

# Case Study Waste-fueled Power Plant

**Plant information**

Norrköping, Sweden

Boiler 14, 75 $MW_{th}$, CFB, Metso

Fuel: Domestic and industrial waste

**Cleaning areas:**

Economiser, flue gas temperature 350 °C in / 175 °C out

Infrasound generator: APX5000

Installation year: 2006

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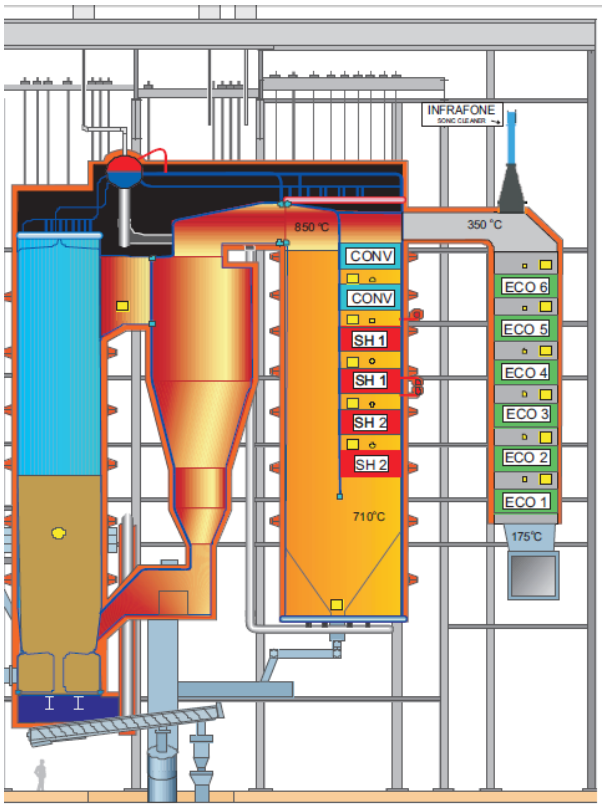
## Plant situation

During 2005 the availability of the boiler was just 7600 hours due to required stops for maintenance. Apart from the two regular stops per year the boiler had to be shut down two times per year for manual cleaning of the economiser. The stops were necessary due to too high differential pressure over the economizer which caused an increase of the flue gas fan power and reduced the efficiency of the boiler. During the stops the economiser had to be water washed to remove the deposits on the tube bundles.

During normal operation the economiser was cleaned 3-4 times per day using 6 steam soot blowers.

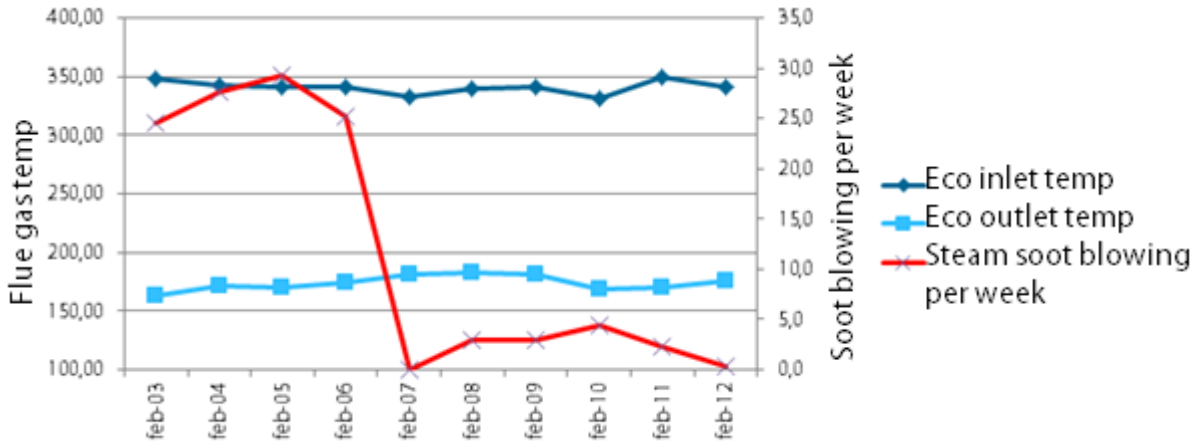
Norrköping installed Infrafone's infrasound generator to:

- Increase availability
- Reduce steam consumption
- Reduce the maintenance costs of the steam soot blowers
- Increase the life-time of the tube bundles in the economiser




## Technical results

***Steam soot blowing of the eco reduced from 3-4 times per day to a few times per week,*** resulting in increased production of electricity and reduced wear on the tubes in the economiser. See figure below showing number of steam soot blowing per week for February each year 2003-2012. The infrasound system was installed in the autumn of 2006.




***A thin protective layer of dust on the tubes in the economiser,*** which has given 5 degrees higher flue gas outlet temperature of the economiser but the dust layer protects against the corrosive flue gas and helps to increase the life-time of the tube bundles.

***The boiler is operating more stable*** since a reduction of the boiler load is necessary when operating the steam soot blowers to be able to handle the increase of flue gas volume when blowing in steam.

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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.