

# Alpha Resources, Inc. Certificate Of Analysis

AR 883

CARBON STEEL PIN STANDARD

LOT # A25909B99

**% CARBON**  
MEAN = 0.193  
ONE SIGMA = 0.002  
TWO SIGMA = 0.004  
RANGE = 0.189 – 0.197

**% SULFUR**  
MEAN = 0.018  
ONE SIGMA = 0.001  
TWO SIGMA = 0.002  
RANGE = 0.016 – 0.020

Method of Analysis is Combustion IR Detection  
ASTM E 1019 (Latest Revision)

Standards Employed:

NIST 11h, 2160, 72, 72f, 106a

Notes:

The mean analytical values were derived by a number of data sets utilizing various ASTM approved instruments.

The precision values represent the standard deviation, two times the standard deviation, and complete range of analysis.

The statistical analysis of the certification was performed by K.E. Dyer at Alpha Resources.

The overall direction and coordination of the analytical measurements leading to certification were performed by K.E. Dyer at Alpha Resources.

Remedies for any claimed defect in this product will be limited to product replacement or refund of the purchase price. In no event shall Alpha Resources be liable for incidental or consequential damages.

This is a Certified Reference Material (CRM), and is traceable to the above-mentioned standards. For good laboratory practice it is recommended that all standards be verified prior to use.

Certified January, 2000



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