

SEBIMILL

BIOGAS FROM LIQUID EFFLUENTS IN ANAEROBIC LAGOONS

SEBIGAS developed **SEBI MILL**, a tailor made technology for the anaerobic digestion of by-products from:

- Sugar production (vinasse and filter cake)
- Bioethanol production (vinasse and filter cake)
- Palm oil production (POME)
- Manioca/Cassava/Tapioca/Sago palm processing
- Distilleries
- Pig farms

The process has been studied and optimised to ensure the highest transformation of the organic content of the liquid effluent into biogas, achieving a remarkable reliability rate, if compared with similar solutions.

Thanks to the cooperation with MACCAFERRI, leader in environmental engineering solutions, SEBIGAS provides the design and construction of anaerobic lagoons with the best drainage, waterproofing and gas-tight solutions.

Anaerobic lagoons

- ⚙️ TECHNOLOGY**
- The anaerobic digestion of the organic content of the liquid effluents occurs through the biomass recirculation in an active sludge layer with controlled flow rates.
 - Digestion volumes are adequate to the typical high effluent flow rate of industrial processes in order to ensure the biological stability of the anaerobic digestion.
 - Effluent distribution system is fitted to perform the best contact between the active sludge and the fresh biomass in order to enhance the biogas production.

- ⬆️ ADVANTAGES**
- Simple technology with several references in operation.
 - Low installation investments and reduced operation costs.
 - Tailor-made solutions, based on the customer biomass availability.
 - Safe operation of the plant, thanks to a specific design, developed to reduce risk in event of seasonal storms, typical of tropical areas.

SEBIGAS technology enables the effluents of the sugar and bioethanol industries (vinasse and filter cake from sugarcane processing) to be exploited by converting the organic matter into biogas and reducing their environmental impact.

The digestate output from the process has a pH suitable to its usage as fertiliser.

MILL CAPACITY

4,000,000 t/y OF CRUSHED SUGARCANE

DAILY FLOW RATE

10,000 m³/d OF VINASSE

EFFLUENT COD

25,000 mg/l

BIOMETHANE PRODUCTION

59,000 m³/d

INSTALLED POWER

10 MW



MILL CAPACITY

60 t/h OF FFB - FRESH FRUIT BUNCH

DAILY FLOW RATE

700 m³/d OF POME

EFFLUENT COD

60,000 mg/l

BIOMETHANE PRODUCTION

12,500 m³/d

INSTALLED POWER

2 MW

The palm oil industry can doubly benefit from the installation of SEBIGAS technology with a reduced pollution load of POME (Palm Oil Mill Effluent) and the production of renewable energy (electricity or biomethane).

The wastewater derived from cassava mills can be treated in the SEBIGAS anaerobic lagoons with biogas production. Besides being an energy source, the plant allows a reduction of the greenhouse gas emissions.

MILL CAPACITY

100 t/d OF CASSAVA STARCH

DAILY FLOW RATE

1,500 m³/d OF CASSAVA WW

EFFLUENT COD

15,000 mg/l

BIOMETHANE PRODUCTION

6,000 m³/d

INSTALLED POWER

1 MW

