

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: P578
 Grade: WPB
 TFA Part ID: 20109
 Description: 4 XH CAP
 Quantity: 1
 Mill: NUCOR
 Mill Heat : A5P0820
 Process: WPB-C43
 Customer Part ID:

Test Bar Type: ROUND
 Yield (PSI): 55100
 Tensile (PSI): 84000
 % Elong In 4D: 32.00
 B.H.N. :
 Tensile Orientation: TRANS

C	MN	P	S	SI	MO	CR	NI	CU	V	CB	B	TI	AL	C.E.
0.220	1.080	0.012	0.008	0.210	0.021	0.070	0.080	0.220	0.003	0.000				0.44

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 COLD FORMED AND STRESS RELIEVED AT 1225F AND AIR COOLED. 2. THE HARDNESS DOES NOT EXCEED 197 BHN PART TO PART. 3. STARTING MATERIAL IS PLATE. 4. THIS PRODUCT IS SEAMLESS.

THE MATERIAL IS MANUFACTURED TO ASTM A 234 GR WPB REV: 05, ALSO PER ASME SEC II SA 234 GR WPB,2004 EDITION THRU ALL ADDENDAS AT TIME OF ORDER. 2. DESIGN AND DIMENSIONS TO ASME B16.9-2003 OR MSS-SP-75-04 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).

Heat Code: P578 Grade WPB

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Certificate: 30248



John Peachey
 John Peachey, Mgr. Quality Assurance