

## what they are doing

introduced with a view to lessen the cost of spreading the material over the grate, a ram being placed in such a position that the refuse can be pushed from the hopper on to the grate. The action of the ram has, however, to be supplemented by hand labour.

In the Meldrum system the whole volume of hot gases, after leaving the boiler, is carried through a system of pipes somewhat similar to an ordinary economizer. In the Heenan destructor a somewhat similar system of air heating has been adopted.

The introduction of the air blast is effective in reducing the quantity of moisture in the refuse, and has rendered practicable the omission of the drying hearth.

Again, in determining the type of destructor to be used, the question of what kind of a boiler to be adopted must be considered, and this in turn depends upon the use to which the steam is to be put.

Two types are in general use,—the Lancashire and water-tube boilers. The former provides large steam and water spaces, which are of the greatest utility when the steam is taken irregularly, as in electric lighting, while tubular boilers have the advantage in a greater amount of heating surface on a given space, and a greater absorption of radiant heat. The latter, perhaps, are more easily cleaned.

### Low Temperature Incinerators

Advantages:—Diminished wear and tear on the fire brick sides of the cells and the consequent saving in upkeep.

Disadvantages:—Both inlet for refuse and the outlet for gases are, as a rule, at the rear of the cell, and therefore the noxious vapours and fumes given off, both during the drying of the refuse and before it is in active combustion, escape before being burnt—and the cremator is necessary.

As the cells burn less refuse per cell per day (6-8 tons) more cells are required.

### High Temperature Incinerators

Disadvantages:—Chiefly in the cost of maintenance by wear and tear of fire bricks.

Advantages:—Wear and tear offset by the large quantity of refuse burnt per day (10-16 tons) requiring fewer cells.

The destruction of noxious fumes without the additional expense of the coke cremator. The outlet for the gases is at the front of the cell and the vapours pass over the hottest part of the fire to reach the exit. As the cell is raised to a very high temperature by forced draught (steam blast or fans) such gases are destroyed within the cell itself.

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