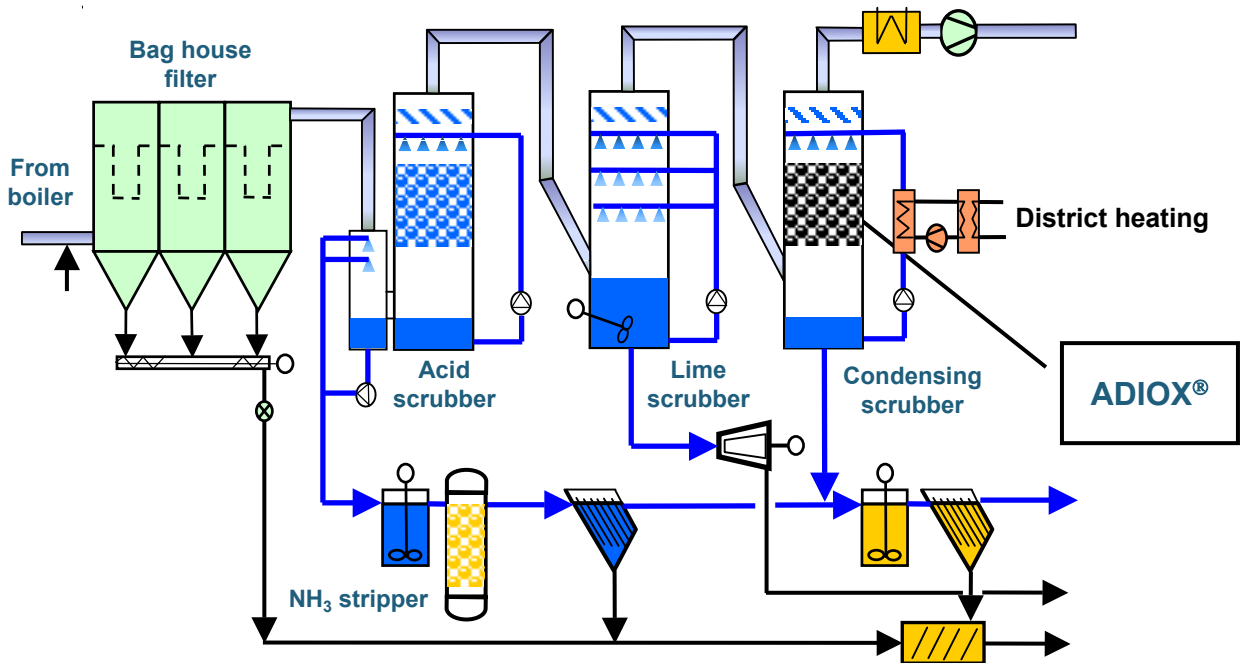


Dioxin removal by ADIOX[®]

**The Dåva Waste-to-Energy Plant at
Umeå, Sweden**





General aims:

Provision of an additional safety feature, a “police filter”, in case of operational disturbances. Experience shows that disruptions so occur, causing both short-term peaks and a more long-term increase in dioxin emissions: the “memory effect”.

Disturbances may be of different types, such as increased levels during start-up, additive dosing problems, or filter bag rupture.



Description:

The Dåva municipal waste incineration plant, outside Umeå in northern Sweden, commenced operations in spring of 2000. The flue gas treatment system was designed and built by Götaverken Miljö. The principal components in the gas stream are a bag house filter with coke injection for dust and dioxin removal, an acid scrubber and a $\text{Ca}(\text{OH})_2$ -scrubber for acid removal, plus a condensing scrubber for energy recovery.

Boiler output is 55 MW, corresponding to some 18 tons/hour of waste incinerated. As a result of an efficient condensing system and a heat pump arrangement, as much as 51 MW of energy is produced for district heating. This is additional to the 15 MW of electricity generated in the turbine.

Measurements show 0.027 ng/Nm^3 of dioxin at the inlet of the condensing scrubber and 0.005 ng/Nm^3 at the outlet, thus there is an approximate 80 % reduction in the dioxin concentration.



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