Sorbacal®

CASE STUDY NR 12 • FRANCE

LOWER ACID GAS CONCENTRATIONS WITH SIMPLIFIED AND MORE COST EFFECTIVE UTILITIES MANAGEMENT

THE CHALLENGE

A liquid waste incinerator produces hydrazine, hydrate and their derivatives. This generates liquid effluents that are directly treated on site by incineration, generating steam.

Developments in the plant's operating permit, as well as new emissions regulations, required the implementation of a flue gas treatment (FGT) process for dust recovery and acid gas neutralization. The new standards specified the following daily averages:

- 10 mg HCl/Nm^3
- 50 mg SO_2/Nm^3
- 10 mg dust/Nm^3

THE LHOIST SOLUTION

In collaboration with an equipment supplier partner, Lhoist identified the most suitable sorbent for a dry processing system: Sorbacal® SP, a high porosity hydroxide. This would be injected upstream of a baghouse running at 240°C.

The supplier provided the entire FGT system, including the baghouse and the Sorbacal® SP storage, feed quantity and injection systems. The installation was designed to reduce HCl emissions while treating a low flue gas flow.

THE BENEFITS

Acid concentrations measured downstream of the FGT unit showed that the desulfurization and dechlorination performance of Sorbacal® SP was very satisfactory, even in the most demanding operating conditions. The same was true for dust emissions.

The dry process simplified the management of utilities, thanks to a single sorbent, low compressed air consumption and reduced electricity use. It also resulted in dry residues that were easy to handle and recycle.

Implementing a dry processing system perfectly met the client's needs. The plant easily achieved lower concentrations of acid pollutants and dust emissions than the limits imposed by the new regulations.

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