

DEPARTMENT OF COMMERCE

Bureau of Standards

Certificate of Analysis

OF

STANDARD SAMPLE No. 34

ACID OPEN-HEARTH STEEL, 0.8% CARBON

ANALYST.	CARBON.			SILICON.		PHOSPHORUS.				SULPHUR.			MANGANESE.							
	DIRECT COMBUSTION	SOLUTION AND COMBUSTION	COLORIMETRY.	DROWN METHOD.	OTHER METHODS.	ALKALI MOLYBDATE.	MOLYBDATE REDUCTION.	WEIGHING PHOSPHO-MOLYBDATE.	AS $Mg_2P_2O_7$ FROM PHOSPHO-MOLYBDATE.	OXIDATION.	EVOLUTION (Calc-Iodine).	OTHER METHODS.	FORD (Weighing as $Mn_2P_2O_7$).	FORD-WILLIAMS.	VOLHARD.	BISMUTHATE.	COLOR (Percarbonate).	COPPER.	CHROMIUM.	MOLYBDENUM.
1	.83			.16	.098					.028		.026 ^a				.70 ^b		.01		
2	.83			.18			.095			.028		.024 ^a				.69		.02	.01	.002
3	.85	.85		.19			.094		.094	.028	.026					.69				
4	.84	.83		.18	.18		.096			.029						.68				
5	.83			.17			.097			.030	.029					.70	.71			
6	.83						.099			.030	.029		.71							
7	.85	.85	.85	.17			.091	.092		.026	.030		.72			.70				
8		.85	.85	.17				.097		.028	.030		.72			.69 ^c				
9		.84			.20			.089			.030						.71			
10	.83	.83		.18			.095	.096		.032	.032 ^d			.71	.69					
AVERAGE	.84	.84	.85	.175	.18	.096	.095	.094	.094	.029	.029	.025	.72	.71	.71	.69	.71	.015	.01	.002
GENERAL AVERAGE	.84			.18		.095				.029			.70					.015	.01	.002

^a Evolution— H_2O_2 — $BaSO_4$.

^b With arsenite titration.

^c Combination Ford-Williams and bismuthate. Nickel and vanadium not found by analyst 2.

^d Evolution— ZnS —iodine.

INDEX TO ANALYSTS

- John R. Cain, Bureau of Standards.
- L. F. Witmer, Bureau of Standards.
- Porter W. Shimer, Easton, Pa.
- Booth, Garrett & Blair, Philadelphia, Pa.
- Jones & Laughlin Steel Co., South Side Department Laboratory, Pittsburgh, Pa.

- George P. Vanier, Pennsylvania Steel Co., Steelton, Pa.
- W. D. Brown, Carnegie Steel Co., Duquesne Works.
- I. A. Nicholas, Carnegie Steel Co., Clairton Works.
- J. L. Harvey, Carnegie Steel Co., Homestead Works.
- Carnegie Steel Co., Edgar Thomson 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.

June 15, 1913.