Richard W. Roberts, Director

## National Bureau of Standards Certificate of Analysis

## Standard Reference Material 16e

## Basic Open-Hearth Steel, 1.1% Carbon

Element	Element															Percent by Weight		
Carbon																		1.09
Manganese.																		0.381
Phosphorus.																		.028
Sulfur																		.029
Silicon												•				•		.202
Copper																		.052
Nickel																		.072
Chromium .														• .				.118
Vanadium .			•										•	•	•	•		.002

The value listed for an element is the best estimate of the "true" value based on the results of the cooperative analytical program. The value is not expected to deviate from the "true" value by more than  $\pm 1$  in the last significant figure reported. For a subscript figure, the deviation is not expected to be more than  $\pm 5$ .

The material for this SRM was provided by the United States Steel Corporation, Duquesne Works, Duquesne, Pa.

The overall direction and coordination of the technical measurements at NBS leading to certification were performed under the direction of O. Menis and J. I. Shultz.

The technical and support aspects involved in the preparation, certification, and issuance of this SRM were coordinated through the Office of Standard Reference Materials by R. E. Michaelis.

Cooperative analyses for certification were performed in the analytical laboratories of General Motors Corporation, Research Laboratories, Warren, Mich., M. D. Cooper and R. E. Kohn; Bethlehem Steel Corporation, Sparrows Point, Md., F. G. Fick and W. Selig.

Analyses were performed in the NBS Analytical Chemistry Division by J. R. Baldwin, S. A. Wicks, R. K. Bell, K. M. Sappenfield and E. L. Garner.

Washington, D.C. 20234 April 30, 1974 (Revision of Prov. Cert. 3-23-66) J. Paul Cali, Chief Office of Standard Reference Materials