Mondi Dynäs

Application: Black Liquor Recovery Boiler
Efficiency solution: HISS®
Cleaning area: Superheater, Economizer and Boiler Bank

General info

Mill: Mondi Dynäs
Boiler: Recovery Boiler
Fuel: Black Liquor
Capacity: 1400 tDS/day

Installation

Number of sootblowers: 76
Year of installation: 2023

Situation description

The customer had problems with fouling on the primary and secondary superheaters. Steam temperature was dropping about 25 degrees Celsius in a span of two and a half months. The client saw a need for sootblowing more but also saving sootblowing steam.

The bark boiler at the mill supports the production of steam in the facility and also uses oil as fuel during certain parts of the year when steam production is too low.



Figure 1. Mondi Dynäs Paper mill in Väja

Mondi Dynäs exercises batch cooking, which increases the need for steam production. With the steam saved by the High Impact Sootblowing System (HISS®), the need for that support can be significantly reduced.

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Results

After implementing HISS® there were more efficient cleaning in the economizer, boiler bank and superheater. The results are as follows:

- +30% Savings direct at start-up
- +40 % Steam saving after tuning
- Increased cleanliness of critical boiler areas
- Reduction of soot steam pressure peaks (approx 10 bar)
- Less downtime for sootblowers
- Potential for increased boiler load or further savings
- 1200 ton oil saved each year by reducing the number of times the customer had to use the bark boiler as support in the production process.

Steam savings after complete tuning:
14.1 – 8.3 = 5.8 t/h
From 8.5 to 4.9% of recovery boiler steam production
Reduction = 42%

