Solid Waste Management
Mechanical-Biological Treatment (MBT)

There exist several solid waste treatment methods for material and energy recovery. One of these treatments, which impacts effective solid waste management, is the Mechanical-Biological Treatment (MBT), also called "cold treatment".

MBT means the integration of several mechanical and biological processes, which are applied for domestic waste treatment. It aims at the recovery of materials for one or more purposes (solid waste fuels, recyclables) and the increase of the biological stability of the remaining organic fraction to be landfilled.

MBT plants are flexible units and can be built on a modular basis.

Applications

In many countries, MBT technology has helped in contributing to drastically reduce the amount of waste to be discharged. This versatile method of waste treatment can be adapted depending on the types and volumes of waste, the existing waste management system, the type of existing treatments and facilities and the set targets for specific waste streams.

NOS SERVICES

- Advisory for setting targets and objectives
- Concept development, design and cost estimation of a pilot plant
- Waste characterization study
- Provision, installation and commissioning of equipment
- Staff training for the use of equipment and monitoring of the process
- Structured collection of results
- Escalation of the process pilot-to-full scale
- Concept development at full-scale
- Detail design of the process at full-scale
- Elaboration of tender documents
- Client support for contract negotiations
- Works supervision
**BENEFITS**

- Reducing waste volume
- Extending life span of landfills
- Reducing the volume of leachate generated from direct landfilling
- Stabilization of waste going to landfill, landfills are easier to manage and less risky
- Separation of waste fraction: organic/commercial recyclables/RDF
- Potential production of compost or stabilized products and RDF
- Adaptable process, based on local meteorological parameters (temperature, humidity)
- Recuperation of recyclable waste streams
- Low operating and maintenance costs
- Adaptable system over time, depending on the amount and quality of waste generated/cолlected

**STUDY CASES**

**Tunisia**

Tractebel GKW has set up a pilot scale plant in Béja where tests were performed on samples of 100 tons of household waste during the summer and the winter season. The results showed a reduction of more than 40% of the volume of waste to be landfilled. The system enabled a separation of the organic, recyclable and RDF fractions. Tunisian authorities are now in the process to identify landfills all around the country where MBT system will be implemented on a large scale.

**Germany**

Tractebel GKW has prepared several studies on inventory on different types of residual wastes as well as biomass inventory and on energy recovery from biomass for numerous municipalities districts.

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