Tubacero
Ave. Guerrero
No. 3729 nte.
Col. Del Norte
Monterrey N.L. México
CP.64500
TEL:3055555
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CERTIFICADO DE TUBERIA

PIPE CERTIFICATE

No.CERTIFICADO(certificate No.): **080378**

CLIENTE(customer): PLESA ANÁHUAC Y CÍAS., S.A. DE C.V.

DIRECCION(address): AV. VALLE DE LAS ALAMEDAS # 66- O COL. SAN FCO. CHILPAN TULTITLÁN, EDO. DE MEXICO. C.P. 54940

O.T. (order no.)	DIAMETRO (outside diam.)	ESPESOR (thickness)	GRADO (grade)	ESPECIFICACION (specification)	PROCESO (process)	PEDIDO (contract)	O. PREPARACION (preparation order)	PROVEEDOR (supplier)	FECHA (date)
33430	12.750"	0.250"	X42/5LB/A53B	API 5L 43 ED/A.S.T.M.	ERW	4551	TB-083-2008	APM	19/05/2008

TUBO (pipe) O SERIE (SERIAL)	COLADA (heat)	TYPE	LOC	PRUEBA DE TENSION(tensile test) UNIDADES (units)	ORIENTACION (orientation)	TAMAÑO (size)		BEND	HARDNESS	PRUEBA DE IMPACTO (impact test) °C °F ORIENTACION (orientation)				TAMAÑO (size)				DWTT			GRAIN SIZE
				PSI (Y.S.)	1 (T.S.)	3 % EL.	Y.S/T.S.			ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	SHEAR AREA 1	2	AVG	
302	ZZ0025918	H	6		76000																
			7	56100	71400	37	0.79														
81	ZZ0025919	H	6		68800																
			7	55200	70000	35	0.79														
214	0613610	H	6		66600																
			7	50800	65600	40	0.78														
443	0612928	H	6		71400																
			7	52100	69900	40	0.75														

(%)ANALISIS QUIMICO / chemical analysis (%)

TYPE	LOC	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Als	Ca	PCM	CE
H	7	0.21	0.81	0.010	0.011	0.205	0.052	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.80	0.009	0.010	0.200	0.050	0.012	0.020	0.020	0.002	0.002	0.002	0.0001	0.001	-	-	0.001	0.23	0.32
P	7	0.18	0.78	0.008	0.009	0.200	0.051	0.010	0.018	0.018	0.001	0.002	0.001	0.0002	0.001	-	-	0.001	0.23	0.32
H	7	0.19	0.72	0.012	0.011	0.201	0.051	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.70	0.010	0.010	0.197	0.050	0.010	0.010	0.009	0.001	0.002	0.002	0.0002	0.001	-	-	0.001	0.19	0.27
P	7	0.14	0.68	0.011	0.012	0.195	0.048	0.010	0.010	0.009	0.001	0.003	0.002	0.0004	0.001	-	-	0.001	0.18	0.26
H	7	0.20	0.69	0.011	0.005	0.158	0.035	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.68	0.010	0.003	0.156	0.034	0.010	0.020	0.021	0.002	0.005	0.001	0.0002	0.001	-	-	0.001	0.22	0.30
P	7	0.16	0.66	0.010	0.002	0.152	0.032	0.010	0.020	0.022	0.001	0.005	0.001	0.0002	0.001	-	-	0.001	0.20	0.28
H	7	0.19	0.76	0.010	0.004	0.156	0.032	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.72	0.010	0.003	0.152	0.030	0.012	0.010	0.020	0.002	0.001	0.001	0.0001	0.001	-	-	0.001	0.22	0.30
P	7	0.17	0.72	0.008	0.002	0.150	0.028	0.011	0.012	0.018	0.001	0.002	0.001	0.0002	0.002	-	-	0.001	0.21	0.29

PRUEBA HIDROSTATICA: (hidrostatic test) — PRESION: (pressure) 1400 Psi — TIEMPO: (time) 10 sec

ULTRASONIDO(U.T.): (ultrasonic) — STANDARD DE REFERENCIA: REFERENCE STANDARD J

RAYOS-X (RT): (x-ray) — PENETROMETRO (penetrometer): N/A

NORMALIZADO DE SOLDADURA: (heat treatment weld) — TEMPERATURA (temperature): 1600° F MIN

REFERENCE STANDARD — F: U.T. DRILLED HOLE 1/16", G: U.T. DRILLED HOLE 1/8", I: U.T. NOTCH N-5, J: U.T. NOTCH N-10 L: RT HOLE 1/16", N: RT HOLE 2-2T O: RT HOLE 2-4T

ORIENTACION(orientation):
1. TRANSVERSAL (transverse)
2. LONGITUDINAL (longitudinal)

TAMAÑO (size)
3.RECTANGULAR(rectangular)
4.CILINDRICA(round bar) 0.500"
5.CILINDRICA(round bar) 0.350"

LOCALIZACION (location)
6. SOLDADURA (weld)
7. METAL BASE (base metal)
8. ZONA AFECTADA (h.a.z.)
9. LINEA DE FUSION (fusion line)

TIPO DE PRUEBA (type)
H: COLADA (heat)
P: PRODUCTO (product)
R: REMUESTREO (recheck)

CERTIFICAMOS QUE EL MATERIAL DESCRITO HA SIDO HECHO DE ACUERDO CON LA ESPECIFICACION MENCIONADA Y QUE LOS RESULTADOS SON COMO APARECEN EN LOS REGISTROS DE LA COMPAÑIA
(WE HEREBY CERTIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MADE IN ACCORDANCE WITH THE SPECIFICATION MENTIONED AND THAT THESE TEST RESULT ARE AS THEY APPEAR IN RECORDS OF THE COMPANY)

Control de Calidad (Quality Control)

CONTROL DE CALIDAD TUBACERO, S.A. DE C.V. 04

REV. 2 May-07

F-TUME-013