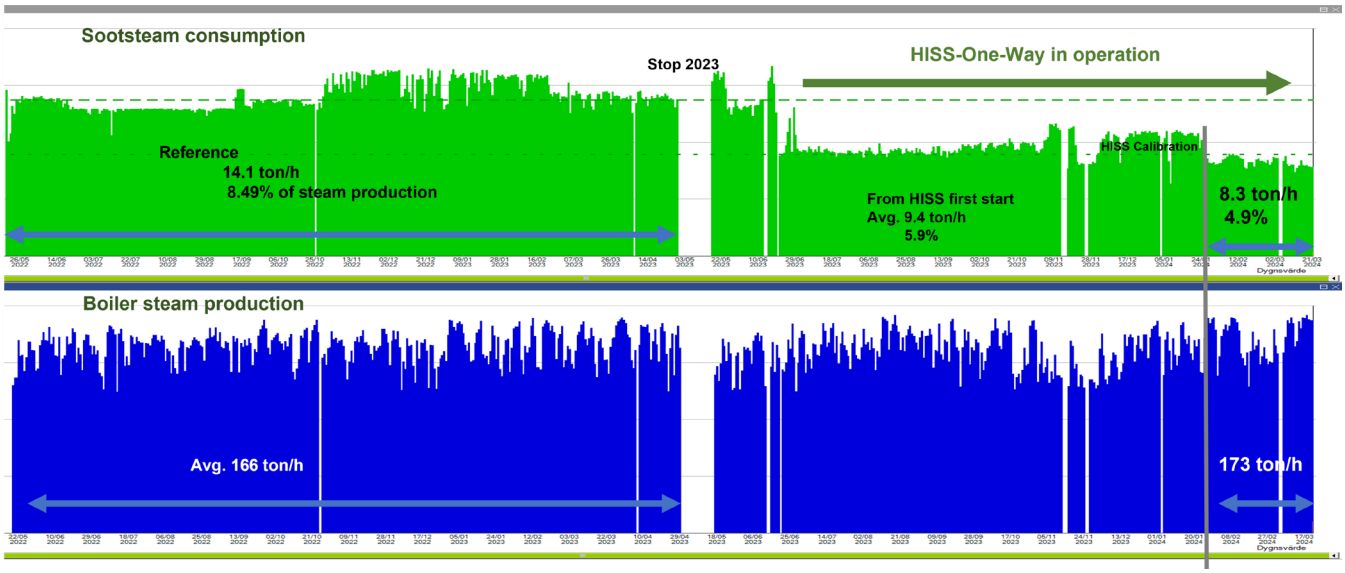


Figure 2. Steam consumption before and after HISS®-installation

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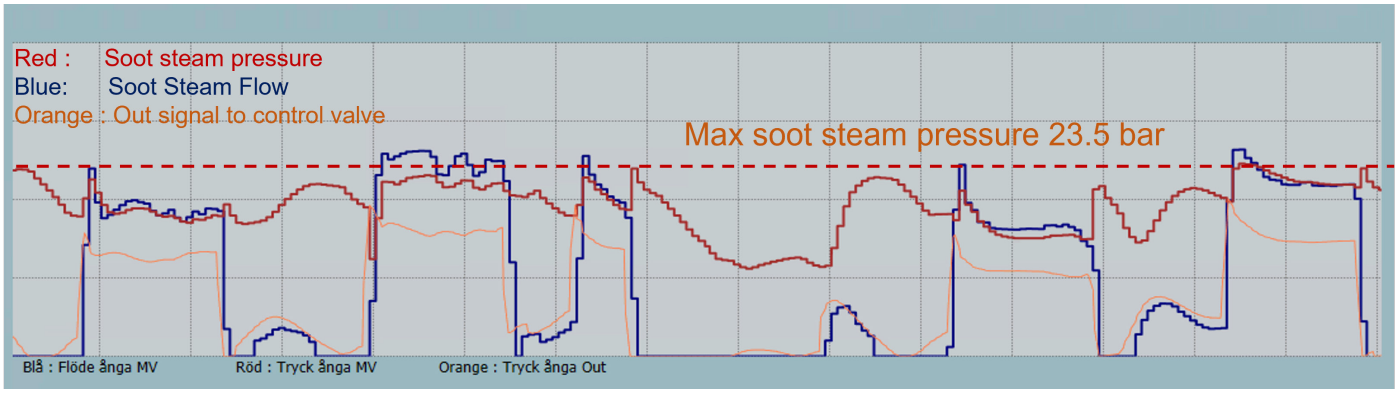


Figure 3. Steam Pressure with HISS®-installation

Stabilized soot steam pressure:
Reduction of steam pressure peaks
from 32 to 23 bars
Reduced tube wear/sealing damages
from condensate
Full cleaning from wall

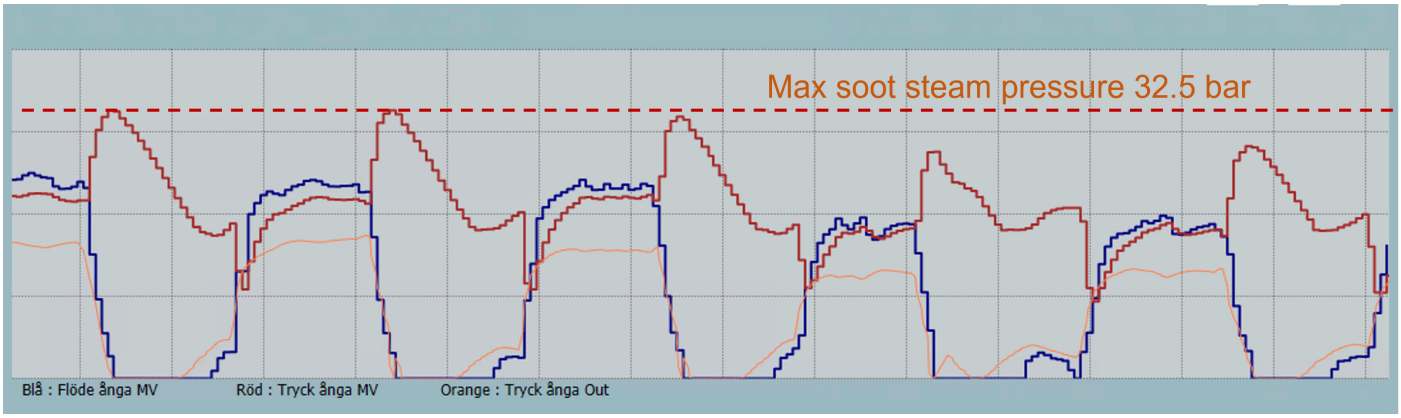


Figure 4. Steam Pressure without HISS®-installation

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