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.CERTIFICADO(certificate No.): **070074**

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)
33431	12.750"	0.406"	X-42/5LB/ A53B	API 5L 43 ED/A.S.T.M.	ERW	2189	B-306-2006	APM	24/01/2007

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	PRUEBA DE IMPACTO (impact test) °C °F ORIENTACION (orientation) ENERGY (lbs/ft) 1	2	3	AVG	TAMAÑO: (size) SHEAR AREA 1	2	3	AVG	DWTT: SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		73900																
444	0642943	H	7	52700	67400	42	0.78														
			6		83500																
30	ZZ0025919	H	7	53300	71100	44	0.75														
			6		86000																
15	ZZ0025920	H	7	56700	75600	36	0.75														
			6		85800																
81	ZZ0025918	H	7	60300	79900	35	0.76														
			6		74200																
130	0633044	H	7	52400	68800	46	0.76														
			6		79900																
163	ZZ0025916	H	7	54300	73200	37	0.74														
			6		72200																
33	ZZ0025917	H	7	55300	72500	38	0.76														
			6		77700																
194	0642942	H	7	52200	70300	40	0.74														

(%)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	0.18	0.74	0.010	0.004	0.147	0.036	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.19	0.69	0.030	0.015	0.198	0.032	0.010	0.001	0.011	0.001	0.002	0.003	0.0007	0.001	-	-	0.005	0.24	0.31
P	7	0.19	0.69	0.030	0.015	0.198	0.032	0.010	0.001	0.011	0.001	0.002	0.003	0.0007	0.001	-	-	0.006	0.24	0.31
H	7	0.19	0.72	0.012	0.011	0.201	0.051	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.69	0.001	0.003	0.220	0.070	0.035	0.002	0.012	0.001	0.002	0.002	0.0004	0.001			0.028	0.20	0.27
P	7	0.20	0.68	0.001	0.002	0.210	0.070	0.031	0.002	0.010	0.001	0.002	0.002	0.0006	0.001			0.007	0.25	0.32
H	7	0.20	0.75	0.014	0.013	0.195	0.044	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.69	0.010	0.012	0.219	0.065	0.035	0.002	0.010	0.001	0.002	0.002	0.0004	0.001	-	-	0.006	0.20	0.27
P	7	0.20	0.68	0.012	0.012	0.212	0.071	0.031	0.002	0.010	0.001	0.002	0.002	0.0006	0.001	-	-	0.007	0.25	0.32
H	7	0.21	0.81	0.010	0.011	0.205	0.052	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.72	0.012	0.013	0.171	0.035	0.010	0.001	0.011	0.001	0.002	0.001	0.0002	0.001	-	-	0.004	0.22	0.30
P	7	0.16	0.72	0.010	0.015	0.170	0.033	0.012	0.001	0.011	0.001	0.001	0.002	0.0001	0.001	-	-	0.003	0.20	0.28
H	7	0.18	0.71	0.013	0.003	0.184	0.034	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.64	0.012	0.002	0.175	0.032	0.012	0.001	0.010	0.001	0.002	0.001	0.0005	0.002	-	-	0.003	0.22	0.29
P	7	0.18	0.65	0.012	0.002	0.174	0.031	0.011	0.002	0.010	0.002	0.001	0.001	0.0005	0.001	-	-	0.002	0.22	0.29
H	7	0.19	0.67	0.013	0.022	0.163	0.046	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.16	0.64	0.012	0.020	0.160	0.040	0.012	0.002	0.011	0.002	0.002	0.002	0.0004	0.002	-	-	0.004	0.20	0.27
P	7	0.17	0.62	0.011	0.018	0.157	0.038	0.011	0.001	0.001	0.002	0.001	0.002	0.0005	0.002	-	-	0.003	0.21	0.28
H	7	0.21	0.73	0.011	0.012	0.209	0.070	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.72	0.010	0.009	0.208	0.076	0.010	0.001	0.009	0.001	0.001	0.001	0.0002	0.001	-	-	0.005	0.22	0.30
P	7	0.18	0.72	0.010	0.009	0.175	0.075	0.010	0.001	0.009	0.001	0.003	0.002	0.0004	0.001	-	-	0.005	0.22	0.30
H	7	0.19	0.75	0.012	0.003	0.168	0.027	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.19	0.76	0.010	0.003	0.160	0.025	0.017	0.001	0.011	0.001	0.001	0.001	0.0006	0.001			0.004	0.24	0.32
P	7	0.17	0.78	0.010	0.002	0.150	0.024	0.016	0.002	0.010	0.001	0.002	0.002	0.0005	0.001			0.003	0.22	0.30

PRUEBA HIDROSTATICA: (hidrostatic test) PRESION: (pressure) 2270 Psi TIEMPO: (time) 10 sec

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

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 V-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)

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