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

PIPE CERTIFICATE

No.CERTIFICADO(certificate No.): **080457**

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

DIRECCION(address): AV. VALLE DE LAS ALAMEDAS # 66-O COL. SAN FCO. CHILPAN TULTITLAN, 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)
33456	12.750"	0.225"	X42/5LB/A53B	API 5L 43 ED/A.S.T.M.	ERW	4650	TB-103-2008	AHMSA	26/06/2008

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 (orientation) ENERGY (lbs/ft) 1	2	3	AVG	ORIENTACION (orientation) SHEAR AREA 1	2	3	AVG	TAMAÑO: (size)	DWTT SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		72400																	
390	274958	H	7	51000	66300	38	0.76															
			6		71500																	
229	175069	H	7	47200	61900	40	0.76															
			6		71600																	
52	175068	H	7	51700	65100	36	0.79															
			6		65500																	
68	174726	H	7	46700	62600	38	0.74															
			6		73600																	
199	174727	H	7	59700	74500	31	0.80															
			6		65300																	
127	175066	H	7	47600	63600	37	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	0.15	0.59	0.020	0.007	0.065	0.024	0.020	0.020	0.020	0.003	-	-	-	-	-	-	-	-	0.25
P	7	0.19	0.59	0.025	0.009	0.086	0.030	0.015	0.008	0.021	0.001	0.001	0.002	0.0001	0.003	-	-	0.001	0.23	0.29
P	7	0.19	0.59	0.023	0.010	0.084	0.035	0.015	0.008	0.022	0.001	0.001	0.002	0.0002	0.003	-	-	0.001	0.23	0.30
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	0.57	0.024	0.009	0.118	0.032	0.023	0.016	0.026	0.001	0.002	0.002	0.0002	0.003	-	-	0.003	0.22	0.29
P	7	0.18	0.57	0.026	0.007	0.117	0.030	0.021	0.015	0.025	0.001	0.002	0.002	0.0002	0.003	-	-	0.003	0.21	0.28
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	0.21	0.58	0.022	0.011	0.119	0.035	0.005	0.019	0.022	0.001	0.002	0.002	0.0003	0.002	-	-	0.002	0.25	0.31
P	7	0.22	0.59	0.021	0.012	0.114	0.029	0.006	0.019	0.020	0.001	0.002	0.002	0.0004	0.002	-	-	0.002	0.25	0.32
H	7	0.16	0.60	0.014	0.009	0.110	0.030	0.020	0.020	0.020	0.004	-	-	-	-	-	-	-	-	0.27
P	7	0.20	0.58	0.018	0.007	0.126	0.040	0.014	0.018	0.021	0.001	0.001	0.002	0.0004	0.001	-	-	0.002	0.24	0.30
P	7	0.19	0.58	0.017	0.011	0.124	0.037	0.011	0.018	0.021	0.001	0.001	0.002	0.0004	0.001	-	-	0.002	0.23	0.30
H	7	0.16	0.59	0.015	0.007	0.106	0.033	0.020	0.020	0.020	0.004	-	-	-	-	-	-	-	-	0.27
P	7	0.18	0.58	0.018	0.007	0.127	0.059	0.018	0.009	0.023	0.001	0.002	0.001	0.0004	0.001	-	-	0.003	0.21	0.28
P	7	0.17	0.58	0.019	0.008	0.124	0.043	0.020	0.009	0.022	0.001	0.001	0.001	0.0003	0.001	-	-	0.003	0.21	0.27
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	0.19	0.58	0.020	0.008	0.121	0.044	0.013	0.020	0.024	0.001	0.002	0.002	0.0003	0.002	-	-	0.002	0.23	0.29
P	7	0.19	0.58	0.019	0.009	0.120	0.041	0.011	0.020	0.024	0.001	0.002	0.002	0.0004	0.002	-	-	0.002	0.23	0.29

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. 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 RESULTS ARE AS THEY APPEAR IN RECORDS OF THE COMPANY)

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

Control de Calidad (Quality Control)

REV. 2 May-07

F-TUME-013