

MATERIAL TEST CERTIFICATE

QUALITY CERTIFICATE

DATE: September 28, 1998

AMERICAN ENERGY SERVICES
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CUSTOMER

 FERRETERA ANAHUAC S.A. DE C.V.
 AV. VALLE DE LAS ALAMEDAS NO. 66-B
 COL. SAN FRANCISCO CHILPAN
 TULTITLAN, EMEX, C.P. 54940

AES CONTROL NO.: 3352

CUSTOMER P.O.: 98/005

ITEM NO.: 44

QUANTITY: 5

SIZE & DESCRIPTION

 3" 600# GLOBE VALVE

AES FIG. NO: 03GL06RHA11

IDENTIFICATION NOS.

 39008 THRU 39012

COMPLIES WITH NACE MR-0175

HEAT NO.	MATERIAL: ASTM A216 GR WCB									
	CHEMICALS									
	C.	Mn.	P.	S.	Si.	Cu.	Ni.	Cr.	Mo.	V.
L083	0.220	0.81	0.027	0.021	0.51	0.068	0.052	0.127	0.012	0.018
L086	0.250	0.79	0.024	0.021	0.44	0.033	0.078	0.056	0.018	0.020
L088	0.240	0.85	0.024	0.021	0.50	0.044	0.130	0.078	0.030	0.020
L018	0.220	0.74	0.024	0.021	0.44	0.047	0.156	0.062	0.030	0.022
L019	0.220	0.93	0.027	0.020	0.52	0.047	0.220	0.062	0.018	0.022
L088	0.240	0.85	0.024	0.021	0.50	0.044	0.130	0.078	0.030	0.020
N012	0.230	0.86	0.027	0.021	0.46	0.037	0.132	0.083	0.035	0.023
N018	0.220	0.74	0.024	0.021	0.44	0.047	0.156	0.062	0.030	0.022
N088	0.225	0.93	0.027	0.022	0.53	0.066	0.092	0.025	0.018	0.020
N080	0.240	0.85	0.024	0.021	0.50	0.044	0.130	0.078	0.030	0.020

PHYSICALS				
TENSILE	YIELD			
KSI	KSI	%EL	%RA	BHN
79	44	29.0	39.0	164
83	51	28.0	42.0	169
74	51	27.0	51.0	167
76	44	30.0	40.0	165
77	46	31.0	38.0	164
74	51	27.0	51.0	167
79	50	32.0	40.0	167
76	44	30.0	40.0	165
78	44	28.0	40.0	163
79	51	27.0	51.0	167

HEAT TREATMENT
 1650°F NORMALIZE

PRESSURE TEST
 API 598 1990

psi	SEAT A		SEAT B		BACK SEAT	
SHELL	HYDRO	AIR	HYDRO	AIR	HYDRO	AIR
	2225	1650			1650	

SECONDS
 60 60 60

DIMENSIONS CONFORM TO ASME/ANSI B16.34

Our letters are for the exclusive use of the client to whom they are addressed. The use of our name must receive our written approval. Our letters and reports apply only to the sample tested an/or inspected, and are not necessarily indicative of the qualities of apparently identical or similar products. We certify the materials meet the referenced specifications as reported on the material manufacturer's test certificates which are maintained in our files. The information contained in this report is true and correct to the best of my knowledge. This report is issued by the Quality Assurance Department which is independent of the Manufacturing or Processing Department. It conforms to Din Standard 50049-3.1B and to ISO standard 10474-3.1B.

Karla Kelly
 QUALITY ASSURANCE