



# 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	: 140015
Product	: CARBON STEEL FITTINGS MADE FROM SEAMLESS PIPES	Order No	: PO. 17201
Specification	: ASTM A-234 WPB - 2011A	Date	: DECEMBER 28, 2013
	: ASME SA234 WPB	L/C No	: M930449

Raw Material Standard	Inspection Standard	Visual Inspection		Dimensional Inspection
PIPE : ASTM A108 B / A53B / API5L B PLATE : ASTM A516 Gr 50 / 50	ANSI B16.9 ANSI B16.28	PASS		PASS
Product & Size (Inch)	Heat ID.	Quantity	Heat NO.	Raw Material Maker
1 CAP SCH40 3"	39498	100	243498	050694
2 CAP SCH40 4"	39516	100	243516	050695
3 CAP SCH40 5"	41516	10	243516	050695
4 CAP SCH40 6"	38953	100	488953	545370
5 CAP SCH40 8"	41953	50	488953	545370
6 CAP SCH40 10"	41442	20	232442	050696
7 CAP STD 12"	32442	2	232442	050696
8 CAP STD 16"	35442	10	232442	050696
9 CAP STD 24"	36442	8	232442	050696
10 CAP STD 24"	41442	3	232442	050696
11 CAP STD 24"	41442	4	232442	050696

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	TRANSVERSE 17		
Max.	30	-	106	48	58	40	40	40	15	8	-	50	-	85,000		197	42
1	14	21	74	12	14	0	2	2	0	0	-	-	48100	71600	34	154	27
2	14	21	79	14	14	0	0	2	0	0	-	-	45900	68700	27	153	28
3	14	21	79	14	14	0	0	2	0	0	-	-	45900	68700	27	153	28
4	15	37	91	21	14	0	0	0	0	0	-	-	46900	69000	24	158	30
5	15	37	91	21	14	0	0	0	0	0	-	-	46900	69000	24	158	30
6	18	19	80	16	11	0	0	0	0	0	-	-	49300	71700	27	162	31
7	18	19	80	16	11	0	0	0	0	0	-	-	49300	71700	27	162	31
8	18	19	80	16	11	0	0	0	0	0	-	-	49300	71700	27	162	31
9	18	19	80	16	11	0	0	0	0	0	-	-	49300	71700	27	162	31
10	18	19	80	16	11	0	0	0	0	0	-	-	49300	71700	27	162	31
11	18	19	80	16	11	0	0	0	0	0	-	-	49300	71700	27	162	31

COUNTRY OF EXPORT : THAILAND  
 COUNTRY OF ORIGIN : THAILAND  
 VALUE OF THE PO 17201 - US\$94,159.70

- 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 850-880 C x 1.0 HR.
- CE = C + (Mn/0) + (Cr + Mo + V)/5 + (Ni+Cu)/15
- ALL TEES ARE TESTED BY MAGNETIC PARTICLE EXAMINATION (MT)

Chief of Quality Assurance Dept