A Case study from Heat Management

Statkraft Kungsbacka, Sweden

Application: Smoke Tube Boiler
Boiler manufacturer: KMW
Fuel: Biofuel (bark, wood chips, sawdust)
Product: Infrasound cleaning

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General info

Industry: Sawmill
Boiler: KMW, built 2005 (Boiler 1)
Capacity: 14MW$_{th}$

Infrasound generator

Type: APS350
Location of installation: Reversal chamber
Year of installation: 2020

Situation description

Statkraft Kungsbacka has two 14MW$_{th}$ smoke tube boilers, supplying the city of Kungsbacka and surrounding areas with district heat. The boilers are in operation for the whole year, except during revision and when the need for heat can be fulfilled with only one boiler.

Boiler 1 is equipped with sonic horns, and requires manual cleaning 2 times per year. The main location for soot accumulation is in the inlet of the first tube pass, and beard is accumulated in the bottom of the first tube pass. To prevent clogging, the tubes were manually cleaned with compressed air. The noise from the sonic horns was considered too high. The Infrasound Cleaner installed on the boiler can be seen in Figure 1.

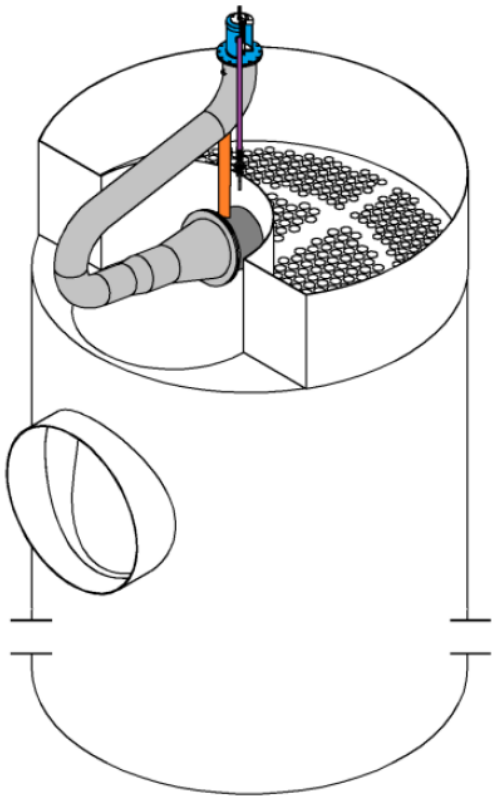


Figure 1 - Infrasound installation on boiler

Results

The installation of an Infrasound Cleaners (see Figure 2 and 3) resulted in the following benefits:

- Fully eliminated the need for manual cleaning.
- 100% availability of the boiler.
- 100% availability of the Infrasound Cleaner.
- € 0 in lost production.
- € 0 service and spare part cost.
- Higher thermal efficiency.
- Improved work environment.
- Return on investment lower than 1 year.



Figure 2 - Infrasound installation



Figure 3 - Infrasound installation

Overall, the customer is satisfied with the installation as it not only provides great economical benefits but also enables steady operation for the whole season, without interruptions. For all boiler owners in similar situations, Infrasound Cleaning is a modern and powerful solution.

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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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