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*Jahresbericht* (Wagner).—Portland Cement aus dolomitischem Kalk (Erdmenger), 627.

1875.

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*Dingler's Polytechnisches Journal*.—Neues Verfahren zur Fabrikation, 215, 75. Ueber Veränderungen welche Portland Cement durch Lagern erleidet, 215, 538; 216, 63; 218, 503. Ueber Verwendung von Alkalien in der Portland Cement Fabrikation und Zerfallen des Portland Cementes, 218, 503.

*Transactions of the American Society of Civil Engineers*.—Testing machines, 4, 313. Cement Sampling, 4, 312. Appliances for testing cements, 4, 313. Cement for masonry dam, 3, 354. Experiments with cements, 4, 101. Tensile strength of cements, 4, 99, 312.

[TO BE CONTINUED.]

## INTERNATIONAL STANDARDS FOR THE ANALYSIS OF IRON AND STEEL.

### SUB-COMMITTEE ON METHODS.<sup>1</sup>

#### BULLETIN No. 2.

#### CIRCULAR TO IRON AND STEEL CHEMISTS ON METHOD OF DETERMINING PHOSPHORUS.

AT the World's Congress of Chemists in Chicago a Sub-Committee of the original Committee on International Standards for the Analysis of Iron and Steel was appointed to

<sup>1</sup> The Sub-Committee on Methods for the Analysis of Iron and Steel have sent the following bulletin to the iron and steel chemists of the country, so far as they could get their names. They earnestly request that any who do not receive a copy of the circular, but who do see this, will comply with the request of the bulletin, the same as though they had received a circular direct.

consider the subject of Standard Methods.

This sub-committee consists of Dr. C. B. Dudley, Chairman, Messrs. A. A. Blair, W. P. Barba, P. W. Shimer, and T. M. Drown. It has recently held a meeting and has decided to recommend standard methods in iron and steel analysis to be used as the basis of commercial transactions. The sub-committee fully appreciates the fact that these methods, to have the highest value, should be in facility and in time of execution such that they will readily recommend themselves for daily use in iron and steel works.

To further this end the sub-committee wishes to have the co-operation of the iron and steel chemists of the country, and to ask them for a brief outline of the processes or methods they use and prefer for the determination of different elements in iron and steel, and for such other information and suggestions as they think will aid it in the work before it. The sub-committee recognizes the fact that it will add immensely to its efficiency and value if the iron and steel analysts of the country will take a personal interest in it, and aid it by their counsel and active influence.

You are therefore requested to send to the chairman of the sub-committee, as soon as convenient, such an outline as you may deem sufficient to fully describe your practice. It is suggested that you follow the general plan here indicated, by answering the following questions, which may be referred to by number to save you unnecessary trouble:

First. What general method do you use for the determination of phosphorus in iron and steel?

Second. What special precautions do you consider necessary to make this method reliable?

Third. What precautions do you take to prevent the interference of arsenic?

Fourth. What factors do you use in your calculations?

Fifth. What variations do you introduce in the case of iron ores or slags?

Sixth. Do you use the same method in pig iron and steel and do you consider the results equally reliable?

Seventh. Do you ever examine the residues insoluble in acid,

in pig irons, or iron ores, and do you ever find phosphorus in them?

Eighth. Are all your determinations made by the same method, or do you check your work by reference to another method, and if so, what method do you use for this purpose?

Ninth. How many determinations do you make a day in your laboratory under ordinary circumstances?

Tenth. What do you consider the greatest length of time necessary to obtain a result, permissible in your work?

The sub-committee begs that you will send at the earliest possible moment as full replies to all or any of the above questions as you conveniently can, and assures you that in making use of any details that may be original with you, you shall have full credit. You will likewise be furnished with copies of the various reports.

CHAS. B. DUDLEY,

*Chairman Sub-Committee,*

APPROVED,

J. W. LANGLEY,

*Chairman Com. on Int. Standards.*

ALTOONA, PA.

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### ERRATUM.

In the column showing percentages for the No. 2 steel on page 219 this number, *0.041* should read *0.048*.