

CNIM MARTIN

CNIM MARTIN Private Limited is established in India since 2017 and it is jointly owned by the two **European Waste-to-Energy leaders CNIM & MARTIN**, with the vision to bring down the emission and pollutants levels of Waste-to-Energy plants in India as well as in Asian market.

For over sixty years, **LAB** has been designing and building turnkey **Flue Gas Cleaning (FGC)** for Waste-to-Energy, Biomass and Power Plants applications. The solutions provided by **LAB** are backed up by more than 400 Lines installed in the most stringent countries.

LAB counts about 200 highly skilled specialists and devotes considerable efforts in R&D enabling to propose a large portfolio of advanced **Flue Gas Cleaning (FGC)** systems from dry to semi-dry and wet technologies including catalytic systems and condensation units, protected by numerous patents. Waste-to-Energy lines fitted with **LAB** Flue Gas Treatment represent an equivalent of waste coming from more than 150 million habitants.

In the recent years, **LAB** has been developing and delivering its patented process **SecoLAB™** turnkey **dry** and **semi-dry solution** based on lime or sodium bicarbonate reagent; now brought into the India and Asian market by **CNIM MARTIN**.

Some Key References of SecoLAB™ System:

CUSTOMER / Plant Location	Country	Fuel Application
I/S NORDFORBRÆNDING / Hørsholm	Denmark	Waste
VEOLIA UK / Leeds	UK	Waste
VIRIDOR / Oxford	UK	Waste
SITA UK / Suffolk	UK	Waste
WESTENERGY OY / Vaasa	Finland	Waste

Address:

CNIM MARTIN Private Limited,

SKCL Central Square-1, Ground Floor, North Wing,
Thiru-Vi-Ka Industrial Estate, Guindy, Chennai – 600032. Tamil Nadu, India.
Phone : +91(44) 66170 800, Contact: info@cnimmartin.in
Visit our website: www.cnimmartin.in

YOUR PARTNER FOR FLUE GAS CLEANING

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SecoLAB™



INNOVATIVE SOLUTION FOR EMISSION CONTROL IN ASIA

Lab

An Exclusive License From

CNIM MARTIN is the exclusive representative of the **LAB** (CNIM Subsidiary) state of the art **Flue Gas Treatment technology and solutions** for Waste-to-Energy applications.

YOUR PARTNER FOR FLUE GAS CLEANING

MARTIN

SecoLAB™ - Lime based Dry system with Maturation Silo: an innovative high performance dry system developed and patented by LAB.

SecoLAB™ is a conditioned dry sorption process comprising 3 steps:

1. Gas Cooling:

A conditioning tower is located in the flue gas duct upstream of the LABLoop™ reactor and Bag House Filter. **This is an optional equipment**, for flue gas cooling by water injection for boiler outlet flue gas temperature higher than 150°C.

2. Residues Reactivation:

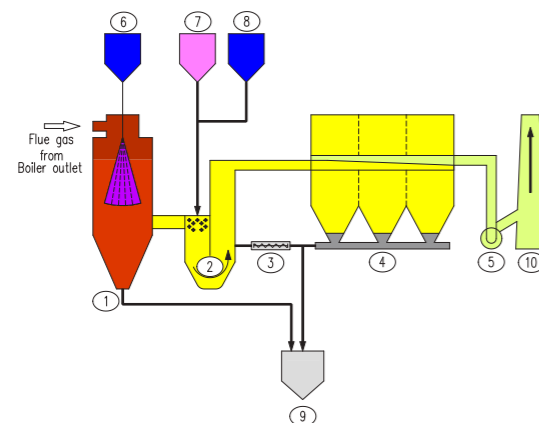
The reactivation takes place through the diffusion process by increasing the part of the reagent that is available for reaction. Efficiency mainly depends on appropriate contact and residence time into the maturation silo.

3. Residues Recycling:

Reactivated residues are reinjected in the LABLoop™ reactor to improve stoichiometric ratio and reduce reagent consumption and residues production.

Basic Solution:

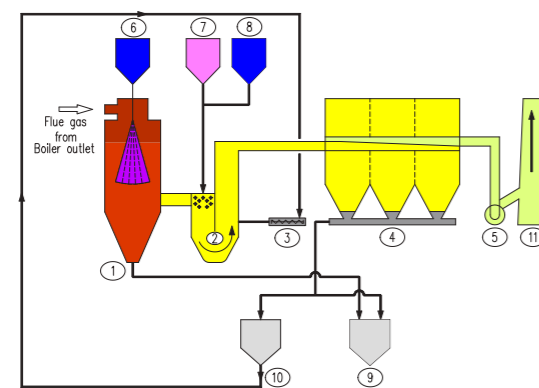
No Maturation Silo. Reagents consumption will increase moderately. Solution applicable for lower inlet SO₂ loadings.



- 1. Conditioning Tower
- 2. LABLoop™
- 3. Recycling Screw
- 4. Bag Filter
- 5. ID Fan
- 6. Water
- 7. Lime
- 8. Activated Carbon
- 9. Residues
- 10. Stack

Optimum Solution (High Efficiency):

Maturation Silo helps to reduce reagent consumption by reactivating process.



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CONDITIONING TOWER



RESIDUE SILO



LABLoop™



Key Benefits of SecoLAB™:

- Modular in construction.
- Efficient performance & Low maintenance.
- Uniform reagent & gas distribution.
- High Efficiency for pollutants peaks.
- Safe emission limits.
- Low operating costs with hydrated lime.
- High reliability and availability.
- Small footprint.



EXTRACTION SYSTEM



MATURATION SILO



BAG HOUSE FILTER