



## WATER SLUDGE INCINERATOR

CASE STUDY NR 23 • EUROPE

# SORBACAL® CDS : ADDED VALUES AT SLUDGE INCINERATOR OF WATER TREATMENT PLANT

## THE CHALLENGE

BIOFOS Lynetten is a Danish water treatment plant which incinerates its residual sludge. The pollutants to capture are mainly SO<sub>2</sub> and some HCl in the presence of high moisture content in the gas.

BIOFOS had some difficulties with their FGT process. Their set-up consists of a spray cooler, a Circulating Dry Scrubber (CDS) with conditioning drum including water injection and a wet scrubber at the end (caustic soda). The wet scrubber is directly linked to the spray cooler. The reacted salt solution used in the dry process ending on the bag filters. Their CDS recirculation was not running and consequently most of the pollutants abatement happened in the wet scrubber.

The consequences on overall FGT system were:

- > Corrosion inside the filters, spray nozzles,... due to the presence of high concentration of caustic solution
- > Reduction of filter bags lifetime
- > High maintenance costs
- > Overconsumption of caustic soda
- > Emissions peaks due to the imbalance of the FGT process between dry and wet parts

## THE LHOIST SOLUTION

Sorbacal® CDS is an innovative Lhoist Ca-based product specific to Circulating Dry Scrubber technology to improve process efficiency and reduce operating costs as well as maintenance costs for the customers.

Sorbacal® CDS demonstrates superior performance to standard hydrate products with improved flowability and double moisture handling capacity. The higher residue moisture content will boost the efficacy of acids gas removal and increase process reliability & flexibility.

With the introduction of Sorbacal® CDS, BIOFOS could restart the recirculation and operate at high moisture content which allowed capture of pollutants mainly in the dry part of the process. Mixer clogging issues experienced by BIOFOS before, already at lower water injection rates did not reoccur.

## THE BENEFITS

The efficiency of Sorbacal® CDS allowed to reduce the injection of caustic soda in the wet scrubber. The main advantage of Sorbacal® CDS on BIOFOS was the re-balance of the overall FGT system for reliable operation.

The benefits brought by Sorbacal® CDS are:

- > Lower maintenance costs with no clogging issues and lower corrosion
- > Extension of filter bags operation time
- > 50% reduction in caustic soda consumption
- > Reduction of sorbent consumption and residue generation
- > More stable FGT system (less emission peaks from acids gas)

### OUR EXPERTS CLOSE TO YOU

Find the best solution for your business by contacting one of our experts in your country or region via the contact page on [www.sorbacal.com](http://www.sorbacal.com).