Tubacero
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Col. Del Norte
Monterrey N.L. México
CP.64500
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CERTIFICADO DE TUBERIA

PIPE CERTIFICATE

No.CERTIFICADO(certificate No.): **080283**

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)
33457	12.750"	0.250"	X42/5LB/A53B	API 5L 43 ED./A.S.T.M.	ERW	4378	TB-061-2008	AHMSA	07/04/2008

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) TAMAÑO: (size) ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	DWTT SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		71900																
12	175068	H	7	50700	67600	40	0.75														
			6		74000																
48	175066	H	7	49600	65800	36	0.75														
			6		68400																
201	274958	H	7	48600	62900	36	0.77														
			6		74000																
233	175069	H	7	47800	63100	40	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	0.16	0.58	0.018	0.006	0.101	0.020	0.010	0.020	0.020	0.004	-	-	-	-	-	-	-	-	0.27
P	7	0.18	0.58	0.021	0.008	0.118	0.030	0.005	0.014	0.022	0.001	0.002	0.002	0.0002	0.002	-	-	0.002	0.22	0.28
P	7	0.18	0.58	0.024	0.007	0.116	0.031	0.008	0.014	0.021	0.001	0.002	0.002	0.0003	0.002	-	-	0.003	0.22	0.28
H	7	0.15	0.58	0.019	0.008	0.100	0.034	0.020	0.020	0.020	0.005	-	-	-	-	-	-	-	-	0.25
P	7	0.20	0.58	0.019	0.010	0.121	0.048	0.013	0.026	0.024	0.001	0.002	0.002	0.0004	0.002	-	-	0.002	0.23	0.30
P	7	0.20	0.57	0.022	0.011	0.118	0.043	0.013	0.025	0.023	0.001	0.002	0.002	0.0003	0.002	-	-	0.002	0.23	0.30
H	7	0.15	0.59	0.020	0.007	0.065	0.024	0.020	0.020	0.020	0.003	-	-	-	-	-	-	-	-	0.25
P	7	0.21	0.59	0.025	0.008	0.087	0.049	0.014	0.009	0.022	0.001	0.002	0.002	0.0002	0.003	-	-	0.001	0.25	0.31
P	7	0.19	0.58	0.018	0.012	0.093	0.042	0.018	0.009	0.023	0.001	0.002	0.002	0.0003	0.003	-	-	0.003	0.22	0.29
H	7	0.15	0.58	0.022	0.008	0.098	0.024	0.030	0.020	0.020	0.005	-	-	-	-	-	-	-	-	0.26
P	7	0.19	0.58	0.024	0.012	0.120	0.041	0.022	0.017	0.025	0.001	0.002	0.002	0.0004	0.003	-	-	0.003	0.23	0.29
P	7	0.20	0.57	0.025	0.014	0.115	0.034	0.022	0.017	0.024	0.001	0.002	0.002	0.0004	0.003	-	-	0.003	0.23	0.30

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 THEY APPEAR IN RECORDS OF THE COMPANY).

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

Control de Calidad (Quality Control)

REV. 2 May-07

F-TUME-013