

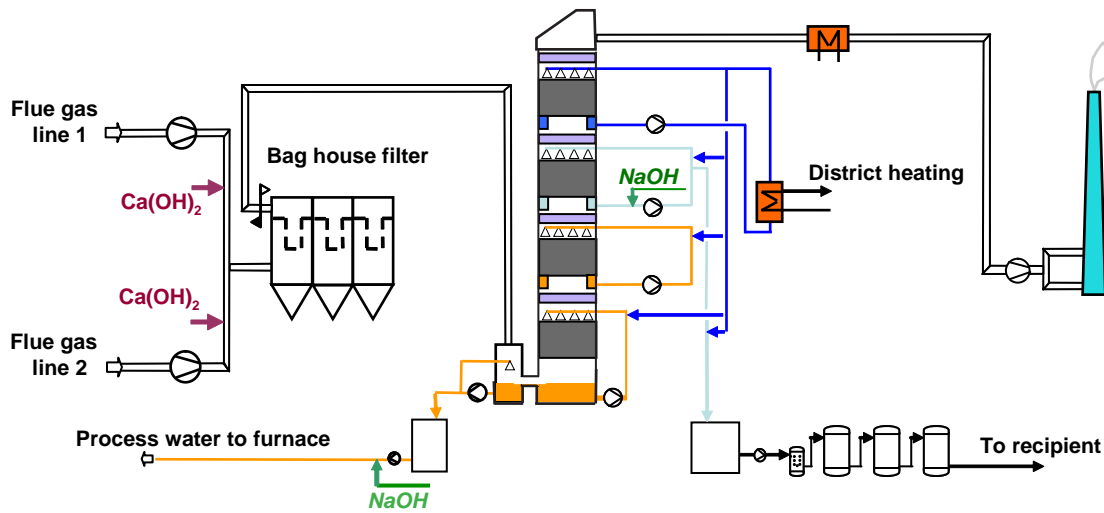
Flue gas treatment with integrated dioxin removal by ADIOX[®]



SYSAV Waste-to-Energy plant in Malmö, Sweden

In 2005 Götaverken Miljö AB carried through the upgrading of SYSAV's flue gas treatment plant, incineration lines 1 and 2. The contract was signed on November 15, 2004, and handed over to the client in December 2005. The purpose of the upgrading was to meet the EC waste incineration directive in respect of emissions of acidic components, ammonia and dioxin. In addition flue gas condensation was integrated, providing for efficient energy recovery.





Data:

- Waste throughput 2 x 12 t/h
- Flue gas flow 51.000-183.000
- Energy recovery by condensation 6 MW
- Gas cleaning requirements:

	Inlet scrubber	Cleaned gas
NH ₃	200	< 10 mg/Nm ³ dg@11% O ₂
HCl	200	< 10 mg/Nm ³ dg@11% O ₂
SO ₂	600	< 50 mg/Nm ³ dg@11% O ₂
HF	5	< 1 mg/Nm ³ dg@11% O ₂
Dust	<10	< 10 mg/Nm ³ dg@11% O ₂
Dioxin	0,5	< 0,1 ng/Nm ³ dg@11% O ₂



Description

The incineration lines 1 and 2 at SYSAV were built in 1973. Before the conversion SYSAV operated these lines with a common bag house filter system. Lime was injected prior to the filters for removal of acidic components.

Included in the upgrading contract was design and installation of one common scrubber of the 'tower packing type'. Exhaust fan systems, flue gas reheating and an effluent water treatment system were also provided.

The various scrubber stages are all equipped with ADIOX® tower packing material for dioxin removal.

In the first stages of the scrubber, NH₃ together with HCl are separated. NaOH injected into the third stage will facilitate efficient SO₂-removal. Most of the HF is also separated from the gas.

Finally the flue gases are cooled by a circulating cooling water system (indirect district heating water) enabling a substantial amount of energy to be recovered.