

**CERTIFIED MATERIAL TEST REPORT**

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/  
 LAREDO, TX 78041

TFA Heat Code: 476NN  
 Grade: WPB  
 TFA Part ID: C24064  
 Description: 14 X 10 STD ECC  
 Quantity: 1  
 Mill: TAMSA  
 Mill Heat : 20010  
 Process: WPB-CN1MIW  
 Customer Part ID:

Test Bar Type: ROUND  
 Yield (PSI): 55000  
 Tensile (PSI): 74500  
 % Elong In 2": 32.00  
 B.H.N. :  
 Tensile Orientation: LONG

C	MN	P	S	SI	MO	CR	NI	CU	V	CB	B	TI	AL	C.E.
0.170	1.070	0.009	0.002	0.230	0.021	0.030	0.070	0.078	0.038	0.000				0.38

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



*John Peachey*  
 John Peachey, Mgr. Quality Assurance