57 SOGLIANO AL RUBICONE (FC) ITALY

Year	2010
Client	SOGLIANO AMBIENTE SpA
Operator	SOGLIANO AMBIENTE SpA
System description	Dry anaerobic digestion, tunnel composting and odour control
Waste processed	Organic from mixed municipal solid waste and recyclables
Plant capacity	50,000 t/year. Installed electrical capacity 998 kW

Sogliano Ambiente has awarded ATZWANGER with the design and construction of the equipment of an integrated waste treatment system.

The plant uses a combination of anaerobic (digestion) and aerobic (composting) processes for the treatment of organic waste with recovery of electric energy and compost.

The process includes two successive phases:

- Fermentation phase in an anaerobic environment, with degradation of the organic matter and formation of biogas (methane gas and carbon dioxide): the biogas recovered in this phase is used to fuel two engines which produce electric energy and heat;

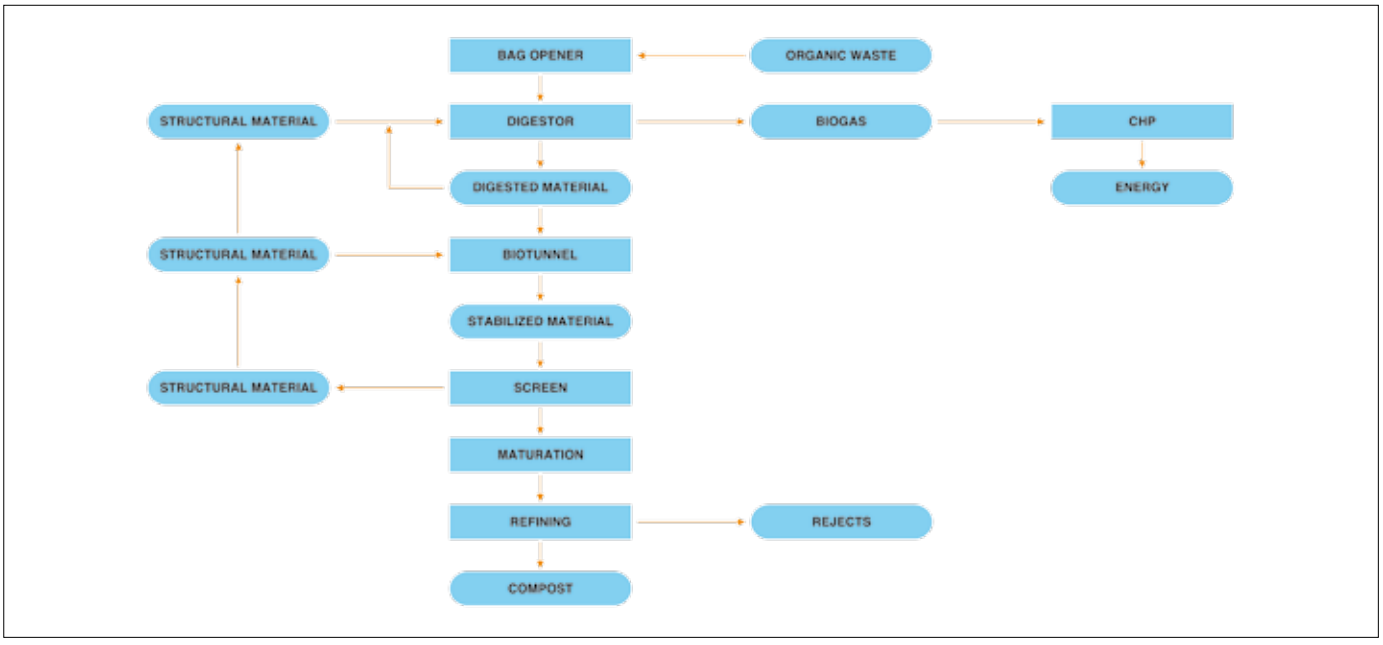
- Composting phase, organized in two successive phases, intensive bio-oxidisation and maturation (curing). The first phase, that takes place in bio-tunnels, is marked by a rapid decomposition of the organic matter, with an intense metabolic activity and rise in temperature; the resulting product is fresh compost. The second phase, called "curing", takes place on the maturation floor and the final product is mature compost with a higher content of humic substances.

The final products of the recovery process are:

- Biogas used in gas engines for the production of electrical energy and heat;
- Quality compost to be used in agriculture;
- Bio-stabilised material.

The plant is equipped with an air extraction system and a bio-filter for the control of the odours generated by the process.

The project is completed by Sogliano Ambiente with the installation of a photovoltaic plant on the roof of the building that contains the stabilisation process.



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