

week from September 3 to September 9, the following results were obtained:—

Pig-iron produced	131.4	tons
Quantity of slag	22.1	"
Charcoal used per ton of iron	0.036	"
Pig-iron produced per kw.-year	5.05	"
Pig-iron produced per h.p.-year	3.79	"
Current consumption per ton of iron.....	1,736	kw.-hours
Power consumption per ton of iron.....	2,315	h.p.-hours
Average load	1,357	kw.
Average CO ₂ contents in the gas (by vol.)	30	per cent.

The current and fuel consumption depend, of course, to a large extent on the quality of the ore. The results for a protracted period during which the same kind of ore used are, therefore, of interest.

Working Results.

	Sept. 3rd to Sept. 30th.
Pig-iron produced, tons	537.9
Quantity of slag, tons	88.9
Iron in the ore, per cent.	67.65
Iron in the ore and lime, per cent.	65.02
Quantity of slag per ton of iron, kg.....	165
Charcoal used per ton of iron, kg.....	339.9
Average load, kw.	1,407
Average power, h.p.	1,913.5
* Current used per ton of iron, kw.-hours....	1,749
† Iron produced per kw.-year, tons	5.01
Iron produced per h.p.-year, tons	3.68
Average CO ₂ contents in gas, per cent.....	29.27
Average analysis of iron:—	
C, per cent.	3.64
Si, "	0.36
Mn, "	0.40
S, "	0.009
P, "	0.018

Comparing these figures with the earlier results it will be seen that a great improvement has been obtained over the first six months' working results.

Per ton of iron there were then used from 2,150 to 3,800 kw.-hours, and for the entire time an average of 2,391 kw.-hours. The ores then used varied somewhat in quality, but it will be seen that a reduction of 20 to 25 per cent. has been effected in the current consumption. Correspondingly, the output of pig-iron per kw.-year has been raised from an average of 3.66 tons to over 5 tons. The charcoal consumption has been reduced from 418 kg. to 345 kg. per ton of iron, and the electrode consumption has also been reduced. The electrodes now used are supplied by the well-known Planawerke, and are provided with screw joints so that there are no waste stumps.

The practical importance of the process is best proved by the fact that there are now built or building furnaces for an aggregate of 27,000 h.p., while in addition, furnaces for about 36,000 h.p. are projected.

* According to instruments at the furnace.

† Estimated on the basis of 8,760 kw.-hours per kw.-year.

WORLD'S PRODUCTION OF BAUXITE.

The following table shows the world's production of bauxite from 1907 to 1909. One noteworthy feature is that the production in the United States in 1909 exceeded the pro-

duction of France for the first time in the history of the world's bauxite industry:—

	1907 Tons	1908 Tons	1909 Tons
United States	97,776	52,167	129,101
France	155,834	167,991	128,099
United Kingdom	7,537	11,716	9,500
Italy	3,445	6,890	3,881
Total	264,592	238,764	270,581

The chief uses of bauxite are (1) as raw material in the production of metallic aluminium; (2) in the manufacture of aluminium salts; (3) in the manufacture of artificial abrasives; and (4) in the manufacture of bauxite brick.

EXTENSIVE FINDS OF POTASH MADE AT GODERICH AND IN EASTERN ONTARIO.

A discovery of value has been made, according to a report cabled from Berlin, Germany, of extensive finds of potash at Goderich and in the region around Lakes St. Clair and Huron. This area has a great salt industry. Last year the output was 84,071 tons, valued at close upon half a million dollars. Many inquiries have been made regarding the deposit of potash supposed to have been found in connection with salt wells at or near Goderich.

During the negotiations between the United States potash buyers and the German potash trusts, a rumor was circulated of extensive finds of potash in the area named. At that time the opinion was expressed in Berlin that the report had been circulated in order to affect the negotiations. The German potash trusts sent a corps of geologists to Canada to investigate. The reports of these corps have been received in Berlin and are sufficiently encouraging to justify the formation of a syndicate. Advance reports of a rich potash tract are encouraging and the Germans are prepared to exploit the field to the fullest possible extent.

The annual report of the Ontario Bureau of Mines received in Ottawa, contains an elaborate statistical review in the course of which, under the heading of, "The Pursuit of Potash," this subject is discussed and it is stated:—

"There is no doubt that the discovery of potash salts in quantity would be a boon to the agricultural interests of Ontario, and indeed of the Dominion at large. Wood ashes, which in the early days of settlement when the forest was being cleared away and burned, were plentiful, and were largely made use of for the extraction of potash salts, are now no longer to be had in quantity, and our agriculturists are dependent for potash upon foreign sources of supply, which means Germany."

The report goes on to say: "A bountiful supply of potash is contained in the feldspar deposits at Verona and elsewhere on the line of the Kingston and Pembroke Railway, this material containing as much as 13 or 14 per cent. of potash. The difficulty is that no feasible method has yet been discovered for converting the contained potash into soluble form. It has been stated that finely pulverized feldspar when applied directly to the ground will part with potash, though slowly, and thus act as a fertilizer. With the view of ascertaining the value of ground feldspar, a quantity from the deposits of the Kingston Feldspar and Mining Company has been forwarded to the Ontario Agricultural College, at Guelph, where experiments will be conducted by the authorities of that institution."