

A lecture room devoted to metallurgical instruction in which it would be possible to have models, specimens and diagrams in addition to the usual equipment.

A room with books, papers, blue-prints etc. in which the students can read, write, calculate and make drawings.

Separate laboratories for analytical chemistry, metallography, hydro-metallurgy and furnace metallurgy.

Small laboratories equipped with scientific apparatus for metallurgical research.

One important item of equipment which should be provided is a high-frequency electrical equipment for the electrical melting of metals. This is a recent development of electro-metallurgy which is being adopted in commercial metallurgy and is particularly valuable for metallurgical research. It is included in all modern research institutes and we should obtain one in the near future.

As regards the teaching staff, it is not possible for one or two instructors to cover the whole field of so wide a subject as metallurgy; neither is it possible to have a separate instructor for each branch, and a reasonable compromise must be arrived at. Mr. Sproule gives instruction in the second year in materials of construction and in the third year in elementary metallurgy and in fire-assaying. He also gives special attention to physical metallurgy, including the microscopic and physical testing of metals and pyrometry. I give more advanced descriptive lectures on metallurgical practice, both ferrous and non-ferrous, and teach theoretical metallurgy and metallurgical calculations as applied to furnace charges, metallurgical design, and the applications of thermo-chemistry, physical chemistry