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.): **060790**

CLIENTE(customer): PLESA ANÁHUAC Y CIÁS, 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)
33406	10.750"	0.365"	X-42/5LB/A53B	API 5L ED.43/ ASTM	ERW	2001	B-270-2006	APM	10/10/2006

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 ORIENTACION (orientation) °F TAMAÑO: (size) ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	DWTT SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		79700																
309	ZA0046056	H	7	56200	71900	39	0.78														
			6		87600																
599	ZA0046054	H	7	61200	80200	44	0.76														
			6		78400																
437	ZA0045711	H	7	55000	71800	40	0.76														
			6		86900																
565	ZA0046044	H	7	63600	80100	44	0.79														
			6		72900																
58	TB1442184	H	7	51700	67500	42	0.76														
			6		79100																
227	TB2425885	H	7	56200	72000	43	0.78														
			6		74100																
7	TB2425872	H	7	52300	66600	43	0.78														

(%)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	0.76	0.025	0.009	0.214	0.045	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.14	0.60	0.009	0.002	0.151	0.031	0.016	0.003	0.024	0.002	0.001	0.001	0.0002	0.002	-	-	0.003	0.09	0.12
P	7	0.15	0.61	0.009	0.002	0.152	0.031	0.017	0.004	0.023	0.002	0.001	0.001	0.0002	0.002	-	-	0.003	0.09	0.12
H	7	0.18	0.79	0.022	0.008	0.185	0.050	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.60	0.009	0.002	0.152	0.031	0.017	0.004	0.023	0.002	0.001	0.001	0.0002	0.002	-	-	0.003	0.09	0.12
P	7	0.14	0.61	0.009	0.002	0.151	0.032	0.016	0.003	0.024	0.001	0.001	0.001	0.0002	0.002	-	-	0.003	0.09	0.12
H	7	0.17	0.77	0.018	0.008	0.180	0.049	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.17	0.64	0.010	0.001	0.172	0.031	0.014	0.005	0.020	0.004	0.001	0.001	0.0002	0.002	-	-	0.002	0.07	0.10
P	7	0.17	0.60	0.006	0.001	0.150	0.032	0.015	0.003	0.020	0.003	0.001	0.001	0.0002	0.002	-	-	0.003	0.08	0.10
H	7	0.19	0.71	0.011	0.003	0.207	0.040	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.16	0.63	0.011	0.002	0.162	0.030	0.015	0.003	0.004	0.001	0.001	0.001	0.0002	0.002			0.002	0.07	0.11
P	7	0.14	0.61	0.009	0.002	0.151	0.032	0.016	0.003	0.024	0.001	0.001	0.001	0.0002	0.002			0.003	0.09	0.12
H	7	0.18	0.79	0.022	0.008	0.185	0.050	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.15	0.60	0.012	0.002	0.152	0.031	0.017	0.004	0.023	0.002	0.001	0.001	0.0002	0.002	-	-	0.003	0.19	0.25
P	7	0.14	0.61	0.013	0.002	0.151	0.032	0.016	0.003	0.024	0.001	0.001	0.001	0.0002	0.002	-	-	0.003	0.18	0.25
H	7	0.17	0.77	0.018	0.008	0.180	0.049	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.17	0.64	0.010	0.002	0.172	0.031	0.014	0.005	0.020	0.004	0.001	0.001	0.0002	0.002	-	-	0.002	0.21	0.28
P	7	0.17	0.60	0.011	0.003	0.150	0.032	0.015	0.003	0.020	0.003	0.001	0.001	0.0002	0.002	-	-	0.003	0.21	0.27
H	7	0.21	0.71	0.011	0.009	0.202	0.043	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.18	0.65	0.010	0.008	0.198	0.042	0.013	0.005	0.020	0.004	0.001	0.001	0.0002	0.002	-	-	0.002	0.22	0.29
P	7	0.19	0.67	0.010	0.008	0.198	0.042	0.015	0.003	0.018	0.003	0.001	0.001	0.0002	0.002	-	-	0.003	0.23	0.31

PRUEBA HIDROSTATICA: (hidrostatic test) PRESION: (pressure) 2420 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 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)
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 APPER IN RECORDS OF THE COMPANY)

Control de Calidad (Quality Control)

F-TUME-013

REV.1 Sep-99