Tidaholms Energi

Application: Smoke tube boiler
Efficiency solution: Infrasound Cleaning
Cleaning area: The entire boiler and the gas neck

General info

Plant: Heating plant
Boiler: HOTAB integral STB (2007)
Fuel: Pellets 80 %, Wood Chips 20 %
Capacity: 4 MW_{th}

Installation

Type: 1 x APS70
Year of installation: 2015

Situation description

Compressed air soot blowing is installed, but relatively ineffective because of the valves being mounted on the turning chamber, far away from the problem area. This results in the air pressure not reaching the problem area.

The boiler is used as peak load during winter and base load during summer when the regular production has its audit.

Before the infrasound generator was installed by Heat Management there were problems with clogging in the inlet to the first smoke tube pass, which led to increased outlet temperature. At full load, the outlet temperature increased to over 200°C.
At these temperatures, the bag filter must be bypassed.



Figure 1. The infrasound generator installed on the boiler

Wave Impact Heat Management AB
E-mail: info@heatmanage.com
Phone: +46 8-661 33 10

Situation description, continued

The increasing temperatures lead to a lower boiler efficiency and higher emissions caused by the bag filter being bypassed.

For availability reasons the boiler is cleaned manually, but to avoid oil-heating this is only done only twice a year.

The infrasound generator was installed in order to increase the availability and power of the boiler as well as to reduce the emissions.

Results

- **The boiler efficiency has been increased.** The outlet temperature is steady at 160-165°C with full load.
- **The use of oil has decreased** since the efficiency is maintained. When maintaining a higher efficiency, less oil-heating is needed.
- **Lower emissions**. Thanks to the lower outlet temperature the bypassing of the bag filter can be avoided.

Under references at www.heatmanage.com, you can read about our technical and economical results for our technical solutions; infrasound cleaning, optimized steam soot blowing, big data operation analysis and CFD (computational fluid dynamics). White papers comparing our solutions to competing technologies are available under knowledge base at our homepage.

Wave Impact Heat Management AB
E-mail: info@heatmanage.com
Phone: +46 8-661 33 10

Heat Management

Heat Management was founded in 2016 following a merger between Infrafone AB and Soottech AB. The purpose of the merger was to create a world-leading cleantech company with a superior product portfolio in energy conversion adapted for industrial boilers and incinerators.

Heat Management's primary customers include power and heat plants as well as pulp mills and marine companies. Today, Heat Management has patented solutions installed in a large number of applications around the world.

qValify ISO 9001 qValify ISO 14001 qValify ISO 45001

Wave Impact Heat Management AB
Landsvägen 50A
172 63 Sundbyberg, Sweden

E-mail: info@heatmanage.com
Phone: +46 8-661 33 10
Fax: +46 8-661 33 60