A Case study from Heat Management

EEW Delfzijl, Netherlands

Application: WtE Boiler
Efficiency solution: Infrasound cleaning

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Cleaning area: SCR, 2 layers of honeycomb elements

General info

Plant: Power plant
Boiler manufacturer: Alstom
Fuel: RDF, 60/40 domestic/industrial waste
Capacity: 3x60 MW_{th}

Installation

Type: 3x APX5000 (1 per SCR)
Year of installation: 2015, 2016, and 2018

Situation description

The first layer of two in the honeycomb SCR got clogged within 2-3 weeks, requiring explosion cleaning at high costs and causing damages to the SCR elements. There were also an outage every 6 months for manual cleaning. The SCR elements had to be replaced once every year.



An APX5000 infrasound generator was installed in the end of 2015 to keep one of the two SCRs clean without using explosion cleaning.

After two months of operation the very positive results were obvious, and an infrasound generator was ordered for the second SCR in January 2016. 2018 a third boiler was taken in operation, and it was equipped with an infrasound generator from the start.

Results

The customer is satisfied with the infrasound cleaners and has seen the following results:

- **Eliminated need for explosion cleaning.** Earlier the SCR had to be cleaned using explosion cleaning every 2-3 weeks.
- **Stable differential pressure**, see trends below for comparison.
- **Longer element life-time**, at least double the life-time of the elements and keeping the element activity high.
- **Order of two more infrasound generators**, after seeing great results on the first SCR.

Flue gas differential pressure trend

The trends in Figure 2 displays how the differential pressure on each line stabilizes after the installation of Infrasound Cleaning. Sawtooth pattern comes from clogging followed by explosion cleaning.

Line 1
Line 2

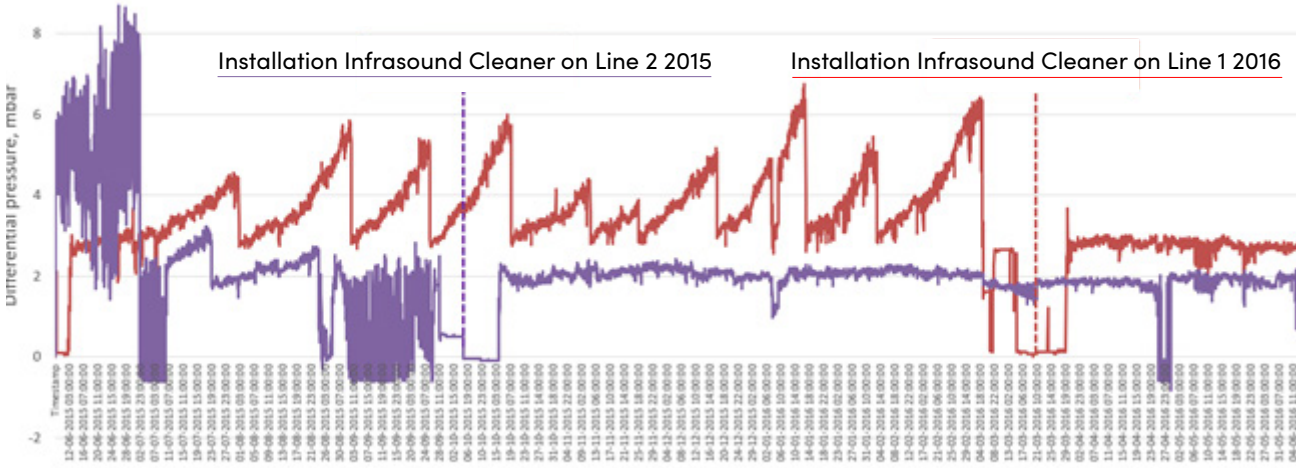


Figure 2. Data trends before and after the installation of Infrasound Cleaning

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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