THE "BULK" FEEDING OF REFUSE DESTRUCTORS.

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ABSTRACT.

ALL destructor inventors have endeavoured to charge destructors direct from the cart so as to avoid shovel handling, but until recently with only small success.

The Fryer system of tipping behind the furnaces to a flow with moveable bars was tried over twenty-five years ago, but failed because the refuse was of such a character that it would not burn equally, and consequently the rate of combustion could not be regulated to the rate of travel of the refuse in its passage through the furnace.

Many other systems on the same lines have been tried, but not one survives to-day in practice.

The Boulnois and Brodie system of trucks with compartments into which the refuse can be shot from the carts, and which in operation enables each compartment to be discharged in turn into the furnaces, is still in operation, and in some cases is working successfully.

The tub feed system of the Horsfall Destructor Company is arranged so that the carts shall discharge into containers or tubs, and these are lifted by overhead cranes until they are suspended over the top of the furnace requiring a charge. The descent of the tubs engages a cradle which, by combined weight actuating levers, removes the cover of the furnace, and also opens the bottom of the tub. The load or charge is discharged into the furnace, and as the empty tub is elevated by the crane to be returned to the pit for refilling, the cover of the furnace is returned to its position. A high blast pressure is used, and the results in consumption are the highest yet attained, being over 100 lbs. of refuse per square foot of grate area per hour.

Two cells of this type at Burmantofts, Leeds, consume about 50 tons of refuse per 24 hours.

The highest steaming results have been obtained at Greenock, where 97 units of electricity per ton of refuse have been obtained on test, and the average over a year's working has been 67 units per ton.

Advantages.—The shovel has been eliminated from charging operations. The labour conditions are better than under any other system. The labour bill is the lowest possible. Freedom from nuisance is adequately secured.