

Brammer Standard Company, Inc.

Certificate of Analysis

Low Alloy Steel Reference Materials

BS No. Grade	56E 1045	57E 1020	58C 9310	BS No. Grade
C	0.48	0.20	0.098	C
Mn	0.72	0.45	0.57	Mn
P	0.011	0.005	0.011	P
S	0.025	0.015	0.014	S
Si	0.24	0.050	0.29	Si
Cu	0.016	0.039	0.14	Cu
Ni	0.017	0.051	3.20	Ni
Cr	0.024	0.014	1.29	Cr
Mo	0.006	0.008	0.11	Mo
Al	(0.065)	(0.002)	(0.055)	Al
Sn	<0.002	0.002	(0.012)	Sn

COOPERATING LABORATORY ANALYSIS -

Allegheny Ludlum Steel Corp., Brackenridge, PA
Carpenter Technology, Reading, PA
Crobaugh Laboratories, Cleveland, OH
Charles Kawin Laboratories, Maywood, IL
Spectrochemical Laboratories, Pittsburgh, PA
Universal Cyclops Corp., Specialty Steel Div., Bridgeville, PA

CHEMICAL ANALYSES were made on millings from the cross-section of the bars. The values listed are the average wet chemical analyses and have been checked by spectrographic analyses. The values listed in parentheses are not certified but listed for information.

CertificateNo.56E-58C-053087

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