



Head Office : 395/5 Silom Road, BangRak, Bangkok 10500, Thailand. Tel: (662)-2377230-40 Fax : (662)-2366627, 2377241
 Production Plant : 33/3 GP. 7, Soi Pon-Chareon, K.M. 16.5 Bangna-Trad Road, Bangplee, Samutprakan 10540, Thailand
 website : www.ttu.co.th email address : sale001.ttu@ttugroup.com, chris.ws@ttugroup.com

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	: 140426
Product	: SEAMLESS STEEL WELDING FITTING	Order No	: PO. 18799
Specification	: ASTM A-234 WPB – 2011A	Date	: JULY 28, 2014
	: ASME SA234 WPB	L/C No	: T/T

Raw Material Standard	Inspection Standard	Visual Inspection	Dimensional Inspection
PIPE : ASTM A106 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	Net Wts KG
1 90 ELBOW LR STD 8"	48814	227	1107015	2554-814	4737.49
2 90 ELBOW LR STD 10"	48815	50	1107003	2554-815	1849.00
3 90 ELBOW LR STD 18"	48952	4	836981	2554-952	452.00
4 90 ELBOW LR SCH40 18"	48514	2	1036740	2554-514	226.00
5 90 ELBOW LR SCH40 16"	48511	1	1036925	2554-511	118.00
6 45 ELBOW LR STD 12"	43807	8	671365	2554-807	216.00
7 45 ELBOW LR STD 12"	47807	14	671365	2554-807	378.00
8 45 ELBOW LR STD 16"	47318	37	0844607	2554-318	133.80
9 45 ELBOW LR STD 16"	48318	7	0844607	2554-318	312.20
10 45 ELBOW LR SCH40 16"	47511	5	1036925	2554-511	295.00
11 90 ELBOW SR STD 6"	48302	37	08-1-0110	2554-302	255.30
12 TEE STD 24"	48862	2	208-15	2554-862	380.00

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 1000	x 1000	psi	psi	%	Hb	x 100
Min.	-	10	29	-	-	-	-	-	-	-	-	-	35,000	60,000	30	-	-
Max.	30	-	106	48	58	40	40	40	15	8	-	50	-	85,000	-	197	42
1	19	25	50	15	9	7	4	9	-	-	-	-	47500	70700	35	147	30
2	19	24	51	14	7	11	10	9	-	-	-	-	47100	69600	37	141	39
3	21	25	51	2	1	2	2	5	-	-	-	-	39800	68900	32	145	30
4	22	29	41	13	7	8	3	5	1	<1	2	1	38400	66700	37	145	31
5	22	21	40	10	3	5	3	3	1	<1	2	1	40600	65300	44	165	30
6	19	21	57	16	7	6	2	4	-	-	-	-	40400	65400	38	164	30
7	19	21	57	16	7	6	2	4	-	-	-	-	40400	65400	38	164	30
8	20	23	50	12	10	10	4	4	-	-	-	-	45700	67500	33	140	36
9	20	23	50	12	10	10	4	4	-	-	-	-	45700	67500	33	140	36
10	22	21	40	10	3	5	3	3	1	<1	2	1	40600	65300	44	165	30
11	18	23	52	25	7	11	4	9	-	-	-	-	50000	71400	36	101	35
12	19	21	52	14	10	14	6	6	-	-	-	-	46800	68200	35	160	30

COUNTRY OF EXPORT : THAILAND
 COUNTRY OF ORIGIN : THAILAND

- * 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