



TTU INDUSTRIAL CORP., LTD.

TTU Fittings

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MANUFACTURER'S CERTIFICATE

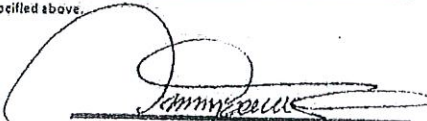
(Mill Test Certificate) DIN 50049-3.1-B / EN-10204-3.1

Purchaser : PLESA ANAHUAC Y CIAS., SA DE C.V. Certificate No : 130513
 Product : CARBON STEEL FITTINGS Order No : PO. 16082
 Specification : ASTM A-234 WPB / NACE MR -01-75 Date : AUGUST 10, 2013
 : ASME SA234 WPB L/C No : M929849

Raw Material Standard	Inspection Standard	Visual Inspection		Dimensional Inspection	
PIPE : ASTM A108 B / 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 SCH80 4"		38324	200	D1-9568	2554-324

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	x	x	x	x	x	x	x	x	x	x	x	psi	psi	%		
Min.	100	100	100	1000	1000	100	100	100	100	100	1000	1000	35,000	60,000	30	-	-
Max.	30	-	106	48	58	40	40	40	15	8	-	50	-	85,000	-	197	42
1	19	20	52	17	3	3	1	3	-	-	-	-	50400	73200	38	142	39

- * 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)/16
- * ALL TEES ARE TESTED BY MAGNETIC PARTICLE EXAMINATION (MT)


 Chief of Quality Assurance Dept