

# **Case story**

**Replacement of Electro filter with Filcon Bag Filter**

**Masnedø Kraftvarmeværk.**



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## MASNEDØ KRAFTVARMEVÆRK REPLACEMENT OF ELECTRO FILTER WITH FILCON BAG FILTER

### Introduction:

The combined power and heating plant on Masnedø is owned and operated by DONG Energy, formerly Energi E2. The Plant is straw- and wood chip-fired with a capacity of 9 MW electrical power and 23 MJ/s heating power. The yearly consumption of straw amounts to approximately 40.000 ton, while wood chips may constitute up to 25% of the accumulated solid fuel consumption.



### Purpose:

Replacing Electro filter with Bag filter.

### Why:

The electro filter was worn-out and corroded, so when a replacement was necessary, the bag filter solution was chosen, which can clean the flue gas at a higher temperature but also giving a lower dust emission independent of the flue gas temperature.

### Solution:

Installation of a bag filter system on the existing foundation, consisting of 2 bag filters with extraction screws and ash transport system, as well as flue gas ducts and integration of the control in a main control system. Furthermore construction of a building and platforms around the unit was included because of the working environment in connection with operation and maintenance.

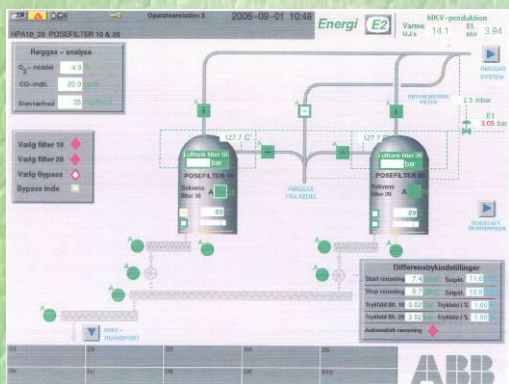




## Carrying out:

The switching over, incl. demolition, installation and commissioning were scheduled to last 3 weeks.

The demolition was planned to be carried out by cutting, but due to the limited space it was decided to lift the complete electro filter out and then scrap it on the ground.



The installation and commissioning proceeded according to schedule with participation of project managers, operators and programmers from both DONG Energy and Filcon A/S.

## Conclusion:

The demolition- and installation process was, in spite of the change in the demolition process, carried out satisfactory, as well as the commissioning proceeded was without problems. The objective of higher operational temperatures is achieved, and the emission is far below the limit values.



## Follow-up:

After the first year of operation the filter bags have been analysed, and the residual coating were minimum, and according to the plant manager, Jesper Bolin, the unit has been running satisfactorily.