Stadtwerke Gießen

Application: Waste-to-Energy Boiler
Efficiency solution: Infrasound Cleaning
Cleaning area: Economizer and ducts

General info

Plant: Heating plant
Boiler: Boilerworks A/S
Fuel: 100 % industrial waste
Capacity: 10 MW_{th}

Installation

Type: 1 x APM350
Year of installation: 2014

Situation description

The boiler had steam soot blowing operating very frequently to keep the heat transfer surfaces clean. At the beginning of the season, when the boiler was recently cleaned, steam soot blowing was performed 4-5 times per 24 hours in the Eco. After 3 months the need for steam soot blowing was 8 times per 24 h and after 6 months 18 times per 24 h. The steam for the soot blowers is bought from the neighbouring plant operating a gas fired boiler so a reduction of the need for steam soot blowing was of great interest.

Stadtwerke Gießen had earlier tried acoustic cleaning using three 75 Hz horns installed at the Economizer tube bundles. The horns where unsuccessful so the equipment was taken out of operation. An infrasound cleaner was ordered to reduce the need for steam soot blowing as much as possible.

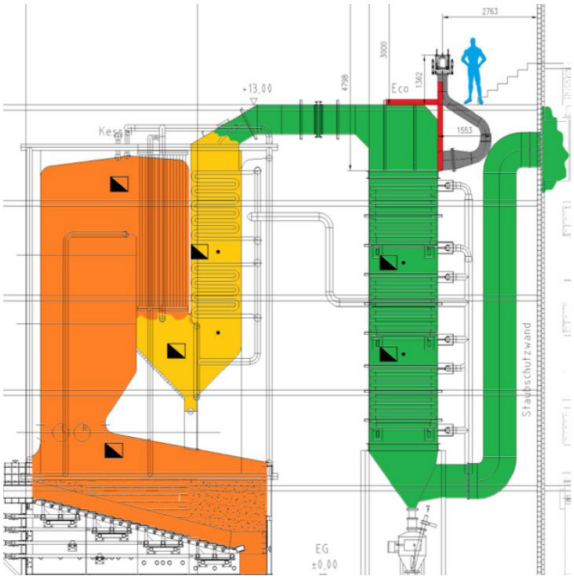


Figure 1. Side-view of the boiler. Economizer and the duct before/after marked green. The bent infrasound generator is installed on top of the economizer pass.

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Results

- **Drastically reduced need for steam soot blowing**. After 3 months of boiler operation the need for steam soot blowing is 4 times per 24 h instead of 8 times. After 6 months the need for steam soot blowing is still 4-5 times per 24 h instead of 18 times.

- **Less deposits in the convection section**. At inspection of the boiler after 6 months of operation it was obvious that the deposits on the convection section where thinner than usual, due to the long cleaning range of the infrasound cleaner installed on the Eco.

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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