Tubacero
Ave. Guerrero
No. 3729 nte.
Col. Del Norte
Monterrey N.L. México
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CERTIFICADO DE TUBERIA

PIPE CERTIFICATE

No.CERTIFICADO(certificate No.): **070255**

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

DIRECCION(address): AV. VALLE DE LA ALAMEDAS # 66 O COL. SAN FCO. CHILPAN. TULTITLÁN, 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)
33412	14.000"	0.225"	X42/5LB/A53B	API 5L43ED/A.S.T.M.	ERW	2673	B-063-2007	APM	10/03/2007

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 H	PRUEBA DE IMPACTO (impact test) °C °F ORIENTACION (orientation) TAMAÑ (size) 1:1 ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	DWTT °C: ° SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		69000																
422	0620783	H	7	49100	67200	40	0.73														
			6		69000																
167	0621000	H	7	49200	67800	40	0.73														
			6		70700																
4	0630800	H	7	55400	72800	40	0.76														
			6		72500																
285	0620780	H	7	50300	69400	40	0.73														
			6		79000																
89	0640978	H	7	55800	74700	35	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	0.17	0.74	0.013	0.006	0.16	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.14	0.69	0.011	0.004	0.17	0.05	0.018	0.005	0.010	0.002	0.005	0.002	0.0001	0.001	-	-	0.008	0.19	0.14
P	7	0.13	0.71	0.010	0.002	0.18	0.05	0.016	0.005	0.011	0.002	0.004	0.002	0.0001	0.001	-	-	0.006	0.18	0.14
H	7	0.18	0.73	0.010	0.004	0.19	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.19	0.69	0.009	0.002	0.18	0.03	0.012	0.006	0.015	0.007	0.007	0.001	0.0001	0.001	-	-	0.005	0.24	0.16
P	7	0.18	0.68	0.009	0.003	0.17	0.02	0.013	0.006	0.015	0.007	0.007	0.001	0.0002	0.001	-	-	0.005	0.23	0.15
H	7	0.19	0.75	0.009	0.002	0.16	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.14	0.64	0.008	0.001	0.16	0.05	0.016	0.002	0.017	0.001	0.002	0.001	0.0002	0.001	-	-	0.006	0.19	0.13
P	7	0.11	0.63	0.006	0.002	0.16	0.04	0.020	0.002	0.017	0.001	0.002	0.001	0.0001	0.001	-	-	0.004	0.15	0.13
H	7	0.20	0.76	0.006	0.003	0.20	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.25	0.73	0.005	0.002	0.20	0.04	0.010	0.003	0.010	0.001	0.003	0.001	0.0002	0.001	-	-	0.007	0.30	0.16
P	7	0.25	0.74	0.006	0.002	0.18	0.03	0.010	0.003	0.012	0.002	0.002	0.001	0.0002	0.001	-	-	0.006	0.30	0.17
H	7	0.19	0.75	0.009	0.003	0.18	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
P	7	0.24	0.71	0.008	0.008	0.18	0.05	0.005	0.002	0.015	0.002	0.002	0.002	0.0002	0.002	-	-	0.007	0.29	0.36
P	7	0.25	0.72	0.006	0.005	0.18	0.05	0.007	0.003	0.015	0.002	0.013	0.003	0.0002	0.002	-	-	0.006	0.29	0.37

PRUEBA HIDROSTATICA: (hidrostatic test) — PRESION: (pressure) 1150 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) 1½"
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).

Control de Calidad (Quality Control)

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