Heat Management

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Application: Superheater
Efficiency solution: HISS™

General info

Plant: Combined heat and power plant
Boiler: BWE (Grate), 100 bar, 540°C
Fuel: 100% waste wood
Capacity: 55 MW_{th}, 24 MW_{el}

Installation

Type: HISS™ Advanced
Year of installation: 2013
No of sootblowers rebuilt: 5 steam sootblowers in the Superheater (SH) area

Situation description

In this boiler, the HISS system is used to operate the steam soot blowers in the superheater more often when combusting more difficult fuel (waste wood).

Before installing HISS the fuel was 100% wood chips. With HISS 100 % waste wood is used.

Problems arising when using waste wood as fuel are caused by the properties of the ash:

- Increased ash volume (waste wood give 2-5 times more ash than wood chips).
- Heavier fouling (waste wood ash sinters more easily and can create deposits/slag that are impossible to remove by sootblowing).
- Aggressive ash (increased amounts of Chlorides, Zinc and Potassium create corrosive ash).

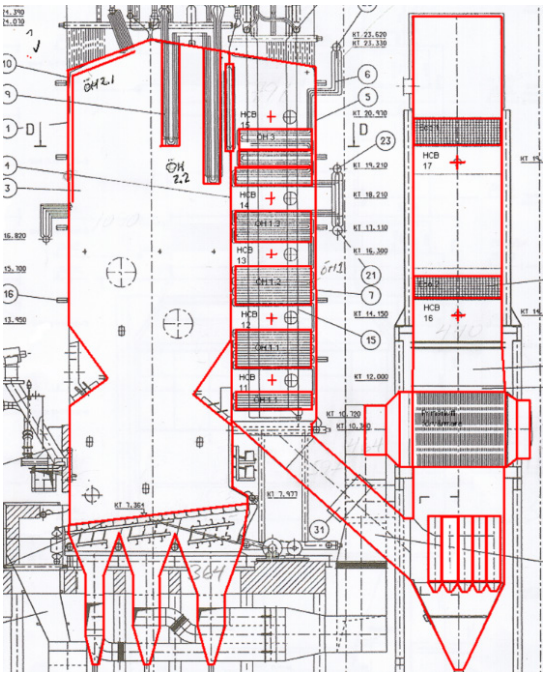


Figure 1. Boiler design.

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Results

- **The HISS™ installation reduced the wear caused by erosion by 50%.**
- **It is now possible to operate the steam sootblowers twice as often when fuel is difficult,** 6 times/day, without consuming more steam.
- **With HISS™ the whole depth of the boiler is kept clean.** Before installing HISS™ the tube bundles were clean only near the middle.

Under references at www.heatmanage.com, you can read about our technical and economical results for many of our projects.

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

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