

**CERTIFIED MATERIAL TEST REPORT**

Tube Forgings of America, Inc.  
 5200 NW Front Avenue  
 Portland, OR 97210  
 ISO 9001-2000 Certified  
 6/26/2006

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 :  
 Customer ID: 38350  
 Customer PO Reference:  
 Attention To:

TFA Heat Code: P616  
 Grade: WPB  
 TFA Part ID: 00201  
 Description: 10 SCH 20 LR 90  
 Quantity:  
 Mill: TAMSA  
 Mill Heat : 17463  
 Process: WPB-H  
 Customer Part ID:

Test Bar Type: STRIP  
 Yield (PSI): 59996  
 Tensile (PSI): 84106  
 % Elong In 2": 38.00  
 B.H.N. : 115  
 Tensile Orientation: LONGITUDINAL

C	MN	P	S	SI	MO	CR	NI	CU	V	CB	B	TI <sup>u</sup>	AL	C.E.
0.170	1.090	0.010	0.003	0.220	0.050	0.050	0.030	0.070	0.035	0.000	0.0000	0.0000	0.0210	0.39

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 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.

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).

EMAILED TO HUMBERTO DEL CASTILLO  
 RE: PO#1459/TFA #135900  
 26 PCS



*[Signature]*  
 John Peachey, Mgr. Quality Assurance