



TTU INDUSTRIAL CORP., LTD.

TTU Fittings

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MANUFACTURER'S CERTIFICATE

(Mill Test Certificate) DIN 50049-3.1-B / EN 10204-3.1

Purchaser	: PLESA ANAHUAC T CIAS.,SA DE C.V	Certificate No	: 140036
Product	: Seamless Steel Welding Fittings	Order No	: PO. 17201
Specification	: ASTM A-234 WPB – 2011A	Date	: JANUARY 9, 2014
	: ASME SA234 WPB	L/C No	: M930449

Raw Material Standard	Inspection Standard	Visual Inspection		Dimension Inspection	
PIPE : ASTM A106B/A53B/API5LB PLATE : ASTM A516 Gr 50 / 60	ANSI B16.9 ANSI B16.28	PASS		PASS	
Product & Size (inch)		Heat ID.	Quantity	Heat NO.	Raw Material Maker
1 45 ELBOW LR S80 24"	24"	411051	2	YZL-09051-08	2554-1051
2 90 ELBOW LR S80 24"	24"	411051	2	YZL-09051-08	2554-1051

Standard	Chemical Composition %												Mechanical Test			Average Hardness	CE Long Formula
	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Nb	Al	YS	TS	E		
	x 100	x 100	x 100	x 1000	x 1000	x 100	x 100	x 100	x 100	x 100	x 100	x 1000	x 1000	psi	psi	%	Hb
Min.	-	10	29	-	-	-	-	-	-	-	-	-	35,000	60,000	TRANSVERSE		
Max.	30	-	106	48	58	40	40	40	15	8	-	50	-	85,000	30	197	42
1	21	29	84	13	14	7	4	2	1	1	1	2	47930	68770	32134	169	37
2	21	29	84	13	14	7	4	2	1	1	1	2	47930	68770	32134	169	37

- We hereby certify that the products described herein have been manufactured, inspected and conforms to standard as specified above.
- ALL FITTINGS ARE HEAT TREATED TO MEET NACE MR0175-03 STANDARD SPECIFICATION AT 650-680 C x 1.0 HR.
- CE = C + (Mn/6) + (Cr + Mo + V)/5 + (Ni+Cu)/15
- ALL TEES ARE TESTED BY MAGNETIC PARTICLE EXAMINATION (MT)


 Chief of Quality Assurance Dept