B.S. Abdur Rahman Crescent Institute of Science & Technology
Deemed to be University u/s 3 of the UGC Act, 1956

17.2.5 a – University as a body collaborate with NGOs to tackle the SDGs – Project 1

B.S. Abdur Rahman Crescent Institute of Science & Technology
Deemed to be University u/s 3 of the UGC Act, 1956

Brief Report on Incinerator (Waste Treatment Technology) Commissioned @ BSARCIST, Vandalur

Product Description: Incinerator (Waste Treatment Technology)

Capacity: 30 Kgs./Hr

Objective: Is an agri- waste treatment process that involves the combustion of organic substances contained in waste materials.

Company Name: M/s. MKR Enterprises, Chennai

Brief Report

The incinerator commissioned is designed for trouble free operation at the rate of 30 kgs./Hr. One can load every 10 – 15 mts, at the rate of 5 - 7 kgs, at a time. One should not dump the wastes for faster burning. Thick black smoke in the chimney means there is overcharging. Pick out any plastics out of the wastes before to be burnt.

The Incinerator comprises of the following

- **Insulation and refractory lined furnace**
- **Stainless Steel water wash System**
- **Stainless Steel Induced Draft Fan with a 5 Hp fan**
- **M.S Chimney**
- **An LP Gas firing burner.**

Working process of incinerator

Material to be burnt is charged in a batch process, in the first chamber through the charging door. When the material is not easily combustible – canteen wastes, slightly wet papers etc, the burner is used, manually. Switch on the ID Fan and the water pump, (and the valves in the water pipeline system). Load 15 mts. waste and light up a sheet of paper / rags and put it in front of the burner and start the gas flow by opening the gas regulator and gas valve. The fire will catch up and the material will start burning quickly. Load the next charge when the material inside is almost fully burnt out. Continue the intermittent loading till the waste is exhausted.

The gases go through the water wash system and through the I D Fan into the chimney. The ash particles which get carried through the furnace are washed down by the water particles and clean flue gases exit through the chimney.

The water wash system showers water while gases go upwards in the same chamber. Here ash particles are washed out, through the drain into the first and then into the second blue barrels outside the shed buried underground The first barrel has an overflow through which clear water will flow into the second chamber and the recirculation has a suction point on top of the second blue barrel where water will be as clear as the original water. This saves water.

Photo of the incinerator commission @BSARCIST, Near Boys Hostel

(Left to right: Dr. T. Harinarayana, Director (ESPAC), Mr. G E Muralidharan, M/s. MKR ENTERPRISES and I/c VC Prof. A. Peer Mohamed)