

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 P/4
 LAREDO, TX 78041

TFA Heat Code: 457NN
Grade: WPB
TFA Part ID: C22031
Description: 4 X 2.5 STD CONC
Quantity: 1
Mill: SIDERCA
Mill Heat : 33873
Process: WPB-CN1MIW
Customer Part ID:

Test Bar Type: RECTANGULAR
Yield (PSI): 44500
Tensile (PSI): 65500
% Elong In 2" 35.00
B.H.N. :
Tensile Orientation: LONGITUDINAL

C	MN	P	S	SI	MO	CR	NI	CU	V	CB	B	TI	AL	C.E.
0.130	1.090	0.013	0.010	0.240	0.010	0.030	0.030	0.063	0.001	0.001	0.0001	0.0030		0.33

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

1. THESE FITTINGS WERE NORMALIZED AT 1650F AND AIR COOLED. 2. THESE FITTINGS WERE S2 TENSILE TESTED TO VERIFY PHYSICAL PROPERTIES AFTER THE HEAT TREAT PROCEDURE. 3. THE STARTING MATERIAL IS SEAMLESS PIPE. 4. THE HARDNESS DOES NOT EXCEED 197BHN PART TO PART. 5. THIS PRODUCT IS SEAMLESS. 6. 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).



Certificate: 30248



John Peachey
 John Peachey, Mgr. Quality Assurance