



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

Table with 4 columns: Purchaser, Product, Specification, Certificate No, Order No, Date, L/C No. Values include PLESA ANAHUAC Y CIAS. SA DE C.V., CARBON STEEL FITTINGS MADE FROM SEAMLESS PIPES, ASTM A-234 WPB - 2011A, ASME SA234 WPB, 140012 Page 1/5, PO. 17201, DECEMBER 28, 2013, M930449.

Table with 4 columns: Raw Material Standard, Inspection Standard, Visual Inspection, Dimensional Inspection. Values include PIPE : ASTM A106 B / A53B / API5LB, ANSI B16.9, ANSI B16.28, PASS, PASS.

Table with 5 columns: Product & Size (inch), Heat ID., Quantity, Heat NO., Raw Material Maker. Lists 11 items such as 90 ELBOW LR SCH40, 45 ELBOW LR SCH40, TEE SCH40, CON RED SCH40 with their respective quantities and heat numbers.

Table with 18 columns: Standard, Chemical Composition %, Mechanical Test, Average Hardness, CE Long Formula. Includes rows for Min. and Max. values and a detailed list of 11 items with their chemical and mechanical properties.

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)

Handwritten signature and blue circular stamp of the Chief of Quality Assurance Dept.

Chief of Quality Assurance Dept



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Purchaser : PLESA ANAHUAC Y CIAS. SA DE C.V. Certificate No : 140012 Page 2/5
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

Table with 4 columns: Raw Material Standard, Inspection Standard, Visual Inspection, Dimensional Inspection. Rows include specifications for PIPE and PLATE, and inspection results (ANSI B16.9, ANSI B16.28, PASS).

Table with 5 columns: Product & Size (inch), Heat ID., Quantity, Heat NO., Raw Material Maker. Lists 11 items including CON RED SCH40, CON RED STD, ECC RED STD, and 90 ELBOW LR SCH80.

Table with 17 columns: Standard, Chemical Composition %, Mechanical Test, Average Hardness, CE Long Formula. Includes rows for Min. and Max. values and a detailed list of 11 items with their respective chemical and mechanical properties.

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Table with 4 columns: Field (Purchaser, Product, Specification), Value (PLESA ANAHUAC Y CIAS. SA DE C.V., CARBON STEEL FITTINGS MADE FROM SEAMLESS PIPES, ASTM A-234 WPB - 2011A, ASME SA234 WPB), Certificate No (140012 Page 3/5), Order No (PO. 17201), Date (DECEMBER 28, 2013), L/C No (M930449)

Table with 4 columns: Raw Material Standard (PIPE: ASTM A106 B/ A53B / API5LB, PLATE: ASTM A516 Gr 50 / 60), Inspection Standard (ANSI B16.9, ANSI B16.28), Visual Inspection (PASS), Dimensional Inspection (PASS)

Table with 5 columns: Product & Size (inch), Heat ID., Quantity, Heat NO., Raw Material Maker. Lists 5 items including 90 ELBOW LR SCH80, 45 ELBOW LR SCH80, 45 ELBOW LR SCH80, TEE SCH80, TEE SCH80.

Table with 17 columns: Standard, Chemical Composition % (C, Si, Mn, P, S, Cu, Ni, Cr, Mo, V, Nb, Al), Mechanical Test (YS, TS, E), Average Hardness (Hb), CE Long Formula (x 100). Includes Min. and Max. values and a detailed data table for 5 items.

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Table with 5 columns: Raw Material Standard, Inspection Standard, Visual Inspection, Dimensional Inspection, Product & Size (inch), Heat ID., Quantity, Heat NO., Raw Material Maker. Includes rows for CAP SCH40 and CAP STD with various sizes and quantities.

Table with 18 columns: Standard, Chemical Composition %, Mechanical Test, Average Hardness, CE Long Formula. Includes rows for Min. and Max. values and a list of 11 items with their respective chemical and mechanical properties.

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Purchaser	: PLESA ANAHUAC Y CIAS. SA DE C.V.	Certificate No	: 140012 Page 5/5
Product	: CARBON STEEL FITTINGS MADE FROM SEAMLESS	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 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
1 CAP SCH80 3"	41953	20	488953	545370
2 CAP SCH80 6"	41398	20	594398	619536
3 CAP SCH80 8"	41398	10	594398	619536
4 CAP XH 12"	41398	10	594398	619536

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	x	psi	psi	%	Hb	x 100
Min.	-	10	29	-	-	-	-	-	-	-	-	-	-	35,000	60,000	TRANSVERSE 17		
Max.	30	-	106	48	58	40	40	40	15	8	-	50	-	-	85,000		197	42
1	15	37	91	21	14	0	0	0	0	0	-	-	46900	69000	24	158	30	
2	13	24	89	20	10	0	0	0	0	0	-	-	42900	65600	29	168	28	
3	13	24	89	20	10	0	0	0	0	0	-	-	42900	65600	29	168	28	
4	13	24	89	20	10	0	0	0	0	0	-	-	42900	65600	29	168	28	

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