A Case study from Heat Management

Stenvalls Trä Lövholmen, Sweden

Application: Smoke Tube Boiler
Boiler manufacturer: PetroETT furnace and VEÅ boiler
Fuel: Biofuel (bark, wood chips, sawdust)
Solution: Infrasound cleaning

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General info

Industry: Sawmill
Capacity: 16 MW_{th} furnace with a 12,5 MW_{th} hot water boiler and a 3,5 MW economiser

Infrasound generator

Type: APS350
Location of installation: Reversal chamber
Year of installation: 2021

Situation description

Stenvalls Trä in Lövholmen, is a sawmill in Piteå, Sweden. The 16 MW PetroETT biomass furnace is equipped with a 12,5 MW VEÅ hot water boiler together with a 3,5 MW economiser. The boiler and the economiser are used to heat water for the drying process and to fulfill other heat needs.

The boiler is in operation for the whole year and must be stopped up to 3 times for manual cleaning. During the operating season, soot accumulations occur (see Figure 1) which causes the following problems:

- Reduced boiler efficiency.
- Erosion problems due to high gas velocities.
- Increased differential pressure.
- High load on ID-fan.

Each stop for manual cleaning results in a 48hr production loss and required compensation firing with oil



Figure 1 - Plugging issues before the Infrasound installation

Results

The installation of an Infrasound Cleaner (see Figure 2) resulted in the following benefits:

- All tubes are cleaned equally and very well.
- Flue gas exit temperature is kept low which leads to increased boiler efficiency.
- Eliminated need to stop for manual cleaning.
- Eliminated need for compensation firing.
- ROI was lower than 3 months.
- Provides good cleaning effect on the 3,5 MW economiser as well.

Figures 3 and 4 shows the improved cleanliness of the tubes after the Installation of an Infrasound Cleaner (compare with Figure 1 to see the difference). Stenvalls Trä feels very satisfied with the installation.



Figure 2 - Infrasound installation



Figure 3 - After preventive cleaning with Infrasound



Figure 4 - After preventive cleaning with Infrasound

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.

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