

Tube Forgings of America, Inc.  
 5200 NW Front Avenue  
 Portland, OR 97210  
 ISO 9001-2000 Certified  
 8/18/2005

Sold To: PLESA ANÁHUAC y CÍAS, S.A. de C.V.  
 AV. VALLE DE LAS ALAMEDAS NO. 66-A  
 TULTITLAN, EDO., MEX. C. P.54940

TFA Sales Order : 133086  
 Customer ID: 38350  
 Customer PO Reference: 103  
 Attention To:

Ship To: SPECIALISTS IN TRANSIT FORWARDING  
 1801 MARKLEY MODERN INDUSTRIAL PA  
 LAREDO, TX 78041

TFA Heat Code: 454NO  
 Grade: WPB  
 TFA Part ID: C24059  
 Description: 12 X 8 STD ECC  
 Quantity: 1  
 Mill: TAMSA  
 Mill Heat : 18064  
 Process: WPB-HMTW  
 Customer Part ID:

Test Bar Type: RECTANGULAR  
 Yield (PSI): 57800  
 Tensile (PSI): 77400  
 % Elong In 2": 42.00  
 B.H.N. :  
 Tensile Orientation: TRANSVERSE

C	MN	P	S	SI	MO	CR	NI	CU	V	CB	B	TI	AL	C.E.
0.170	1.060	0.013	0.016	0.230	0.035	0.060	0.020	0.056	0.037	0.000				0.38

Coupon Size:	Ft. Lbs	% Shear	Lateral Expansion (Mils)
Charpy V notch test at	1:	1:	1:
degrees F:	2:	2:	2:
Charpy Orientation:	3:	3:	3:
	Avg:	Avg:	

1. THESE FITTINGS WERE HOT FORMED BETWEEN 1150F AND 1800F AND AIR COOLED. 2. THE HARDNESS DOES NOT EXCEED 197 BHN PART TO PART. 3. STARTING MATERIAL IS ASTM A 106 GRB SEAMLESS PIPE. 4. THIS PRODUCT IS SEAMLESS. THIS PRODUCT WAS MANUFACTURED BY (MILLS IRON WORKS INC) IN ACCORDANCE WITH THE QUALITY PROGRAM REQUIREMENTS OF (TUBE FORGINGS OF AMERICA INC).

THE MATERIAL IS MANUFACTURED TO ASTM A 234 GR WPB REV: 03. ,ALSO PER ASME SEC II SA 234 GR WPB,2001 EDITION THRU ALL ADDENDAS AT TIME OF ORDER. 2. DESIGN AND DIMENSIONS TO ASME B16.9-2003 OR MSS-SP-75-98 AS APPLICABLE BY DESIGN. 3. PER NACE MR-01-75, 2003 REVISION. OUR QUALITY SYSTEM HAS BEEN REGISTERED BY ( ABS ) TO (ISO-9001. REV: 2000), CERTIFICATE #: 30248. OUR ORGANIZATIONAL STRUCTURE AND CERTIFICATION COMPLIES WITH (EN 10204-3.1.B). OUR FITTINGS SATISFY THE MATERIAL REQUIREMENT OF (PED 97/23-EC ANNEX 1-4.3 ).



*John Peachey*  
 John Peachey, Mgr. Quality Assurance