Mälarenergi Block 6

Application: Waste-to-Energy Boiler
Efficiency solution: Infrasound Cleaning
Cleaning area: Economizer (on ECO roof)

General info

Plant: Mälarenergi. Västerås, Sweden.
Boiler: CFB
Fuel: Solid Wate (RDF)
Capacity: 167 MWth

Installation

Type: APX7000
Year of installation: 2015

Situation description

Boiler 6 in Västerås is today the world's largest WtE boiler. The fuel consists of sorted waste (RDF) imported from Great Britain. Content of glass and aluminum is relatively high. The boiler is base load at the plant and cheapest production line so priority is high.
The ECO was earlier blocked by deposits despite steam soot blowing every 12 hours. The ECO had to be sand blasted and sanitized at large costs. After 3-6 months of operation the two lowest ECO tube bundles were clogged 80-90 %. Higher up in the ECO the tube bundles were clogged 5-40%.



Figure 1. Infrasound cleaner on customers Economizer

To increase availability of the boiler an infrasound generator from Infrafone was installed and operation started October 2015. The photo on the front page shows the infrasound generator, available for service from the ECO roof.

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Results

- Elimination of the blocking problem in the ECO, which results in substantial savings. Earlier the ECO had to be sand blasted every 3-6 months. All 6 tube bundles are kept clean, demonstrating the long cleaning range of the single infrasound generator installed on the ECO inlet.
- The transportation of ash from the ECO ash hoppers is operating smoother since ash is collected more evenly with the infrasound generator.
- Steam soot blowing has been reduced by 50 % since installing the infrasound generator. Reducing steam soot blowing further has not been tested.

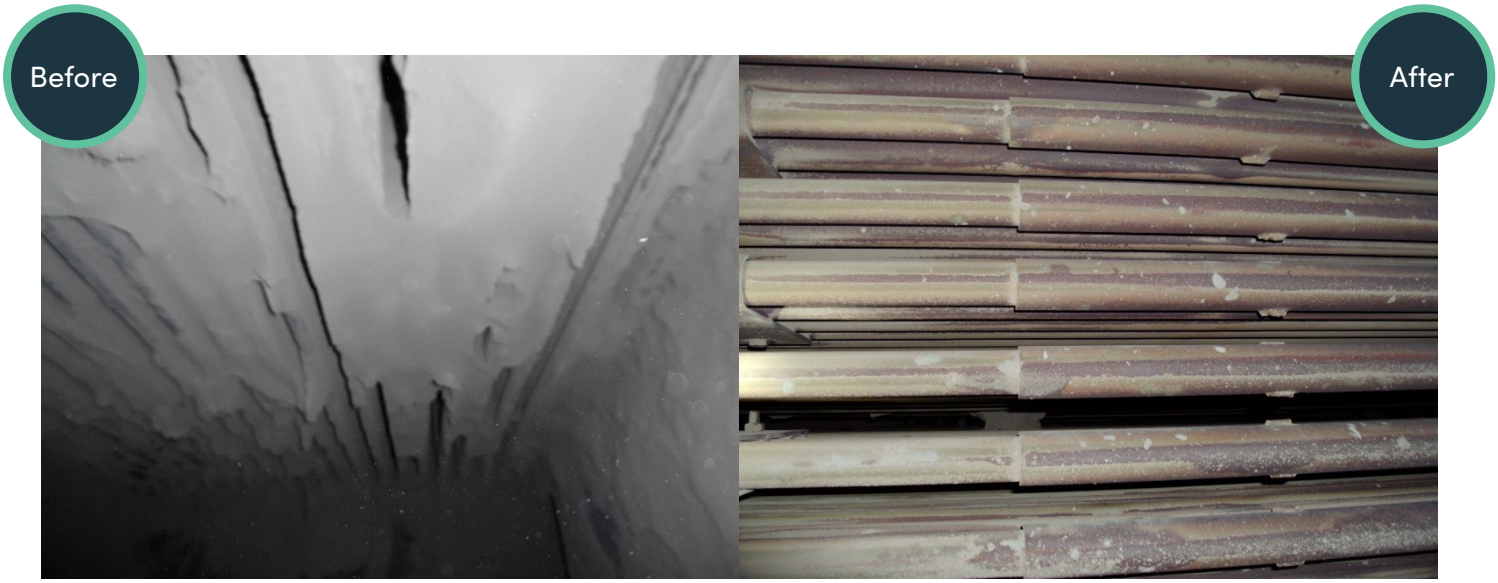
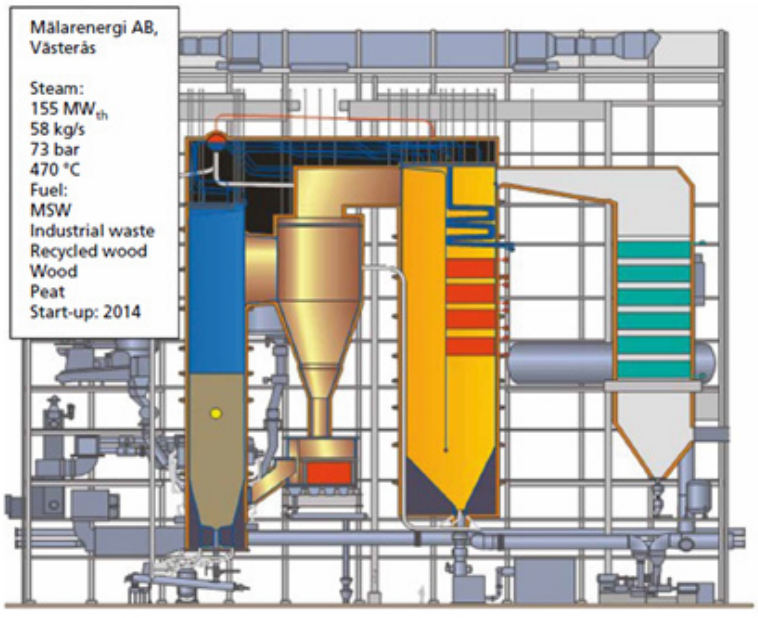


Figure 2. Before (Left) & After (Right) installing Infrasound cleaning



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