Waste-to-Energy

LAB is a subsidiary of www.lab.fr
Waste-to-Energy: more than 400 references in flue gas treatment

A large portfolio of processes

Dry/Semi-dry system: SecoLAB® – VapoLAB®

SCR DeNOx: CataLAB®

Wet system: GraniLAB®
VapoLAB®: an innovative high performance dry system developed and patented by LAB

VapoLAB® is a conditioned dry sorption process comprising 3 steps:

**Flue gas cooling**
A steam generator / water heater is located in the flue gas ducts upstream the LAB-loop reactor and bag house filter

**Residues reactivation**
The generated steam is put in contact with the recirculated unused reagent in the ActiLAB® reactor boosting the reagent activity

**Residues recycling**
Reactivated residues are reinjected in the LABLoop® reactor

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**Key benefits of VapoLAB®**
- Reduced operating cost (low stoichiometric ratio)
- Improved energy recovery
- Small footprint
- Safe respect of emission limits
- Operation with quick or hydrated lime

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25 LINES BUILT IN THE LAST 7 YEARS

<table>
<thead>
<tr>
<th>Project Location</th>
<th>Capacity (tph)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEDDINGTON / Viridor - UK</td>
<td>2 x 18 tph</td>
</tr>
<tr>
<td>LEUNA / MVV Umwelt - GE</td>
<td>2 x 25 tph</td>
</tr>
<tr>
<td>WILTON / Suez – UK</td>
<td>2 x 31 tph</td>
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<tr>
<td>SHROPSHIRE / Veolia - UK</td>
<td>1 x 12 tph</td>
</tr>
<tr>
<td>HELSINKI / Vantaan Energia Oy – FI</td>
<td>2 x 20 tph</td>
</tr>
<tr>
<td>BRIVE / Syctom 19 - FR</td>
<td>3 x 3 tph</td>
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<tr>
<td>TEESSIDE / Sita - UK</td>
<td>2 x 10 tph</td>
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</table>
For over sixty years LAB has been designing and building turnkey Flue Gas Cleaning (FGC) covering three main activities: Waste, Power / Biomass and Marine Industry.

Offering state-of-the-art turnkey solutions, LAB has joined the Environment Division of CNIM in 2001. 200 highly skilled specialists & engineers work all over the world, and LAB is ISO and OHSAS quality certified.

LAB devotes considerable efforts in R&D offering the complete portfolio of advanced Flue Gas Cleaning (FGC) systems from dry to semi-dry and wet technologies including catalytic systems and condensation units, thanks to numerous patents.

LAB Air Pollution Control (APC) expertise is backed up by more than 400 lines in Waste to Energy application being number 1 in Europe for the Flue Gas Treatment with more than 20 % of the market share.

LAB is very active in the most stringent countries like Scandinavia, Switzerland, the Netherlands and well implemented in large countries like Germany, France, and UK.

Waste-to-Energy lines fitted with LAB FGC represent an equivalent of waste coming from more than 150 Million inhabitants.