

# Flue gas Re-heating SCR-system

Project: Vattenfall, Uppsala Bloc 5, Sweden - Installation of Danstoker  
Flue gas Re-heater for SCR-system from Incineration



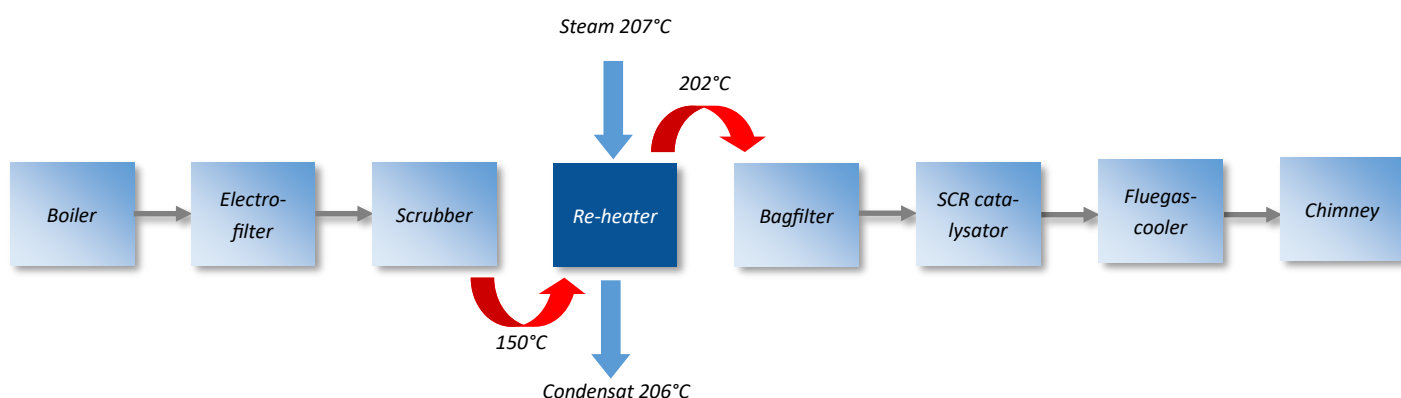
## Process description

Flue gas after the incineration boiler goes through several cleaning steps consisting of scrubber, electro filter, bag filter and SCR (Selective Catalytic Reduction) for cleaning of the flue gas.

By re-heating the flue gas from 150°C to app. 200°C before the bag filter it will ensure the most optimal operating conditions for the SCR-system.

The original re-heater was undersized, it was therefore necessary to run the back-up burners for heating up the flue gas, this was neither economically favourable or environmentally friendly.

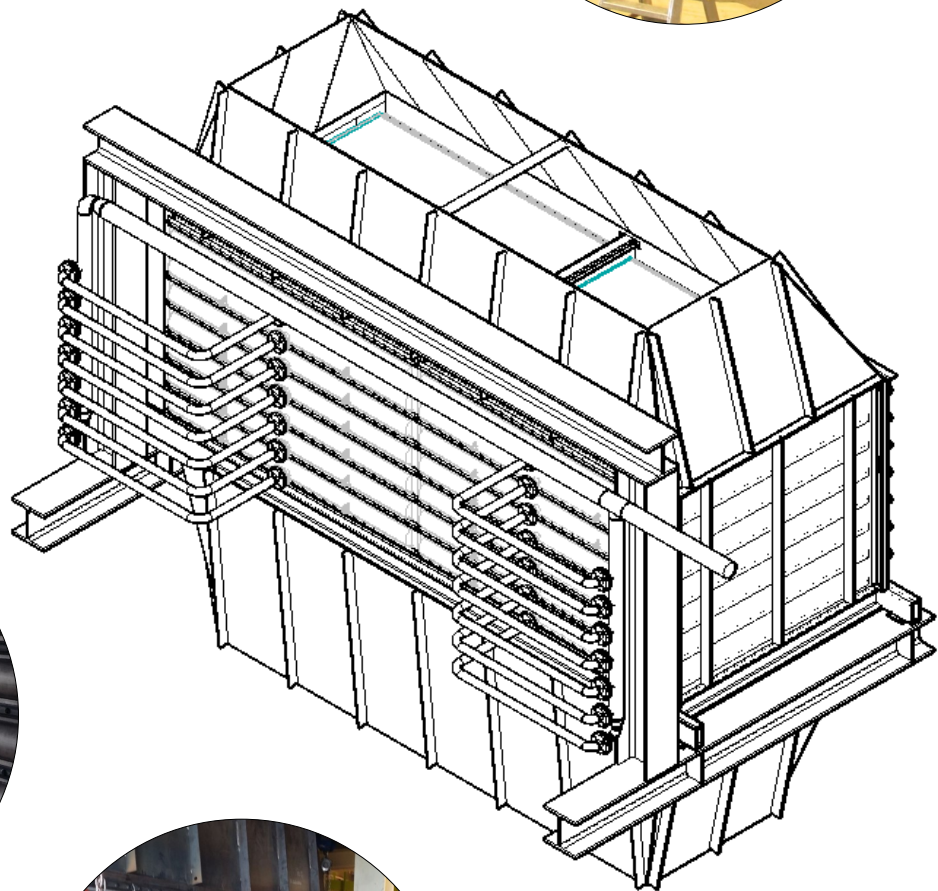
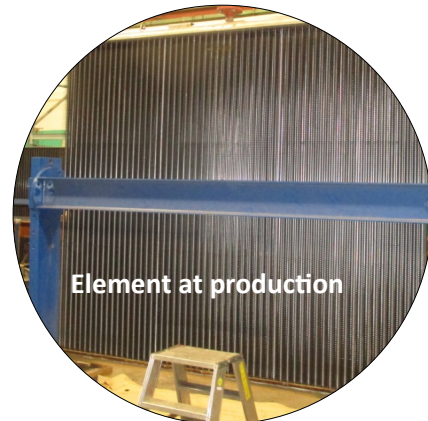
By installing a new Danstoker flue gas re-heater the process was optimized by using waste steam from the turbine to heat up the flue gas. The steam is condensing in the re-heater and is led back to the condensate tank for recycling.



## Danstoker Fluegas Re-heater

The illustration shows the design of the installed Danstoker flue gas re-heater.

<b>Performance</b> .....	<b>2.419 kW</b>
Flue gas flow .....	195.000 m <sup>3</sup> /h
Flue gas flow .....	157.130 kg/h
Pressure drop .....	7.7 mbar
Flue gas temp. inlet .....	150°C
Flue gas temp. outlet .....	202 °C
Steam pressure ...	18 bar(a)
Steam flow .....	4.546 kg/h
Steam temp. inlet .....	207 °C
Steam temp. outlet .....	206 °C



**” Danstoker designs after clients requirements.**