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IPS Composting and Biodrying System

Water Technologies

SIEMENS



The IPS System Advantage

Turn to the Proven Composting and Biodrying System

The IPS Composting and Biodrying System (IPS) is an automated, aerated, agitated-bin technology that is installed in more than 25 facilities worldwide. With over 20 years in the industry, IPS uses precise process control to turn organic residuals into high-quality marketable products and to stabilize residual waste in Mechanical Biological Treatment (MBT).

Annually, IPS converts more than 500,000 tons (450,000 tonnes) of biosolids, source-separated organics (SSO), municipal solid waste (MSW) and other organic residues into high-quality compost. IPS composting facilities vary widely in plant size and in the materials they process. Each day, Rikers Island, New York processes 15 tons (14 tonnes) of kitchen waste while Burlington County, New Jersey composts 270 tons (240 tonnes) of biosolids and green waste.

Stabilized, nutrient-rich compost produced by IPS has been used around the world for landscaping in Washington, D.C., for potting soils in Western Australia, and for agriculture in the Aquitaine region of France.

Choose IPS for a Broad Range of Applications

Composting plants and MBT facilities throughout the world select the versatile IPS technology for a broad range of applications. Biosolids, SSO and green waste plants use IPS as the primary active composting stage. MSW plants choose IPS as the fermentation, or maturation, phase that follows the pre-processing system. MBT facilities rely on IPS as the primary technology to reduce volume and stabilize residual wastes before landfilling. IPS also is used for Mechanically Enhanced Biodrying (biodrying) of biosolids and other organics to significantly reduce the overall volume of waste treated for further use as fuel or fertilizer or to decrease disposal costs. Because a carbon source is not required, this process is useful when amendment is consistently in short supply.

To allow more room for non-recyclable materials, Rapid City, South Dakota and Delaware County, New York use integrated recycling systems and the IPS Composting System to extend the life of their landfills by at least 25 years. Halifax, Nova Scotia takes this concept one step farther with an MBT application prior to landfill disposal. In this plant, IPS stabilizes shredded materials by pathogen control, decreases volume, diminishes odors and reduces attraction of vectors such as rodents, birds and insects.

Control Quality and Performance

The special features of the IPS Composting System provide a high degree of operational flexibility and adaptability to varying conditions of feedstock quantities, consistencies and concentrations. System options include agitator machine size, horsepower and bay speed variations to meet the unique needs of recycling and composting facilities. A proprietary level-bed agitator attachment maximizes capacity of the bays.

The major advantages of IPS include routine agitation and controlled temperatures, aeration and moisture addition to produce a homogeneous compost material that assures product consistency. Automated controls achieve these results with the CompMaster® Computer System, which manages the entire composting process. The CompMaster system collects critical data to provide organic mix ratios, track composting materials, regulate temperatures, control moisture addition and generate regulatory reports. Facility personnel can easily monitor compost characteristics with the assurance of meeting customer expectations and regulatory requirements.

IPS facilities successfully manage composting odors by housing the process in an enclosed building and by maintaining aerobic conditions. A building exhaust system and biofilter or scrubber remove and treat the building air emissions.



Compost use includes green roofs, landscaping, potting soils, soil blending, agriculture, storm water control and slope protection.

Select a Cost Competitive Solution

IPS is cost competitive with other composting technologies due to its automation, special process control features and smaller land area requirements. Through innovative design and frequent agitation, the IPS system is not restricted by porosity and can use various sizes and types of bulking agents. This eliminates the need to purchase specialty amendment materials. For biodrying, IPS uses 1/4 to 1/3 the energy consumption of traditional drying systems that require fossil fuels and also significantly reduces or eliminates the need for amendment altogether.

The accelerated process reduces the detention time and, therefore, the land area required for active composting. The IPS computerized process control and agitation maximize ideal composting conditions that promote biodegradation of organics. This results in high-quality products that are ready to go to market ahead of other technologies. IPS produces green waste compost in one month, compared to at least four months in a typical open windrow system.

The revenue from the end product depends on meeting the consumer demand for quality and consistency. By controlling multiple process variables, IPS helps customers achieve this goal.

Apply IPS to Wastewater Solids and Biosolids

The flexibility of the IPS system allows it to compost the full range of wastewater solids and biosolids, including septage, raw and undigested solids, and aerobically and anaerobically digested biosolids. In fact, four regional IPS composting plants in the United States and France serve multiple wastewater treatment facilities that produce a wide variety of solids types.

For new plants and plant upgrades, eliminating digestion and going directly to composting will result in a beneficial product without the time, space and cost requirement for additional processing. For example, the University Area Joint Authority (UAJA) at State College, Pennsylvania dewateres and sends septage and undigested, primary and waste activated solids directly to IPS composting.

The finished compost quality and characteristics are virtually the same regardless of the solids pre-processing, and the end product is marketable.

Partner With the Leader in Systems and Services

Siemens provides more than IPS composting equipment. Experienced engineers and staff create turnkey recycling programs that include evaluation, cost estimates, facility design consultation, training and aftermarket services. Anticipating our customers' ever changing needs, we continue to make innovative improvements to make your life easier.

Siemens Water Technologies and its family of companies provide many other components for composting facilities, including electronics, odor control, security systems, power and financing. With our innovative technologies and services, you can easily and efficiently manage your programs and achieve your environmental objectives while staying within budget.

Innovative Compost Use

- Landscaping
- Vineyards
- Potting soils
- Soil blending
- Bagging for retail sale
- Green roofs
- Agriculture
- Storm water control
- Erosion and slope protection

IPS Advantages

- Automated agitator and process control
- Versatile industry applications
- Durable and highly efficient
- Ease of operation and maintenance
- Totally enclosed system
- Marketable end product
- Flexibility for different applications and organics (Composting/MBT/MEB)