

bon or other constituents of the iron, but if Mr. Rossi's conclusions are sustained it would appear probable that the electric smelting of titaniferous ores for the production of ferro-titanium may be commercially possible on a moderate scale.

The electrical smelting of these ores for ordinary pig iron has not, I believe, been attempted, and even if it were technically successful it would be difficult to produce the iron sufficiently cheaply to compete with blast furnace iron.

Dr. Stansfield's paper was illustrated by lantern slides of the electric furnaces referred to and was followed by a demonstration of the melting of metals in a Siemens furnace and a Moissan furnace; the last named being similar in construction to the Stassano furnace, and being furnished with a lens and mirror, by means of which a picture of the inside of the furnace was projected upon a screen and the audience was able to watch the metals melting down in the intense heat of the electric arc.

In the Moissan furnace direct currents are usually employed and the electric arc is forced down upon the metals to be melted by the influence of an electro-magnet placed near the furnace. The principle of the resistance type of electric furnace was demonstrated by means of a pencil of carbon, about 6 inches long and  $\frac{1}{4}$  inch diameter, which was raised to a dazzling white heat by the passage of the current.