Heat Management

Versowood

Application: Smoke tube boiler
Efficiency solution: Infrasound Cleaning
Cleaning area: The entire boiler

General info

Plant/Mill: Vierumäki, Finland
Boiler: KMW, smoke tube boiler (2001)
Fuel: 85 % bark, 15 % wood chips
Capacity: 10 MW_{th}

Installation

Type: 1 x APM150
Year of installation: 2013

Situation description

Previously the boiler was stopped for manual cleaning every second month or six times per year due to that tube inlets were clogged by soot particles, leading to overstraining of the fan and increase of the flue gas outlet temperature from 150°C to 180°C. This also results in lower boiler output.

Each stop is 16 hours and during four of the annual stops an 8MW oil fired boiler was used.

In order to increase the availability and output of the boiler, it was decided to install an Infrasound generator from Heat Management. The installation was done in the end of 2013 and the Infrasound generator was placed on the top of the boiler, see Figure 1.

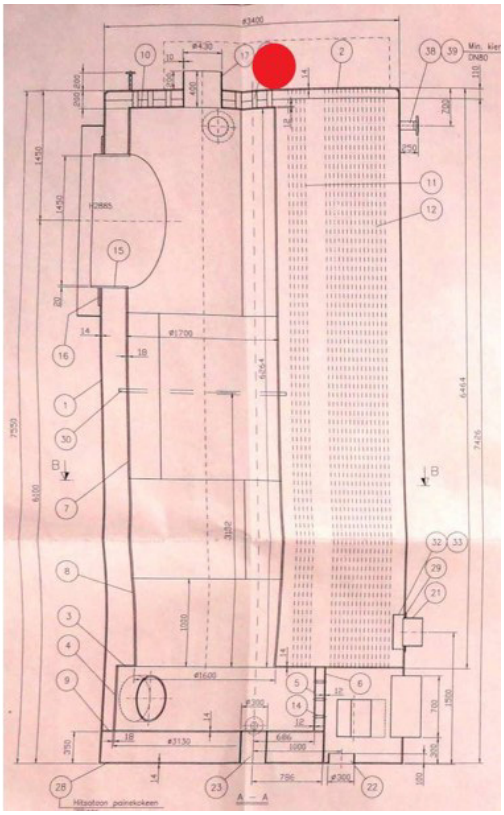


Figure 1. Overview showing the boiler and the installation location (red) of the Infrasound generator.

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Results

- **Increased boiler availability**. The time between the stops for manual cleaning is increased from two to six months, i.e. two stops per year, compared to six stops per year earlier. This reduces the costs for both maintenance and use of the oil fired boiler.

- **Increased boiler power**. The increased time with cleaner tubes results in operation on high load during a longer time than before.

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  As a result of these very positive results, Versowood decided in August 2014 to purchase an additional Infrasound generator from Heat Management for a similar 12MW smoke tube boiler at the same sawmill.

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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