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.): **080365**

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

DIRECCION(address): AV. VALLE DE LAS ALAMEDAS # 66-O COL. SAN FCO. CHILPAN TULTILÁN, 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)
33448	14.000"	0.250"	X42/5LB/A53B	API 5L 43 ED/A.S.T.M.	ERW	4551	TB-083-2008	AHMSA	16/05/2008

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		78800																
78	173675	H	7	60400	72700	33	0.83														
			6		72700																
79	173674	H	7	54800	70200	37	0.78														
			6		76400																
210	173676	H	7	54800	71100	38	0.77														
			6		74000																
277	273503	H	7	48700	64200	42	0.75														
			6		80300																
208	173673	H	7	62200	74500	38	0.83														

(%)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	0.16	0.60	0.009	0.006	0.108	0.032	0.030	0.020	0.030	0.005	-	-	-	-	-	-	-	-	0.27
P	7	0.19	0.60	0.010	0.006	0.120	0.039	0.015	0.013	0.025	0.001	0.001	0.001	0.0002	0.001	-	-	0.003	0.23	0.30
P	7	0.18	0.59	0.010	0.007	0.121	0.038	0.016	0.012	0.025	0.001	0.001	0.001	0.0002	0.001	-	-	0.002	0.22	0.29
H	7	0.16	0.58	0.015	0.008	0.129	0.039	0.030	0.030	0.030	0.005	-	-	-	-	-	-	-	-	0.27
P	7	0.20	0.57	0.011	0.008	0.141	0.042	0.018	0.022	0.028	0.001	0.001	0.001	0.0002	0.001	-	-	0.002	0.23	0.30
P	7	0.20	0.57	0.010	0.008	0.134	0.041	0.012	0.022	0.027	0.001	0.001	0.001	0.0002	0.001	-	-	0.002	0.24	0.31
H	7	0.15	0.59	0.014	0.007	0.116	0.034	0.020	0.030	0.020	0.003	-	-	-	-	-	-	-	-	0.26
P	7	0.20	0.58	0.014	0.008	0.127	0.033	0.005	0.022	0.022	0.001	0.001	0.001	0.0002	0.001	-	-	0.002	0.23	0.30
P	7	0.18	0.58	0.011	0.007	0.130	0.034	0.013	0.022	0.022	0.001	0.001	0.001	0.0002	0.001	-	-	0.002	0.22	0.28
H	7	0.15	0.58	0.013	0.005	0.139	0.036	0.020	0.030	0.030	0.001	-	-	-	-	-	-	-	-	0.25
P	7	0.20	0.59	0.014	0.006	0.151	0.044	0.006	0.023	0.025	0.001	0.002	0.001	0.0002	0.001	-	-	0.002	0.23	0.30
P	7	0.18	0.58	0.014	0.007	0.155	0.041	0.015	0.022	0.025	0.001	0.001	0.001	0.0002	0.001	-	-	0.002	0.21	0.28
H	7	0.15	0.60	0.011	0.006	0.128	0.043	0.020	0.020	0.030	0.004	-	-	-	-	-	-	-	-	0.25
P	7	0.18	0.59	0.010	0.008	0.140	0.045	0.008	0.011	0.024	0.001	0.002	0.001	0.0002	0.001	-	-	0.002	0.22	0.29
P	7	0.17	0.59	0.011	0.006	0.139	0.046	0.008	0.011	0.025	0.001	0.002	0.001	0.0002	0.001	-	-	0.002	0.21	0.27

PRUEBA HIDROSTATICA: (hidrostatic test) — PRESION: (pressure) 1280 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 TUBACERO, S.A. DE C.V. 04

Control de Calidad (Quality Control)