

Brammer Standard Company, Inc.

Certificate of Analysis

	BS No. 120 Standard Ferromanganese		BS No. 121 Medium Carbon Ferromanganese	
C	6.77		1.62	C
Mn	78.3		81.4	Mn
P	0.19		0.38	P
S	0.017		0.004	S
Si	0.80		0.62	Si
Cu	(0.071)		(0.15)	Cu
Cr	(0.041)		(0.080)	Cr
Mo	(0.028)		(0.017)	Mo
Fe	12.1		14.9	Fe
As	(0.10)		-----	As
Ti	(0.135)		(<0.001)	Ti
Zr	(0.0006)		(0.0002)	Zr
N	(0.024)		(0.022)	N

(analysis listed as percent by weight)

The analysis in parentheses are the results from a single laboratory and are provided for information only. The balance of the data is the average analysis from five cooperating laboratories.

Certificate Number 10/79

Brammer Standard Company, Inc., 14603 Benfer Road, Houston, TX 77069
Telephone (281) 440-9396 Fax (281) 440-4432