

U. S. DEPARTMENT OF COMMERCE  
WASHINGTON, D. C.

NATIONAL BUREAU OF STANDARDS

PROVISIONAL CERTIFICATE OF ANALYSIS

SPECTROGRAPHIC STEEL STANDARDS

	: 403a and 803a Type : (A.O.H., 0.6C)	: 407a and 807a (Cr-V)	: 409b and 809b Nickel	: 420a and 820a (Ingot Iron)
	Percent	Percent	Percent	Percent
Manganese	1.04	0.76	0.46	0.017
Silicon	0.34	.29	.27	---
Copper	.096	.132	.104	.027
Nickel	.190	.169	3.29	.009 <sub>2</sub>
Chromium	.101	.92	.072	.003 <sub>2</sub>
Vanadium	.005	.146	.002	---
lybdenum	.033	---	.009	.001 <sub>3</sub>
Tin	---	---	.012	.001 <sub>7</sub>
Cobalt	---	---	.025	.006
Aluminum	---	---	---	.003

Sizes are: 400 series; rods 7/32 inch in diameter, 4 inches long;  
800 series; rods 1/2 inch in diameter, 2 inches long.

Dashes indicate elements not certified for Spectrographic Analysis.

The values indicated above were obtained by chemical analysis of millings cut from the rods. These standards were examined spectrographically in rod form for homogeneity and are suitable for use as spectrographic standards for the elements certified. (Standards 403a and 803a contain approximately 0.07 percent tin, but this element is segregated in both standards).

(Signed) EDWARD WICHERS, Chief  
Division of Chemistry

Washington 25, D. C.  
July 29, 1953