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CHEMICAL LABORATORY,
123 S. SEVENTH ST., PHILADELPHIA, PA.

INTERNATIONAL STANDARDS FOR THE ANALYSIS OF IRON AND STEEL.

SUB-COMMITTEE ON METHODS.

BULLETIN No. 1.

ORGANIZATION AND WORK OF THE COMMITTEE.

AT the World's Congress of Chemists, in Chicago, last August, following the papers of Professor J. W. Langley, "On the Work of the Committee on International Standards for the Analysis of Iron and Steel," and of Dr. C. B. Dudley, "On the Need of Standard Methods for the Analysis of Iron and Steel, with Some Proposed Standard Methods," was a brief discussion, which resulted in the reference by that body of the whole subject of standard methods for the analysis of iron and steel, to the Committee on International Standards for the Analysis of Iron and Steel. That committee, it will be remembered, consists of seven chemists, in each of five different countries, namely, England, France, Germany, Sweden, and the United States. The American Committee was appointed jointly by the American Society of Civil Engineers, and the University of Michigan, with Professor J. W. Langley, Case School of Science, Cleveland, Ohio as Chairman. The other members of that Committee were W. P. Barba, Midvale Steel Works, Nicetown, Philadelphia, Pa., A. A. Blair, 406 Locust street, Philadelphia, Pa., Professor Regis Chauvenet, President State School of Mines, Golden, Colorado, Professor T. M. Drown, Mass. Inst. Technology, Boston, Mass., Dr. C. B. Dudley, Chemist Penn'a. R. R. Co., Altoona, Pa., and Porter W. Shimer, Easton, Pa.

Following the reference of the subject to this committee, it

was decided after consultation to appoint a sub-committee, to take up the question of standard methods. The sub-committee is constituted as follows: W. P. Barba, A. A. Blair, T. M. Drown, Porter W. Shimer and C. B. Dudley, Chairman.

The sub-committee held an organizing meeting at the office of A. A. Blair, 406 Locust street, Philadelphia, on December 13, all the members being present. The object of the meeting was to map out the work. It was agreed as follows:

First. That Mr. Blair should submit a form of circular to go to the iron and steel chemists of the country, asking for a brief outline of the methods which they prefer, and the reasons for all the important points of their methods.

Second. That the work of the committee should comprehend the recommendation of standard methods to be used as the basis of commercial transactions, and when any of these methods could not be used in steel works in daily practice, on account of time required, an alternative rapid method should be recommended, and its limitations defined.

Third. That the members of the committee should draw up each proposed standard method in writing, with some minuteness, and give the reasons for each important point, these written drafts to be sent to the chairman, to be duplicated, and sent to every member of the committee. Later, the points agreed upon are to be edited by some one member of the committee.

Fourth. That only one element should be embraced in a method.

Fifth. That the first method to be taken up, should be phosphorus in steel.

Sixth. Mr. Barba offered to furnish to each member of the committee, a suitable quantity, not less than a pound or so, of borings of three (3) different kinds of steel, namely, one of from 0.01 to 0.02 phosphorus, carbon about 0.90, and silicon about 0.40; another with phosphorus not far from 0.06, carbon 0.50 to 0.60, silicon 0.25 to 0.30, and arsenic 0.15 per cent. The above two, to be crucible steel. Another sample of open hearth steel of carbon 0.90 to 1.05, phosphorus 0.02 to 0.04, manganese 0.30 to 0.40, silicon 0.20 to 0.25, sulphur 0.02 to 0.04 and copper anywhere below 0.10.

Seventh. Dr. Dudley offered to furnish to each member of the committee, a like amount of borings from a sample of Bessemer steel of from, 0.10 to 0.12 phosphorus, carbon about 0.50, manganese 0.80 to 1.00, silicon 0.02 to 0.05, sulphur 0.07 to 0.10 and copper from 0.07 to 0.10. These samples of steel to be used in deciding various questions that may come up in regard to proposed methods.

A very earnest feeling was manifested at the meeting of the sub-committee, and the outlook for some good work, is apparently very favorable.

APPROVED:

J. W. LANGLEY, CHAS. B. DUDLEY,
Chairman Com. on Int. Standard. *Chairman Sub-Committee.*

NEW BOOKS.

A MANUAL OF PRACTICAL ASSAYING. BY H. van F. FURMAN.

The constantly increasing demands made on metallurgical chemists for rapid work makes the appearance of Mr. Furman's book very timely; for while there are numerous text-books on assaying, and complete treatises for the iron-works chemist, no work until this has so completely embodied the methods now in use by the chemists of the silver, lead, and copper smelters of the west, and it is for these especially that the book is written.

On this account it would seem more appropriate to have included technical analysis in the title, for while the term assaying may doubtless be properly used as meaning more than fire assaying, it can hardly be construed into covering the contents of this book, which contains methods not in common use, by the technical chemist at least, and which in actual practice would probably be looked up in more detailed and specialized works. It would, however, hardly be just to criticise the author for making his manual as complete as possible, providing good judgment is used in selecting the methods, which is the case in all but a very few instances.

Part I, which is introductory, and includes chapters giving useful details as to reagents, apparatus, blowpipe reactions, etc.,