Heat Management

Övik Energi

Application: Smoke tube boiler
Efficiency solution: Infrasound Cleaning
Cleaning area: Smoke tubes

General info

Plant: Heating plant
Boiler: TPS
Fuel: Pine oil pitch
Capacity: 3 MW_{th}

Installation

Type: 1 x APM70
Year of installation: 2010

Situation description

From 2008 to 2013, the 3 MW boiler was operated using 100 % pine oil pitch (tallbeckolja in Swedish). No automatic soot cleaning method was used, and the boiler had to be opened for manual cleaning of the smoke tubes once a month.

In 2010, an infrasound cleaner was installed to increase the time between manual cleanings. The infrasound cleaner was installed on the door of the deflection chamber, and the S-shape was chosen to fit the surroundings.



The smoke tubes seen from the deflection chamber (top) and the blue resonance tube of the infrasound cleaner installed on the door of the deflection chamber.

Results

Reduced need for manual cleaning. When operating on 100 % pine oil pitch the time between manual cleaning was increased from 1 month to 2-3 months. The main reason for cleaning after 2-3 months is however not to clean the smoke tubes, but to clean the deflection chamber being partly filled with ash. A system for ash removal in the deflection chamber would probably have eliminated this issue



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