



MUNICIPAL SOLID WASTE INCINERATOR

CASE STUDY NR 10 • EUROPE

REDUCING SO₂ EMISSIONS BY OVER 80% USING A COMBINED PROCESS WITH SORBACAL® SP INJECTION

THE CHALLENGE

Located in Europe, this municipal solid waste incinerator (MSWI) consists of four lines each burning 15 metric tons of waste per hour. Following the enactment of stricter emissions regulations, the site faced the challenge of reducing SO₂ concentrations to below the emission limit values (ELVs).



THE LHOIST SOLUTION

An existing semi-wet/spray dry absorber (SDA) process already used Sorbacal® Q. Together with the plant staff, Lhoist proposed boosting this process with a dry injection of Sorbacal® SP (3/4 dry process). A trial was conducted to determine the proposal's potential benefits. We supplied the following technical assistance and expertise:

Technical assistance

- › Delivery and installation of mobile injection units
- › Setting up a mobile laboratory to measure the concentrations of inlet and outlet acid gases

Expertise

- › Identifying the optimum Sorbacal® SP injection point with respect to the semi-wet process builder
- › Performing the trial and follow-up in cooperation with the plant's technical team

The plant opted for a 3/4 dry process. Four 50m³ Sorbacal® SP storage silos and dosing units were installed. The sorbent injection regulation scheme was adapted to take advantage of both semi-wet and dry processes.

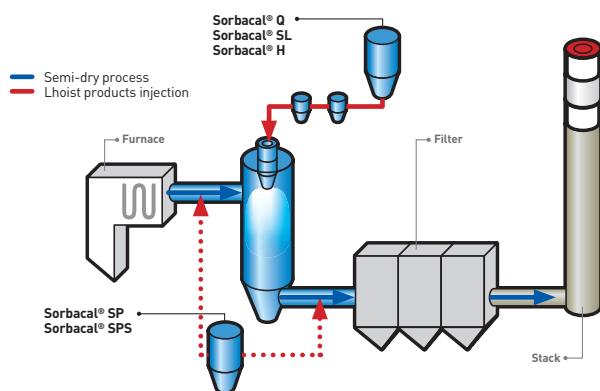


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THE BENEFITS

The trial demonstrated that injecting Sorbacal® SP before the existing process would allow the site to meet applicable ELV standards with less overall sorbent consumption. Moreover, there would be no increase in total sorbent costs, including reagent procurement costs and residue stabilization costs.

The MSWI succeeded in cutting its previous SO₂ emissions above the ELVs by a factor of more than five, by adding only 20-25% of Sorbacal® SP to the total hydrated lime dosed during the process. The plant is now fully compliant with regulations and has optimized its sorbent consumption.



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www.lhoist.com