Heat Management

Wien Energie Spittelau

Application: Grate-fired Boiler (WtE)
Efficiency solution: HISS®
Cleaning area: Superheater

General info

Plant: Waste incineration plant
Boiler: 2 x Hitachi Energy boilers
Power: 2 x 44 MW_{th}
Fuel: Municipal waste (MSW)

Installation

Type: HISS Advanced
Year of commissioning: 2024

Situation description

Wien Energie Spittelau is one of the main heat generation sites supplying Vienna's district heating system, providing heat to more than 60,000 households.

The plant operates two parallel waste-to-energy boilers, each cleaned by 12 retractable steam sootblowers in the superheater section.

Before HISS, each boiler consumed approximately 11 tons of sootblowing steam per day.

The objective was to reduce sootblowing steam consumption while maintaining boiler cleanliness. The Customer also wanted to reduce condensate-related tube erosion and limit pressure variations during sootblowing.



Figure 1. Plant photographed during site visit.

To achieve these objectives, Heat Management installed HISS Advanced to enable one-way sootblowing and overlapping sootblower operation.

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Results

The installation confirmed 40% total steam savings per sootblowing cycle, while boiler cleanability was maintained. During the sootblowing phase itself, steam consumption was reduced by 46%. The superheater sootblowing cycle time was also reduced by approximately 50%.

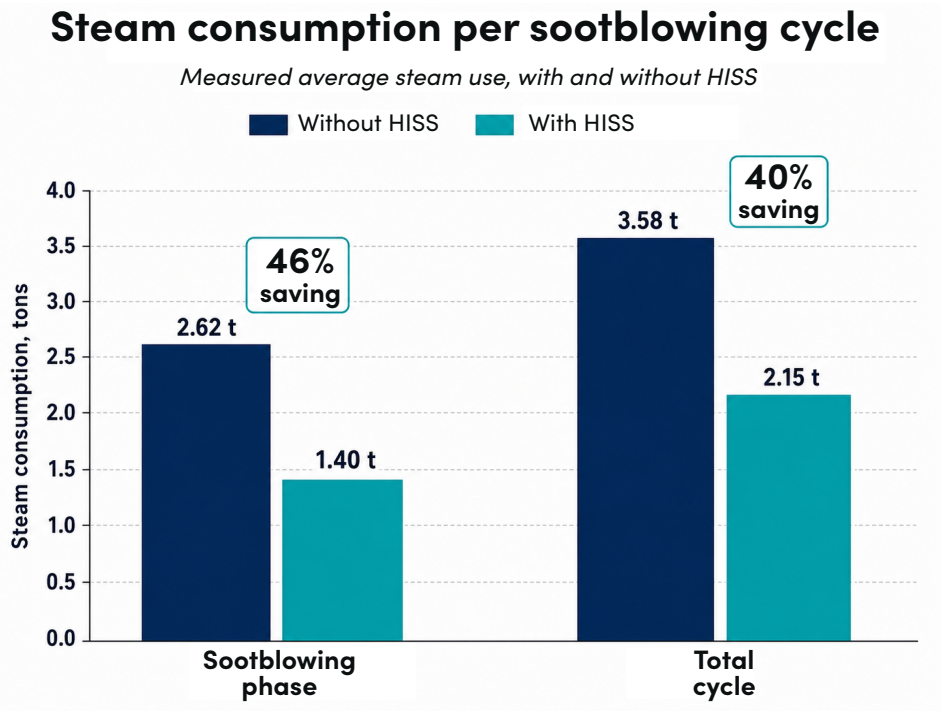


Figure 2. Measured steam consumption per sootblowing cycle in normal mode and with HISS active. Steam consumption was reduced by 46% during sootblowing and by 40% for the total cycle (preheating and drainage included).

Key results:

- **40% total steam saving** per sootblowing cycle.
- Superheater sootblowing **cycle time reduced by 50%.**
- **Lower expected risk of condensate-related erosion.**
- **Maintained stable flue gas temperatures** after HISS installation, indicating maintained cleanability using less steam.

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"Our goal of saving steam with HISS and turning it into valuable energy has been achieved, while maintaining boiler cleanability. This contributes to a more sustainable boiler operation."

