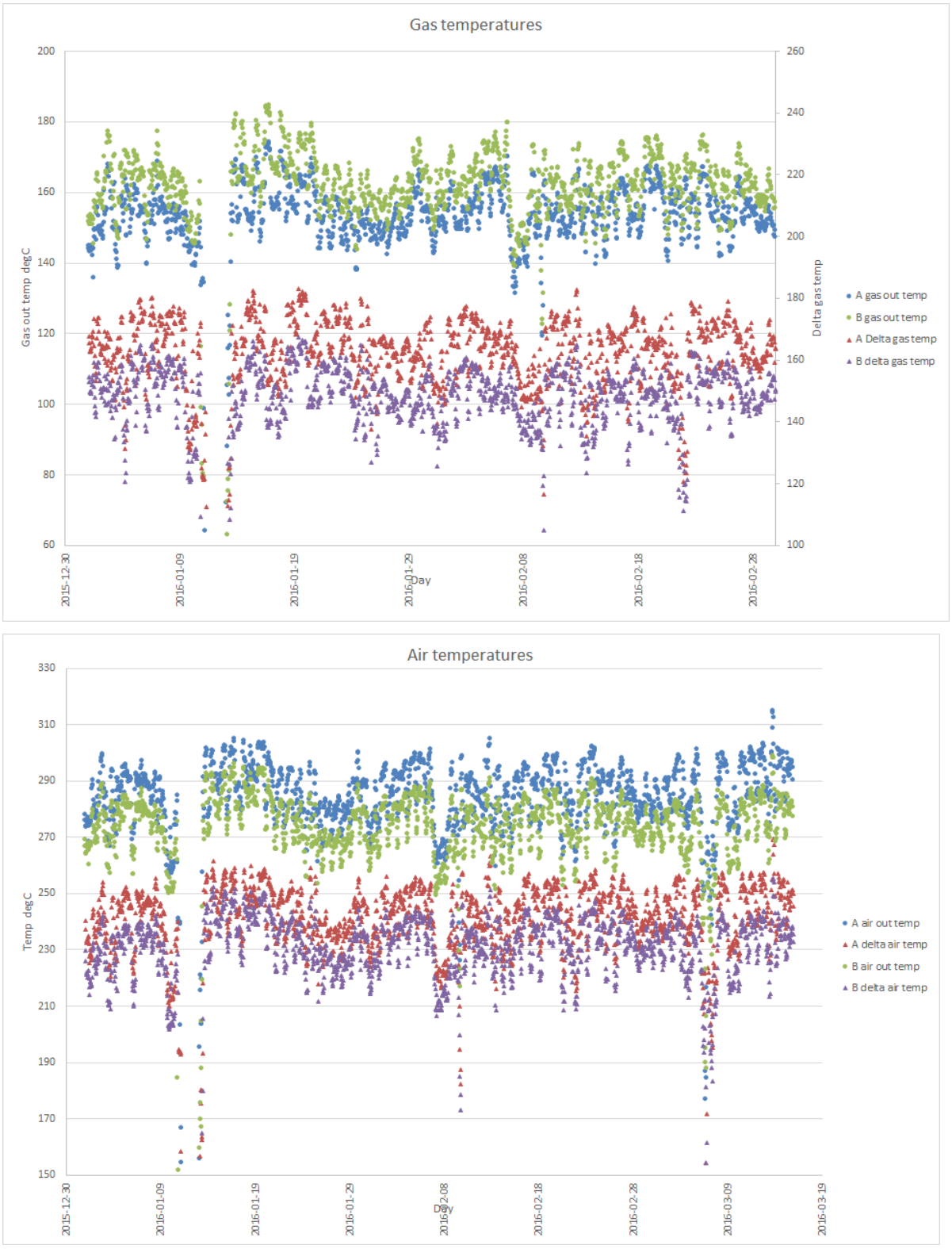

Top graphs shows the flue gas outlet temperature and differential gas temperature of the two secondary Ljungstrom Air Preheater, 2A and 2B. 2A is equipped with an Infrasound generator. 2B uses steam soot blowing only.