FLUE GAS CLEANING
Operated with the Lhoist best-in-class reagents, these different dry processes achieve a very high removal rate (up to 99%) for a large variety of pollutants.
For new plants or to upgrade an existing process, Lhoist has developed dedicated highly reactive products suitable for all injection locations for DSI. We can even blend our reagents with carbon adsorbents or mineral materials to combine acid gas removal with the capture of micropollutants.
Widely applied technologies for larger units where constant quality and security of supply are critical. With its wide network of plants located on high-purity limestone deposits and its expertise in supply chain management, Lhoist is the ideal partner.
THE LHOIST OFFER

Expertise
to provide reliable and effective solutions

Reagents
selected from the Sorbacal® & Sorbacal® Micro product ranges to meet your specific needs

Services
offering appropriate and effective logistics, equipment and technical assistance

SOME REFERENCES

Europe

WASTE TO ENERGY

Municipal Solid Waste to Energy Plant
Issue: better control of pollutant peak management and improved equipment efficiency
Solution: upgrade existing semi-wet system with a complementary injection of Sorbacal® SP – dry process

Municipal Solid Waste to Energy Plant
Issue: removal of HF and excess usage of sodium bicarbonate
Solution: post-injection of Sorbacal® SP with Lhoist injection solution

Municipal Solid Waste to Energy Plant
Issue: SO² peak management related to increasing industrial waste input
Solution: upgrade existing treatment with a complementary injection of Sorbacal® SPS at Ultra High Temperature (>850°C) enabling the plant to use up to 35% of industrial waste

Biomass Waste to Energy Plant
Issue: find the appropriate reagent for a new CDS unit
Solution: Sorbacal® H supply scheme

Sludge Incineration Plant
Issue: achieve high removal rate (>99%) of SO² with DSI
Solution: Sorbacal® SPS supply scheme and technical assistance with commissioning

INDUSTRIAL

Aluminum Smelter
Issue: combined abatement of acid gas and micropollutants without fire hazards
Solution: custom-made Sorbacal® Micro blend

Cement Plant, Glassworks
Issue: regulation compliance for HCl & SO²
Solution: DSI with Sorbacal® SP and Lhoist injection solution

POWER GENERATION

Heating Plant
Issue: requirement of better SO² control
Solution: DSI with Sorbacal® SP and Lhoist injection solution

Power Plant
Issue: removal of HF & SO²
Solution: DSI with Sorbacal® SP upstream the air preheater

Biomass fueled Power Plant
Issue: regulation compliance for HCl & SO²
Solution: DSI with Sorbacal® SP regulated with online emissions measurement

North America

Coal Fired Electric Generating
Issue: Consent decree requiring SO₂ control for a large peaking plant
Solution: DSI with Sorbacal® SP injected at the air heater inlet

Industrial Boilers
Issue: National Ambient Air Quality Standards (NAAQS) requiring SO₂ control
Solution: DSI with Sorbacal® SP injected prior to the particulate control device

Coal Fired Electric Generating
Issue: SO₂ control (blue plume) for utility with a selective catalytic reduction (SCR) and a wet scrubber
Solution: DSI with Sorbacal® SP injected in two locations: upstream the air preheater and post electrostatic precipitator (ESP)

Industrial
Issue: ceramic tile manufacturer using sodium bicarbonate cannot meet HF removal requirements and residue is considered hazardous waste
Solution: DSI with Sorbacal® SPS injected into the duct prior to the baghouse replaced sodium bicarbonate to meet all HF, SO², and HCl requirements and converted residue to non-hazardous

South America

Float glass kiln
Issue: conversion of a wet scrubber into a dry system to simplify handling
Solution: DSI with Sorbacal® HSH and technical assistance

Sinter Belt
Issue: commissioning of a CDS in a new steel mill with 6 Mt capacity
Solution: Sorbacal® HSH supply scheme

Coal Power Plant
Issue: regulation compliance for SOx while improving reagent handling
Solution: supply scheme of premium grade Sorbacal® Q to enhance milk of lime preparation for the semi-wet system and technical assistance

Asia

Municipal Solid Waste to Energy Plant
Issue: evolution of garbage pollutant input
Solution: upgrade existing DSI using standard hydrates with Sorbacal® SP
# PRODUCT RANGE

<table>
<thead>
<tr>
<th>Category</th>
<th>Product</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry hydrates</td>
<td>Sorbacal® SPS*</td>
<td>Activated, highly porous hydrated lime with best-in-class removal performances</td>
</tr>
<tr>
<td></td>
<td>Sorbacal® SP*</td>
<td>High porous hydrated lime with high removal performances</td>
</tr>
<tr>
<td></td>
<td>Sorbacal® A</td>
<td>High surface and extra fine hydrated lime</td>
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<tr>
<td></td>
<td>Sorbacal® HSH</td>
<td>Premium grade hydrated lime with surface area between 22 and 28 m²/g</td>
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<tr>
<td></td>
<td>Sorbacal® H</td>
<td>Premium grade hydrated lime</td>
</tr>
<tr>
<td>Quick lime</td>
<td>Sorbacal® Q</td>
<td>High quality quicklime of different particle size distribution</td>
</tr>
<tr>
<td>Milk of lime/Lime slurry</td>
<td>Sorbacal® SL</td>
<td>Ready to use milk of lime with hydrate content from 5 to 45%</td>
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<tr>
<td>Carbonate</td>
<td>Sorbacal® C</td>
<td>Crushed and milled high purity calcium carbonate</td>
</tr>
<tr>
<td>Granulate</td>
<td>Sorbacal® G</td>
<td>Granular calcic reagent for packed bed reactors</td>
</tr>
<tr>
<td>Blended products</td>
<td>Sorbacal® Micro</td>
<td>Tailor-made non-ATEX solution to remove micropollutants such as dioxins and furans, PAH, PCB, odours or heavy metals and potentially acid gases.</td>
</tr>
</tbody>
</table>

* Patented

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Lhoist, the partner for flue gas cleaning to serve the environment.

Lhoist is a multi-national company, an expert in lime, dolime and mineral products. The diversity of our product range and our industrial facilities around the world, allow the Group to be a key partner in multiple industries and business sectors.