Tubacero
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Col. Del Norte
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CERTIFICADO DE TUBERIA

PIPE CERTIFICATE

No.CERTIFICADO(certificate No.): **080415**

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	4650	TB-103-2008	APM	10/06/2008

TUBO (pipe) O SERIE (SERIAL)	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		76000																
302	ZZ0025918	H	7	56100	71400	37	0.79														
			6		68800																
81	ZZ0025919	H	7	55200	70000	35	0.79														
			6		64300																
76	ZZ0025916	H	7	51300	68800	35	0.75														
			6		66600																
214	0613610	H	7	50800	65600	40	0.78														
			6		74900																
17	ZZ0025917	H	7	55700	72500	35	0.77														

(%)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	0.19	0.67	0.013	0.022	0.163	0.046	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.66	0.012	0.020	0.160	0.042	0.010	0.014	0.015	0.002	0.002	0.001	0.0002	0.002	-	-	0.001	0.22	0.30
P	7	0.17	0.64	0.010	0.021	0.158	0.042	0.010	0.013	0.015	0.002	0.002	0.001	0.0001	0.002	-	-	0.001	0.21	0.28
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	0.21	0.73	0.011	0.012	0.209	0.070	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.70	0.011	0.010	0.206	0.068	0.010	0.010	0.008	0.001	0.002	0.002	0.0003	0.001	-	-	0.002	0.22	0.30
P	7	0.16	0.68	0.009	0.011	0.204	0.066	0.011	0.010	0.008	0.001	0.002	0.002	0.0004	0.001	-	-	0.002	0.20	0.28

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 SHOWN IN RECORDS OF THE COMPANY).

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

Control de Calidad (Quality Control)