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.): **070098**

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

DIRECCION(address): AV. VALLE DE LAS ALAMEDAS # 66 0 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)
33429	12.750"	0.225"	X-42/5LB/ A53B	API 5L 43 ED/A.S.T.M.	ERW	2437	B-010-2007	APM	29/01/2007

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) TAMAÑO: (size) ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	DWTT SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		72700																
593	NA0563919	H	7	52800	69100	40	0.77														
			6		76300																
929	0612928	H	7	51400	67900	40	0.76														
			6		74900																
687	NA6563916	H	7	52300	69400	40	0.75														
			6		71200																
643	ZZ0025916	H	7	50500	67300	35	0.75														
			6		72700																
117	0633042	H	7	50900	69700	39	0.73														
			6		70200																
162	NA1563913	H	7	50600	67300	41	0.75														
			6		67000																
422	NA9563923	H	7	43800	61900	39	0.71														
			6		69700																
514	NA1563927	H	7	49600	66400	37	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	0.18	0.71	0.013	0.014	0.170	0.042	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.68	0.012	0.012	0.168	0.040	0.010	0.014	0.015	0.002	0.002	0.001	0.0002	0.002	-	-	0.001	0.19	0.27
P	7	0.14	0.67	0.011	0.012	0.164	0.041	0.010	0.013	0.015	0.002	0.002	0.001	0.0001	0.002	-	-	0.001	0.18	0.26
H	7	0.18	0.71	0.013	0.003	0.184	0.034	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.68	0.012	0.003	0.180	0.030	0.010	0.013	0.020	0.001	0.001	0.001	0.0001	0.001	-	-	0.001	0.19	0.27
P	7	0.16	0.67	0.013	0.003	0.179	0.032	0.011	0.013	0.021	0.001	0.001	0.001	0.0002	0.001	-	-	0.001	0.20	0.28
H	7	0.18	0.67	0.014	0.015	0.160	0.046	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.65	0.013	0.014	0.158	0.042	0.012	0.010	0.020	0.002	0.001	0.001	0.0001	0.001	-	-	0.001	0.19	0.26
P	7	0.16	0.64	0.012	0.013	0.155	0.042	0.011	0.012	0.018	0.001	0.002	0.001	0.0002	0.002	-	-	0.001	0.20	0.27
H	7	0.19	0.67	0.013	0.022	0.163	0.046	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.64	0.012	0.020	0.162	0.042	0.010	0.012	0.014	0.002	0.001	0.001	0.0002	0.001	-	-	0.001	0.22	0.29
P	7	0.16	0.64	0.011	0.020	0.160	0.041	0.011	0.013	0.016	0.001	0.001	0.001	0.0002	0.001	-	-	0.001	0.20	0.27
H	7	0.19	0.65	0.012	0.003	0.147	0.034	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.60	0.010	0.003	0.145	0.032	0.010	0.020	0.024	0.002	0.004	0.001	0.0002	0.001	-	-	0.001	0.19	0.26
P	7	0.17	0.62	0.012	0.002	0.143	0.031	0.011	0.020	0.023	0.002	0.004	0.001	0.0001	0.001	-	-	0.001	0.21	0.28
H	7	0.18	0.70	0.014	0.015	0.180	0.052	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.16	0.70	0.012	0.014	0.175	0.050	0.010	0.020	0.021	0.002	0.005	0.001	0.0002	0.001	-	-	0.001	0.20	0.28
P	7	0.15	0.68	0.013	0.014	0.174	0.049	0.010	0.020	0.022	0.001	0.005	0.001	0.0002	0.001	-	-	0.001	0.19	0.27
H	7	0.19	0.71	0.014	0.012	0.170	0.054	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.70	0.012	0.010	0.168	0.051	0.010	0.019	0.019	0.001	0.003	0.001	0.0001	0.002	-	-	0.001	0.22	0.30
P	7	0.17	0.69	0.010	0.012	0.168	0.052	0.012	0.020	0.020	0.002	0.003	0.001	0.0001	0.001	-	-	0.001	0.21	0.29
H	7	0.18	0.70	0.012	0.014	0.180	0.048	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.16	0.68	0.010	0.012	0.178	0.046	0.010	0.016	0.016	0.002	0.002	0.001	0.0001	0.002	-	-	0.001	0.20	0.28
P	7	0.15	0.67	0.012	0.013	0.180	0.045	0.010	0.015	0.015	0.002	0.002	0.001	0.0001	0.002	-	-	0.001	0.19	0.27

PRUEBA HIDROSTATICA: (hidrostatic test) PRESION: (pressure) 1260 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 APPER IN RECORDS OF THE COMPANY).

Control de Calidad (Quality Control)

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

REV.1 Sep-99

F-TUME-013