

BIOGAS FROM MUNICIPAL SOLID WASTE

INTRODUCTION

The use of waste biomass to generate energy has a huge potential. This approach can decrease waste management problems, pollution, greenhouse gaseous emissions, global warming and the use of fossil fuels. Waste materials, particularly municipal solid waste, can be a resource if we can safely and efficiently convert it into energy. Municipal Solid Waste (MSW) in general contains a significant fraction of paper, food waste, wood and yard trimmings, cotton, leather etc and can be considered as a source of biomass. Materials derived from fossil fuels, such as plastics, rubber, and fabrics, are also found in MSW. The declining level of fossil fuel in its underground reserve triggers the production of biogas from municipal waste at different countries. Biogas production from organic waste is a well developed technology. In this process the laboratory has incorporated different technological interventions to make the process more mechanized and efficient. Biomass Grinder cum Stirrer in a single unit where grinding and String is being done simultaneously. Automatic gas evacuation system sensing the position of the floating dome mitigating the manual intervention will be done. Recycling of the slurry water improves the gas production yield and fresh water consumption.

APPLICATION

- Renewable, as well as a clean source of
- Energy from bio-degradable waste. By-product of the biogas generation process
- It is enriched organic (digestate), which is a supplement to chemical fertilizers.
A simple and low-cost technology that
- Encourages a circular economy through minimal or manual intervention.

SALIENT FEATURES

- Gas generated through bio-digestion is non-polluting, it actually reduces greenhouse emissions (i.e. reduces the greenhouse effect).
- Digestate is enriched organic fertilizer
- Supplement to chemical fertilizers. Reduced Soil and Water Pollution by recycling and not allowing toxic liquids to drain or underground water sources.

