



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	: 1301052
Product	: CARBON STEEL FITTINGS	Order No	: PO. 13745
Specification	: ASTM A-234 WPB/NACE MR-01-75	Date	: FEBRUARY 25, 2013
	: ASME SA234 WPB	L/C No	: M929152

Raw Material Standard	Inspection Standard	Visual Inspection	Dimensional Inspection
PIPE : ASTM A106 B / A53B / API5L B 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 90 ELBOW LR STD 10"	29815	24	1107003	2554-815
2 90 ELBOW LR STD 12"	32807	40	671355	2554-807
3 90 ELBOW LR STD 16"	32318	2	0844607	2554-318
4 90 ELBOW LR STD 20"	33953	24	521353	2554-953

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 10000	x 1000	x 100	x 100	x 100	x 100	x 100	x 1000	x 1000	psi	psi	%	Hb	x 100
Min.	-	10	29	-	-	-	-	-	-	-	-	-	35,000	60,000	30	-	-
Max.	30	-	106	48	68	40	40	40	16	8	-	50	-	85,000	-	197	42
1	19	24	51	14	7	11	10	9	-	-	-	-	47100	69600	37	141	39
2	19	21	57	16	7	6	2	4	-	-	-	-	40400	65400	38	164	30
3	20	23	50	12	10	10	4	4	-	-	-	-	45700	67500	33	140	36
4	19	24	49	2	2	2	2	6	-	-	-	-	38200	68900	33	155	27

- 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 640-680 C x 1.0 HR
- CE = C + (Mn/5) + (Cr + Mo + V)/5 + (Ni-Cu)/16
- ALL TEES ARE TESTED BY MAGNETIC PARTICLE EXAMINATION (MT)


 Chief of Quality Assurance Dept