



WASTE AND BIOMASS VALORISATION

- Solid urban waste;
- Hospital waste;
- Medicines;
- Automotive grinding residues;
- Industrial sludge;
- Wastewater;
- Wood;
- Green waste;
- Papers;
- Cartons;
- Plastics;
- Tires;
- Agro-food waste;
- Industrial waste;
- Animal droppings...





WASTE RECYCLING AND VALORISATION BY PYROLYSIS

Finding appropriate treatment technologies for cleaning contaminated soils or landfill sites isn't easy.

The available technologies are usually very expensive. As the needs and costs of effective procedures for cleaning up contaminated areas are high, researchers investigated soil cleaning processes and analyzed the best solutions to be applied.

Recovery techniques are distinguished in the fields of biological, chemistry, physics and thermal according to the methodologies used.

Among many technologies studied, pyrolysis (a process of thermal decomposition of organic elements by flash heating to nearly 1000C° without oxygen) appears as a cost-effective and respectful approach to waste treatment and recovery.

EFFICIENT AND ECOLOGICAL TECHNOLOGY

The GENIO project is based on the EPGS « Efficient Pyro-Gasification System », a unique technology developed and patented by SYNECOM, to transform waste into energy (heat and electricity) or other valuable products such as gas, liquid fuel, chemicals, fertilizer, etc.

The EPGS is designed to adapt easily to various different applications thanks to its compact size (200m²), transportable (the EPGS is also proposed in container thus avoiding civil works), modular (additional reactors and pre- and post-treatment stations can be added to the basic solution) and an evolutionary design that makes it extremely flexible: the perfect solution to meet the needs of customers depending on the nature and quantity of waste to be treated or the production requested, all with a minimal impact on the environment (tests revealed CO_2 emissions below 300 kg / T, 70% less than current techniques).

Pyrolysis is a process that consists in breaking down organic materials into simple molecules without any oxygen supply. This technique has the advantage of not forming harmful compounds. The polluting particles remain in the residues that form at the end of the process.

The system uses a process that transfers heat directly into the core of the raw material in an anaerobic environment, using steel balls with a temperature ranging from 450C° to 1050C°.

This makes it possible to transform up to 95% of the organic material into a production of synthesis gas. Energy consumption accounts for only 10% to 20% of the procedure.



EXAMPLE SPECS FOR 1T/H SYSTEM







50, rue Ettore Bugatti 76800 St-Étienne-du-Rouvray +33 2 35 65 78 65

www.genio.com