



Composting

Mannvit Engineering played a lead role in the design and construction of the new Molta's composting plant that opened in 2009. The station is the largest composting plant in Europe based on drum composting technology and designed to handle organic refuse from Northern Iceland. The station can handle 10-13 thousand tons of organic refuse per year and costs about 500 million ISK. The plant is designed in that way its capacity can be rather easily increased by adding necessary equipment, such as extra composting drums.

The station is located in Eyjafjörður and is primarily owned by municipalities in Eyjafjörður, food production companies and others. The construction of the station was an important step in finding a new disposal pathway for organic refuse and, in reaching environmental goals for the area.

Composting offers the benefits of resource efficiency and creating a useful product from organic waste that would otherwise have been landfilled and can offset the need for chemical fertilizer.

The composting plant is designed to utilize organic waste materials from slaughterhouses and meat and fish processing, but also food waste, paper, timber, green waste and animal manure.

Process:

The waste is grinded and shredded to a uniform size and then mixed in a controlled way to ensure desired properties of the composting mixture (C/N-ratio, moisture content, etc.)

The composting mixture heats in drums under controlled aeration. The temperature of the mixture is higher than 70°C for at least one hour, which fulfils EU's animal by-product regulation (EU ABPR). Digestion time in drums is 8-12 days followed by a maturing period outdoors, which is typically 3-6 months. The amount of the compost produced is generally a maximum of 50-60% of the amount of treated organic waste.





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ENGINEERING

Mannvit can support any and all aspects of the challenge of developing and operating an organics recycling facility. We provide support in all areas of facility planning, permitting, design, construction and operation. A full list of services includes:

Planning Studies

- Waste Stream Assessments
- Technology Assessments
- Process Evaluations
- Economic Studies
- Siting Analysis
- Environmental Impact Statements
- Environmental Permitting

Composting Design

- Pre-processing Considerations
- Process Design Modeling
- Materials Handling and Transport
- Size Reduction
- Mixing
- Aeration
- Digestion Systems
- Instrumentation/Controls
- Emission Odor Control
- Indoor Air Quality
- Facilities
- Facility Enclosure

- Baling Systems
- Civil/Site Work
- Use of Amendments
- Vendor Procurement
- Plans and Specifications
- Bid Documents

Construction Services

- Construction Inspection
- Construction Management
- Start-up Testing
- Performance Testing
- As-built drawings
- Claims Management

