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It is very evident, then, that the fibrous matter of this charcoal is simply absorbed slag. Two questions of interest then arise. What were the conditions in the furnace that caused charcoal in large quantities to absorb and retain the liquid slag? How did it happen that only on two occasions had the production of this slag-saturated coal been observed?

The following particulars regarding the furnace are data that must be taken into consideration in any theory put forth to explain the peculiar behaviour of the charcoal under consideration:—

Four 3½ inch tuyeres are used.

The average pressure of blast is about 5¾ lbs.

The average temperature of blast, 900 degrees Fahr.

The quantity of air, as a rule, is 2,638 cubic feet, but at times it has run to as high as 2,827 cubic feet to the minute.

Cubical contents of furnace, from stock-line down, is 1,264 cubic feet.

CHARCOAL IMPREGNATED WITH SLAG.

By D. P. PESHALLOW, M.A.Sc.

On the 8th of October last I received from Prof. J. T. Donald a sample of charcoal, together with some peculiarly fibrous silicious matter, accompanied by the statement that the coal was received from “clients who use charcoal in the production of charcoal iron,” and that “when the coal is burned it leaves an ash consisting of long fibres. This material was thrown out at the cinder notch in large quantities unconsumed. The coal was made from oak and apparently bass-wood and elm.”

Upon submitting the coal to examination, it became evident that it was derived from the wood of an elm—probably the common white or American elm (*Ulmus*