Heat Management

Holmen Workington

Application: BFB boiler
Efficiency solution: HISS®
Cleaning area: Superheater, boiler bank, economizer and air preheater

General info

Mill: Paper mill
Boiler: Andritz BFB boiler
Fuel: Biofuel and wood residues
Capacity: 150 MWth

Installation

Type: HISS® Advanced
Year of installation: 2025

Situation description

Holmen Workington operates a 150 MWth Andritz BFB boiler with 37 steam sootblowers. The existing sootblowing cycle was carried out once per day and took approximately two hours to complete.

The main objective was to reduce steam consumption during sootblowing without compromising boiler cleanliness. The Customer also wanted to maintain effective cleaning while reducing the risk of tube wear caused by unnecessary steam exposure and condensate impact.

Before HISS®, each sootblowing cycle consumed approximately 11.4 tons of steam. This had a direct impact on power generation, as steam used for sootblowing could otherwise be used for electricity production.

To improve the process, Heat Management installed the High Impact Sootblowing System, HISS®.

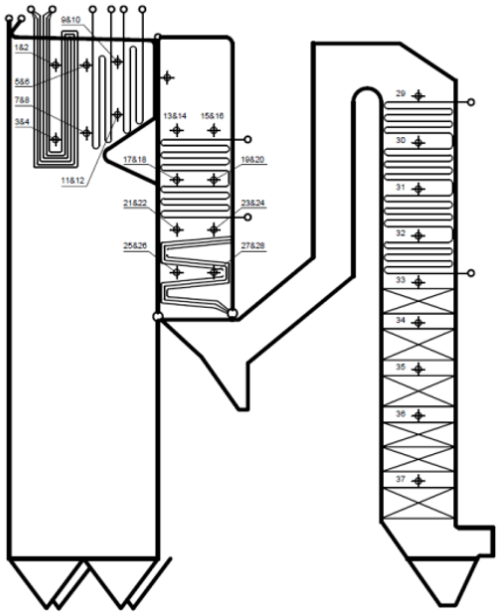


Figure 1. Boiler cross section showing the furnace, flue gas pass, heat transfer surfaces and sootblower locations.

Wave Impact Heat Management AB
E-mail: info@heatmanage.com
Phone: +46 8-661 33 10

Results

Following the implementation of HISS®, the sootblowing cycle time was reduced from two hours to one hour. Steam consumption per cycle decreased from 11.4 tons to 6.3 tons, corresponding to a 44.7 % reduction.

Key results:

- Sootblowing steam consumption reduced by 44.7 % per cycle
- Sootblowing cycle time reduced by 50 %
- Average generator power increased by approximately 1.0 MWe at similar fuel consumption
- Measured boiler efficiency increased by 0.62 percentage units
- Sootblowing steam flow reduced by approximately 40 %
- Steam temperature and steam pressure became more stable during operation
- ID fan load was reduced by approximately 3 %

The graph below shows the boiler operation after HISS® was taken into use. The yellow area marks the five month operating period from November 2025 to March 2026, where the effect of HISS® can be seen in normal production conditions.



Fuel power	Stable and high, with predictable and stable steam generation.
Average generator power	1 MWe higher for same fuel consumption.
Steam temperature	More stable, making turbine operation less sensitive to process variations.
Steam pressure	Stabilized. More stable turbine inlet pressure.

Wave Impact Heat Management AB
E-mail: info@heatmanage.com
Phone: +46 8-661 33 10