

**Case Study No 8**

# DOSING AND MIXING OF POWDERED ACTIVATED CARBON FOR FLUE GAS APPLICATIONS

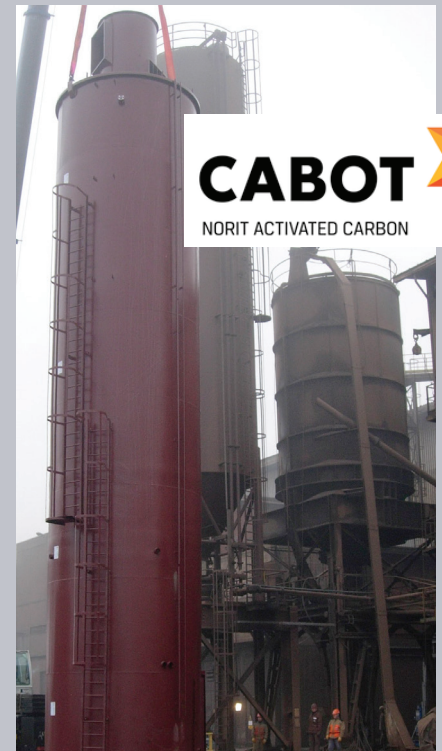
**Subject** Powdered activated carbon (PAC) is dosed in dry powder form into flue gas for the removal of dioxins, furanes, mercury and other heavy metals from flue gases. Gericke supplies complete solutions for the handling of bulk solids. These complete installations are characterized by their clean, accurate, trouble- and dustfree operation.

**Application** Furnaces, incinerators, sinter installations.

**Gericke Technology** PAC is stored in a carbon steel or GRP silo equipped with a dust filter, fluidisation and discharge equipment. Transportation to the dosing point takes place by means of a pneumatic conveying system. Distances of more than a hundred meters between silo and dosing point are possible. The PAC is either dosed by a high precision volumetric or a loss-in weight feeder, if required proportional to the flue gas flow.

Gericke also takes care for the homogenous distribution of a few gramms of PAC with > 100.000 of m<sup>3</sup>/h flue gas by installing special static mixing equipment.

The dosing plant operate fully automatic by means of a local feeder controller with connection to PLC control.



**Gericke has supplied these installations as a turn key project which includes controls, silos, pneumatic conveying to final dosing point, static mixer and site assembly. For smaller capacities big bag dosing installations are also available. For powdered activated carbon installations Gericke cooperates with Norit, the world wide specialist for activated carbon. The combined technology of Gericke and Norit allows our clients to make use of the most modern solutions for environment protection specially in the field of the removal of harmful substances from flue gases of municipal waste incinerators, sinter plants and other incineration processes.**

<b>Material conveyed</b>	Powdered activated carbon.
<b>Bulk density</b>	160 – 600 kg/m <sup>3</sup> .
<b>Silo volumes</b>	As per client's requirements.
<b>Dosing capacities</b>	Relative to the flue gas volume 2 – 120 kg/h.
<b>Specialty</b>	100% dustfree operation with high accuracy. High efficiency of static mixer in the funnel.
<b>ATEX</b>	Gericke dosing installations for PAC comply with ruling ATEX requirements and regulations.



Loss-in-weight feeder

### Legend

- 1 Incenerator/Furnace
- 2 Silo for activated carbon
- 3 Loss-in-weight feeder with injector
- 4 Static mixer
- 5 Filter
- 6 Chimney

