Tubacero
Ave. Guerrero
No. 3729 nte.
Col. Del Norte
Monterrey N.L. México
CP.64500
TEL:3055555
FAX:3055580

CERTIFICADO DE TUBERIA

PIPE CERTIFICATE

No.CERTFICADO(certificate No.): **070217**

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 MÉXICO. 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)
33409	10.750"	0.365"	A53B/5LB/X42	API 5L 43ED/ASTM	ERW	2621	B-046-2007	APM	24/02/2007

TUBO (pipe)	COLADA (heat)	TYPE	LOC	PRUEBA DE TENSION(tensile test) UNIDADES: (units) PSI (Y.S.)	ORIENTACION: (orientation) 1 (T.S.)	TAMAÑO: (size) 3 % EL.	Y.S/T.S.	BEND	HARDNESS H	PRUEBA DE IMPACTO (impact test) °C °F ORIENTACION (orientation) TAMAÑO: (size) 1:1 ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	DWTT °C °F SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		79500																
18	0641035	H	7	57900	72600	41	0.79														
			6		72800																
35	0631082	H	7	52100	66700	40	0.78														
			6		74300																
105	0621047	H	7	50600	65800	42	0.76														
			6		71900																
118	0631086	H	7	49800	65400	41	0.76														
			6		72800																
130	0631083	H	7	53200	67700	40	0.76														

(%)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	0.17	0.74	0.010	0.004	0.169	0.043	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.68	0.014	0.010	0.150	0.045	0.016	0.003	0.024	0.003	0.001	0.001	0.0002	0.002	-	-	0.002	0.19	0.27
P	7	0.13	0.66	0.014	0.009	0.170	0.049	0.015	0.003	0.022	0.003	0.001	0.001	0.0002	0.002	-	-	0.003	0.17	0.24
H	7	0.18	0.68	0.011	0.003	0.143	0.042	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.13	0.60	0.013	0.006	0.230	0.061	0.012	0.003	0.016	0.003	0.002	0.001	0.0002	0.002	-	-	0.006	0.17	0.23
P	7	0.10	0.58	0.012	0.005	0.250	0.065	0.011	0.002	0.014	0.003	0.002	0.002	0.0002	0.002	-	-	0.007	0.14	0.20
H	7	0.19	0.66	0.013	0.002	0.207	0.038	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.11	0.69	0.011	0.004	0.270	0.069	0.010	0.005	0.012	0.003	0.001	0.001	0.0002	0.002	-	-	0.008	0.16	0.23
P	7	0.09	0.66	0.010	0.003	0.290	0.073	0.009	0.006	0.010	0.003	0.002	0.002	0.0002	0.002	-	-	0.009	0.13	0.20
H	7	0.17	0.69	0.011	0.004	0.205	0.051	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.16	0.63	0.011	0.002	0.162	0.030	0.015	0.003	0.004	0.001	0.001	0.001	0.0002	0.002	-	-	0.002	0.20	0.27
P	7	0.14	0.61	0.009	0.002	0.151	0.032	0.016	0.003	0.024	0.001	0.001	0.001	0.0002	0.002	-	-	0.003	0.18	0.25
H	7	0.17	0.68	0.012	0.004	0.205	0.051	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.16	0.64	0.008	0.002	0.161	0.033	0.012	0.002	0.021	0.002	0.001	0.001	0.0002	0.002	-	-	0.002	0.20	0.27
P	7	0.15	0.63	0.009	0.002	0.174	0.032	0.013	0.004	0.023	0.003	0.001	0.001	0.0002	0.002	-	-	0.002	0.19	0.26

PRUEBA HIDROSTATICA: (hidrostatic test) PRESION: (pressure) 2420 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

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) 1½"
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 APPER IN RECORDS OF THE COMPANY).

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

Control de Calidad (Quality Control)

REV.1 Sep-99

F-TUME-013