

# Alpha Resources, Inc. Certificate Of Analysis

AR 511

HIGH SULFUR STEEL PIN STANDARD

LOT # 535018

**% CARBON**  
MEAN = 0.081  
ONE SIGMA = 0.002  
TWO SIGMA = 0.004  
RANGE = 0.0782 – 0.0851

**% SULFUR**  
MEAN = 0.238  
ONE SIGMA = 0.003  
TWO SIGMA = 0.006  
RANGE = 0.2313 – 0.2427

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

The certified mean values were derived by a number of data sets acquired over different days, using ASTM E 1019 approved instruments.

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

Primary Standards Employed were:

NIST	SRM 129c, 368
BCS	SRM 306/I
EURO	SRM 079-1

Notes:

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.

Certified January, 1997

