

DEPARTMENT OF COMMERCE

Bureau of Standards

Certificate of Analyses

OF

STANDARD SAMPLE No. 14 a.

BASIC OPEN-HEARTH STEEL 0.8% CARBON

ANALYST.	CARBON.			SILICON.		PHOSPHORUS.				SULPHUR.			MANGANESE.				
	DIRECT COMBUSTION.	SOLUTION AND COMBUSTION.	COLORIMETRY.	BROWN METHOD.	OTHER METHODS.	ALKALI-MOLYBDATE.	MOLYBDATE REDUCTION.	WEIGHING PHOSPHO-MOLYBDATE.	AS $Mg_2P_2O_7$ FROM PHOSPHO-MOLYBDATE.	OXIDATION.	EVOLUTION (CdS-Iodine).	OTHER METHODS.	FORD (Weighing as $Mn_2P_2O_7$).	FORD-WILLIAMS.	VOLHARD.	BISMUTHATE.	COLOR (Fersulphate).
1.....	.818				.12	.025				.038	.037	.037 ^a					.30
2.....	.808				.10		.025			.041		.037 ^a					.31
3.....	.824 ^b	.819			.10		.023		.023	.040	.039						.32
4.....	.801	.800		.10	.10		.024			.039		.031 ^c					.31
5.....	.810		.82	.09		.025	.024	.025		{.038 ^d .037}	.037					.32	.33
6.....	.811					.026				.040	.039		.31				
7.....		.815		.09		.024					.036		.33				.33
8.....		.816	.84	.10	.11	.025		.025		.040	.040		.32				.34
9.....		.818		.09				.025			.037						.31
10.....	.816	.816		.10		.026		.024		.037	.037				.34		
AVERAGE.....	.813	.814	.83	.095	.106	5	.024	.025	.023	.039	.038	.037	.325	.31	.34	.31	.33
GENERAL AVERAGE.....	.815			.10		.0246				.038			.32				

^a Evolution— H_2O_2 - $BaSO_4$.
^b With red lead.

^c Evolution— PbS - $BaSO_4$, omitted from averages.
^d Obtained by the method as used at the Bureau of Standards.

INDEX TO ANALYSTS.

1. John R. Cain, Bureau of Standards.
2. L. F. Witmér, Bureau of Standards.
3. Porter W. Shimer, Easton, Pa.
4. Booth, Garrett & Blair, Philadelphia, Pa.
5. Jones & Laughlin Steel Co., South Side Department Laboratory, Pittsburgh, Pa.

6. George P. Vanier, Pennsylvania Steel Co., Steelton, Pa.
7. W. D. Brown, Carnegie Steel Co., Duquesne Works.
8. C. H. Rich, Carnegie Steel Co., Clairton Works.
9. J. L. Harvey, Carnegie Steel Co., Homestead Works.
10. Carnegie Steel Co., Edgar Thompson 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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