

"In the older types of independent cells the introduction of a fresh charge of refuse resulted in the lowering of the temperature with imperfect combustion of the gases, a condition which is obviated by increasing the number of cells, and by charging them in turn so that some are at their greatest heat while others are being charged.

"With present improved methods of construction such high temperatures are often obtained that no inconsiderable amount of waste heat is available, and steam boilers are generally made a part of the equipment. This will provide steam for the blast or to drive the fan, and by absorbing heat from the waste gases will reduce the cost of repairs to flues and a less expensive and lighter firebrick in the chimney will suffice.

"Naturally, in these notes a description of the incinerator at Moose Jaw, and the methods for operating same may be much in evidence, as it is operated under similar conditions and with the same class of refuse that will be met with elsewhere throughout Western Canada.

"In the collection of our refuse all house and trade refuse are collected and dumped together at the incinerator, where it becomes automatically mixed with a larger quantity of stable manure, as both are being delivered in the course of the day.

"To obtain the best results and complete combustion, the conditions necessary are:—

"A sufficient air supply brought into intimate contact with all parts of the fuel and the maintenance of the temperature up to ignition point until the whole is consumed.

"All modern high temperature incinerators will have the following features: Forced draught, either steam blast or air; a drying hearth above the grate; a combustion chamber where the gases are mixed and raised to incandescence; a steam boiler for utilization of waste heat; an economizer to heat the feed water, and a regenerator for the air blast. Other things of equal importance are some arrangement to discharge direct into the combustion chamber from above, carcasses of horses, mattresses, wet damaged fruit and certain other things that cannot be consumed during the burning of a single fire on the grates, and which would come out with the ashes only partly burned and require to be thrown in again. A storage floor to hold 24 hours' accumulation of refuse, and tipping platform of such size and arrangement that the ordinary box wagon can safely be brought to the tipping sill.

"The incinerator at Moose Jaw is a Heenan and Froude high temperature, with three cells in one continuous chamber. Fires are fed from the top, where the refuse is shovelled into hoppers, the top of which are with the floors of the tipping and storage platform. The blast is air, supplied by fan and drawn from above storage floor. A pressure of from 3 to 4 inches is given, with temperature around 2,000 Fahr. The fan for the blast is driven by an enclosed steam engine which, with the feed pump, absorbs approximately 15 per cent. of the power generated by the waste heat.

"Under ordinary working conditions an average of two tons of refuse per hour is consumed, and the fires are cleaned about every two hours. The operating costs average a little over \$1.00 per ton.

"Until quite recently no serious effort was made to utilize the power in the steam generated by waste heat. Observations have been made several times under ordinary working conditions which indicated that after allowing for use on the plant itself there was at least 100

h.p. available for other purposes. This is now to be used for the purpose of pumping sewage at the disposal works, which are situated conveniently near, the steam being piped across the short distance in 4-inch insulated pipes.

"Without going outside the scope of the Health Department there are many uses to which this waste steam might be put and so reduce the cost of disposal of refuse, for instance: The establishment of baths and washrooms; steam disinfecting station; electric lighting of depot and works; or even to generate current for ordinary purposes.

"Of other residuals very little has been made so far. The clinker is made small in size, and when free from dust is a suitable material for bacteria beds, some having already been used for that purpose. The dust from the combustion chamber can be used as a body for disinfecting powder and in a small way this has been experimented with."

Business Session.—The Association elected the following members to form the executive committee for the ensuing year: President, Dr. M. M. Seymour; general secretary, Major Lorne Drum; treasurer, Dr. George D. Porter, and Dr. C. J. Hastings, M.H.O., of Toronto, Dr. C. A. Hodgetts, of Ottawa, and Dr. Duncan Anderson, of Toronto. Dr. Adam H. Wright, chairman of the Provincial Board of Health of Ontario, was elected honorary president of the association for the ensuing year.

The next annual congress will be held at Fort William and Dr. Woodhouse, the district sanitary officer of that city, has been appointed the convener of the local arrangements committee.

Among the resolutions adopted was one authorizing the appointment of a committee to assist in the formation and operation of a proposed Federal Health Department. Another read: "That in the opinion of this association it is a matter of great importance that the Dominion Government do take steps to create a Department of Public Health in order that all federal branches dealing with health work may be co-ordinated under one administration."

Another fixed the membership fee of the association at \$3.00 per annum.

Mr. J. T. Vallance, of Lethbridge, Alberta, read a very interesting paper on "Public Abattoirs," going fully into the questions of cost, methods of operation, sanitation and other details, expressing himself of the firm belief that civic abattoirs will prove themselves not only self-supporting, but profitable. He spoke of the manner in which the institution of civic abattoirs in England and Germany had reduced materially the cost of living.

"Leaves From An Inspector's Note Book" was the subject of a paper by Mr. H. D. Mathias, of the Health Department of Regina. The paper dealt largely with the training of a man for sanitary inspection, and with the essential recognition of the provision of a pure and ample supply of air and water as an assurance of safety and health.

Mr. Thomas Watson, of Regina, dwelt upon the legal aspect of the sanitary inspectors' work. In the course of his discourse, Mr. Watson mentioned the unanimity of the various health acts of the Dominion in placing under the control and jurisdiction of the Boards of Health all that properly belongs to sanitary and health matters; but added that in spite of this there is a tendency among municipal authorities to deprive sanitary inspectors of a good deal of authority they should possess with respect to certain elementary fundamentals under their supervision.