

CERTIFIED MATERIAL TEST REPORT

Tube Forgings of America, Inc.
 5200 NW Front Avenue
 Portland, OR 97210
 ISO 9001-2000 Certified
 9/8/2005

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 : 133086-1
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: P109
Grade: WPB
TFA Part ID: 20118
Description: 20 XH CAP
Quantity:
Mill: OSM
Mill Heat : MT8236
Process: WPB-CSS
Customer Part ID:

Test Bar Type: ROUND
Yield (PSI): 50100
Tensile (PSI): 67400
% Elong In 4D 32.00
B.H.N. : 128
Tensile Orientation: LONGITUDINAL

C	MN	P	S	SI	MO	CR	NI	CU	V	CB	B	TI	AL	C.E.
0.110	0.830	0.010	0.005	0.180	0.020	0.020	0.020	0.020	0.007	0.020				0.26

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

1. THIS MATERIAL WAS COLD FORMED AND STRESS RELIEVED AT 1200F AND AIR COOLED AFTER THE COLD FORMING. 2. THE STARTING MATERIAL IS PLATE WHICH MEETS THE CHEMICAL AND PHYSICAL REQUIREMENTS OF ASTM A234 GR WPB. 3. THE HARDNESS DOES NOT EXCEED 197 BHN PART TO PART. 4. THIS PRODUCT IS SEAMLESS.

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