



SOLID WASTE MANAGEMENT

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Municipal solid waste management (MSWM) refers to the collection, transfer, treatment, recycling, resources recovery and disposal of solid waste in urban areas

Solid waste management can be done in two beneficial ways

1. Generation of electricity
2. Recycling of solid waste

1. Generation of electricity:-

In cites the waste is dumped in dump yard. The dumped waste is taken in a truck to weigh it. This waste is kept in the bunker which helps to the reduce pressure than atmospheric pressure to prevent the odour of waste from escaping .Then it is send to combustion rate to attain a total burn out of the refuse. The heat obtained from combustion is used to generate steam in boiler. The 80% of produced steam is sent to turbines coupled to generators to generate electricity. 20% of electricity is used to consume for plant and remaining is sent to the grid. In NIGERIA every day 2714 tons of waste is dumped from one city; about 30 – 52 MWH of electricity is generated .Solid waste management incorporation of waste incinerators with energy recovering at dump sites to effectively transform the inherent energy in solid waste management to electricity.

2. Recycling of solid waste:

The EU globally prohibits and restrictions to dispose hazards waste in landfills are progressive rather, the law requires to minimize pollutions in an environmentally friendly way or to remove them completely. Recycle are to be recovered in the sense of sustainable resource management and to be supplied back in to the recycling loop.

The treatment industrial and hazards waste or the rehabilitation of contaminated and abounded mini cities or other industry sites are increasing in the worldwide focus of industry. The thermal desorption gathers various methods for the treatment of hazards waste. The thermal desorption is a solid liquid separation in which volatile components are removed from a solid or sludge like matrix under the action of heat. Thermal desorption separates the waste into a solid residue and a liquid phase that consists of water and



pollutants. Thermal desorption is divided into various sub processes as follows:

- a) Material conveying,
- b) Evaporation process,
- c) Vapor and off gas treatment condensation,
- d) Condensation of the solid output.

There are few more methods which is available at environment technologies. They are:

3. Vacuum thermal desorption treatment at 400⁰c temperature

4. Thermal treatment in the rotary kiln up to 800⁰c temperature,

5. Thermal treatment in the tube bundle drier up to 300⁰c temperature.

The range of industrial and hazardous wastes enviro Min technologies is offering solutions for large and includes:

- a) By and waste products from chemical processes,
- b) Residues from the chlorine- alkali electrolysis,
- c) Drilling mud from the production of natural gas,
- d) NORM-Sledges,
- e) Amalgam sludge,
- f) Other mercury- containing waste,
- g) Residues from crude oil tanks,
- h) Refinery waste,
- i) Waste from brown coal- cooking,
- j) Remediation from mining activities,
- k) Mixed hazardous wastes,
- l) Paint and varnish sludge,
- m) Grinding sludge from the automotive industry,
- n) Drilling mud from the crude exploration and production,
- o) Filter cakes from the industrial waste water treatment,



- p) Loaded activated carbons and catalyst materials,
- q) Waste with VOC, Pa H_s, PCB_s, pesticides and other hydrocarbons.

Conclusion:

Hence we can generate electricity from solid waste and we can recycle waste by eco friendly methods as mentioned above and minimize global warming and pollutions in an environmentally friendly way.