

36 S. AGATA BOLOGNESE (BO) ITALY

Year	2003
Client	UNIECO Scrl
Operator	NUOVA GEOVIS SpA
System description	Tunnel composting
Waste processed	Organic from mixed municipal solid waste
Plant capacity	70,000 t/year



NUOVA GEOVIS will use this state-of-the-art composting plant, consisting of twelve biotunnels, for the stabilization of organic waste.



The composting plant is meant for the stabilization of organic material coming from the mechanical sorting of mixed municipal solid waste.

A wheel loader fills the bio-tunnels consisting of reinforced concrete cells. Each cell has the shape of a blind tunnel and is equipped with a ventilation system built into the floor.

Once the tunnel has been filled, its sliding door closes tightly in order to ensure odour control.

Process air is blown in through the floor and partly re-circulated in the tunnel. Exhaust air is sent, together with air coming from other areas, to the biological filter, which keeps odours under control.

The composting process is computer-controlled and based on sensors that survey the various process parameters (compost temperature, air pressure, air temperature, oxygen rate, etc.). The surveyed data are processed by the computer to regulate the system according to the process evolution in each one of the twelve tunnels.

The data processing software developed by Ecomaster is tailor-made for this facility. It allows regulating the biological stabilization process according to the operation requirements. The software has the flexibility to compensate for the variations of treated waste and ambient conditions.

In order to ensure an optimal operation, the biofilter is equipped with an air scrubber on the inlet and a sprinkler system.

Once the computer-controlled process has been completed, the material is extracted from the tunnel by means of a wheel loader. The tunnel is thus available again for the treatment of a new batch of material.

