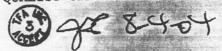




QUALITY CERTIFICATE



Tube Forgings of America, Inc. 5200 NW Front Avenue Portland, OR 97210 ISO 9001-2000 Certified 8/4/2004

PLESA ANÁHUAC, S.A DE C.V. Sold To:

AV. VALLE DE LAS ALAMEDAS NO. 66-2

TULTITLAN, EDO., MEX. C. P.54940

129471 TFA Sales Order: 38350 Customer ID:

Customer PO Reference: Attention To:

SPECIALISTS IN TRANSIT Ship To:

FORWARDING

1801 MARKLEY MODERN INDUSTRIAL

PARK

LAREDO, TX 78041

STRIP Test Bar Type:

56768 Yield (PSI): 77307 Tensile (PSI): 41.00 % Elong In 2"

8270

B.H.N.: 144 LONG Tensile Orientation:

TFA Heat Code: Grade:

WPB 00019

M850

TFA Part ID: Description:

20 STD LR 90

Quantity:

Mill: TAMSA

Mill Heat: Process:

98659 WPB-H1

**Customer Part ID:** 

Cubeom							1,100	1000年	TARKWOOD DEST	-					4
6	MN	D	C	ST	мо	CR	NI	CU	V	СВ	В	TI	AL	C.E.	
C	IVIII	I	3	- VA	AVA			1 - Agentin	Explosion or				0.0010	0206	1
0.180	1.090	0.014	0.003	0.250	0.017	0.040	0.030	0.057	0.035	0.000	0.0000	0.0000	0.0210	0.300	

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

1. THESE FITTINGS WERE HOT FORMED BETWEEN 1150FAND1800F AND AIR COOLED. 2. THE HARDNESS DOES NOT EXCEED 197 BHN PART TO PART. 3. STARTING MATERIAL IS SEAMLESS PIPE WHICH MEETS THE MELTING, CHEMICAL AND PHYSICAL REQUIREMENTS OF ASTM A 106 GR B. 4. THIS PRODUCT IS SEAMLESS.

THE MATERIAL IS MANUFACTURED TO ASTM A 234 GR WPB FROM THE 2001 VOLUME, REV: 00, ALSO PER ASME SEC II SA 234 GR WPB, 1998 EDITION THRU ALL ADDENDAS AT TIME OF ORDER, 2, DESIGN AND DIMENSIONS TO ASME B16.9-2001 OR MSS-SP-75-98 AS APPLICABLE BY DESIGN. 3.PER NACE MR-01-75, 2002 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: M850 Grade WPB

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Certificate: 30248

John Peachey, Mgr. Quality Assurance