- Performance Engineer, Wien Energie

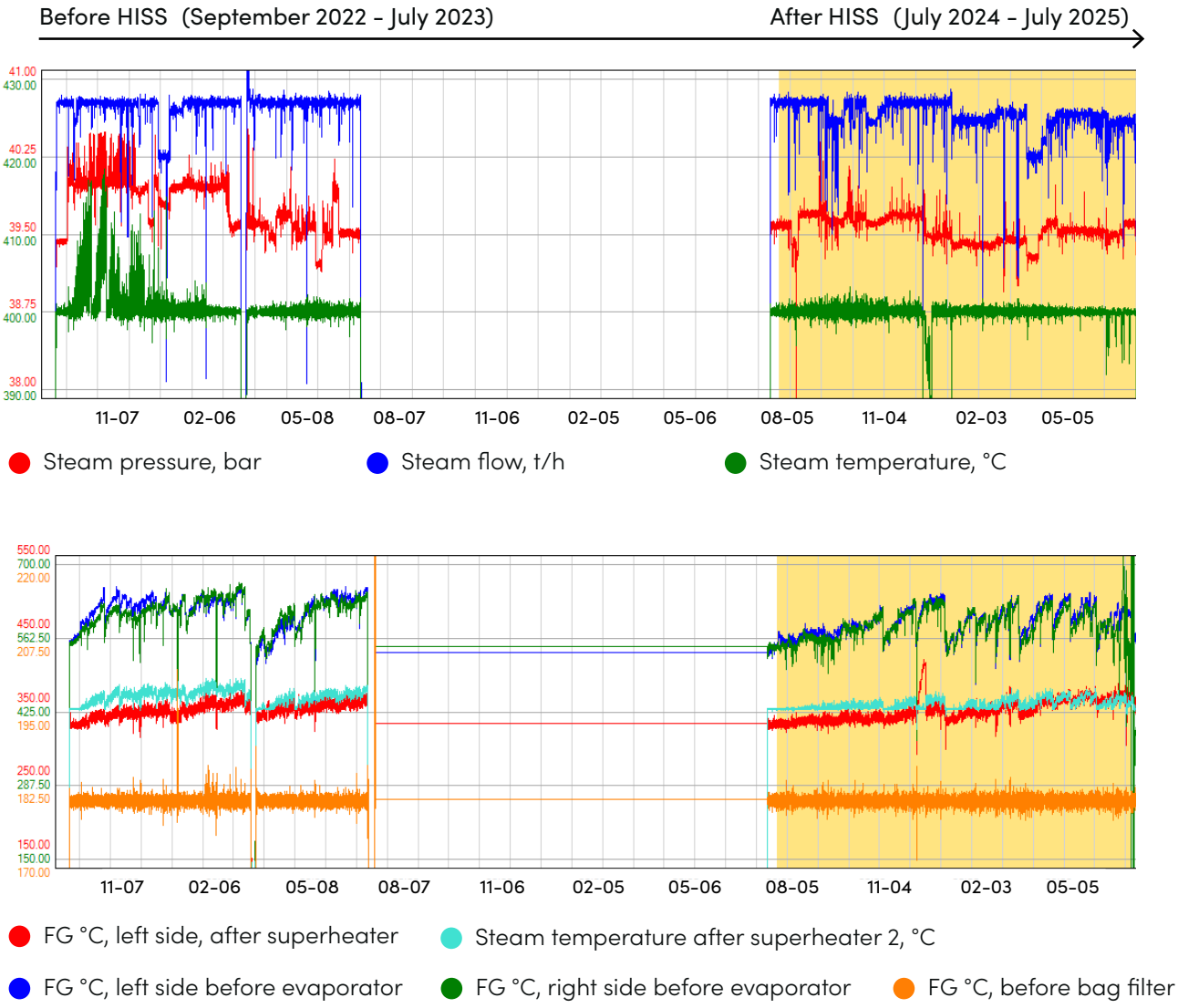


Figure 3. Selected process trends before and after HISS. Stable flue gas temperatures support that boiler cleanability was maintained while total sootblowing steam consumption was reduced.

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