

DEPARTMENT OF COMMERCE

Bureau of Standards

Certificate of Analysis

OF

STANDARD SAMPLE No. 12 b

BASIC OPEN-HEARTH STEEL, 0.4% CARBON

ANALYST.	CARBON.		SILICON.		PHOSPHORUS.				SULPHUR.		MANGANESE.			COPPER.	CHROMIUM.	VANADIUM.	NICKEL.
	DIRECT COMBUSTION.	SOLUTION AND COMBUSTION.	HYDROCHLORIC ACID EVAPORATION.	OTHER METHODS.	ALKALI-MOLYBDATE.	MOLYBDATE REDUCTION.	WEIGHING PHOSPHO-MOLYBDATE.	AS Mg ₂ P ₂ O ₇ FROM PHOSPHO-MOLYBDATE.	DIRECT OXIDATION.	MEINEKE'S METHOD.	FORD-WILLIAMS.	BISMUTHATE.	PERSULPHATE (Arsenite titration).				
1	.408		.023		.016					.024		.547		.014	.012	<.005	.008
2	.407		.021		.014					.024		.541		.014	.008	.005	.008
	.410	.414	.021	.027		.012		.012	.023	^a .018		.531		.013			
4	.403		.020			.012			.023			.53					
5	.412		.021	.024	.015				.024	^a .020		.54	.54	.014			
6	.406		.021		.012				.023		.545	.545		^b .010			
7	.413		.018		.015		.014		.024			.529		.017			
8	.410		.019	.018	.015				.025	.023		.530	.540	.014			
9	.406		.018		.014		.013		.024			.545		.017			
AVERAGE	.408	.414	.020	.023	.014	.012	.014	.012	.024	.024	.545	.538	.54				
GENERAL AVERAGE	.409		.021		.014				.024		.538			.014	.010	<.005	.008

^a Omitted from averages.

^b Thiosulphate precipitation.

INDEX TO ANALYSTS

1. L. F. Witmer, Bureau of Standards.
2. F. H. Tucker, Bureau of Standards.
3. Porter W. Shimer & Son, Easton, Pa.
4. Booth, Garrett & Blair, Philadelphia, Pa.
5. H. E. Slocum, Jones & Laughlin Steel Co., South Side Department Laboratory, Pittsburgh, Pa.

6. George P. Vanier, Bethlehem Steel Co., Steelton, Pa.
7. W. D. Brown, Carnegie Steel Co., Duquesne Works.
8. J. L. Harvey, Carnegie Steel Co., Homestead Works.
9. I. A. Nicholas, Carnegie Steel Co., Clairton Works.

This standard is not recommended for colorimetric carbon determinations, because of uncertainty as to the condition of the carbon.

S. W. STRATTON,
Director.

Washington, D. C.

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