Tubacero
Ave. Guerrero
No. 3729 nte.
Col. Del Norte
Monterrey N.L. México
CP.64500
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CONSTANCIA DE INSPECCION

INSPECTION CONSTANCY

No. CONSTANCIA (constancy No.): **100074**

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.

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)
33506	10.750"	0.365"	X42/5LB PSL 1/A53B	API SPEC 5L 44TH ED./A.S.T.M.	HFW	7706	FB-012-2010	AHMSA	06/02/2010

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		73100																
39	292569	H	7	55100	67600	40	0.81														
			6		80700																
98	292570	H	7	49500	62600	41	0.79														
			6		75600																
5	292568	H	7	50400	64100	42	0.78														
			6		69500																
290	291735	H	7	54900	66500	42	0.82														
			6		74300																
387	291736	H	7	51000	62300	40	0.81														
10	292568		6																		9
76	292569		6																		9
221	291734		6																		9

(%)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	0.59	0.014	0.008	0.129	0.034	0.020	0.020	0.020	0.004	-	-	-	-	-	-	-	-	0.27
P	7	0.12	0.54	0.012	0.005	0.125	0.029	0.018	0.020	0.018	0.005	0.005	0.001	0.0002	0.002	-	-	0.001	0.15	0.22
P	7	0.12	0.56	0.012	0.006	0.128	0.031	0.016	0.018	0.016	0.005	0.005	0.001	0.0002	0.002	-	-	0.001	0.16	0.22
H	7	0.15	0.61	0.020	0.005	0.121	0.033	0.020	0.020	0.020	0.005	-	-	-	-	-	-	-	-	0.26
P	7	0.13	0.60	0.018	0.004	0.120	0.030	0.018	0.018	0.018	0.004	0.003	0.002	0.0001	0.001	-	-	0.002	0.17	0.24
P	7	0.12	0.60	0.016	0.005	0.120	0.030	0.018	0.016	0.018	0.003	0.002	0.001	0.0002	0.002	-	-	0.001	0.16	0.23
H	7	0.16	0.59	0.016	0.005	0.122	0.031	0.020	0.040	0.030	0.007	-	-	-	-	-	-	-	-	0.27
P	7	0.13	0.52	0.010	0.004	0.120	0.029	0.018	0.038	0.027	0.004	0.005	0.001	0.0002	0.002	-	-	0.001	0.16	0.23
P	7	0.14	0.52	0.010	0.004	0.120	0.031	0.020	0.036	0.026	0.005	0.005	0.001	0.0002	0.002	-	-	0.001	0.17	0.24
H	7	0.12	0.79	0.017	0.003	0.288	0.039	0.010	0.020	0.020	0.005	-	-	-	-	-	-	-	-	0.26
P	7	0.10	0.75	0.015	0.002	0.285	0.030	0.010	0.018	0.020	0.003	0.002	0.001	0.0001	0.001	-	-	0.001	0.15	0.23
P	7	0.12	0.74	0.015	0.002	0.285	0.030	0.010	0.018	0.020	0.005	0.002	0.001	0.0001	0.001	-	-	0.001	0.17	0.25
H	7	0.12	0.79	0.018	0.005	0.300	0.037	0.010	0.020	0.020	0.005	-	-	-	-	-	-	-	-	0.26
P	7	0.10	0.75	0.016	0.004	0.285	0.030	0.008	0.015	0.018	0.004	0.005	0.002	0.0002	0.001	-	-	0.001	0.15	0.23
P	7	0.10	0.75	0.015	0.003	0.250	0.030	0.009	0.015	0.015	0.005	0.005	0.001	0.0002	0.001	-	-	0.001	0.15	0.23

PLEASA ANAHUAC Y CIAS. S.A. DE C.V.
CONTROL DE CALIDAD
FECHA 08 Feb 2010
F 342
FIRMA E. RUIZ

CRITERIOS DE ACEPTACION: (Acceptance critera)	MIN:	42.1	60.2	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MAX:																	
	PROMEDIO (AVG.)																	

C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Als	Ca	PCM	CE
0.26	1.20	0.030	0.030	-	-	0.500	0.400	0.400	0.150	0.040	-	-	0.080	-	-	-	-	-

PRUEBA HIDROSTATICA: (hidrostatic test) PRESION: (pressure) 2430 Psi TIEMPO: (time) 5 sec

ULTRASONIDO(U.T.): (ultrasonic) STANDARD DE REFERENCIA: J REFERENCE STANDARD

RAYOS-X (RT): (x-ray) PENETROMETRO (penetrometer): N/A

NORMALIZADO DE SOLDADURA: (heat treatment weld) TEMPERATURA (temperature): 1600° F MIN (NO UNTEMPERED MARTENSITE REMAINS)

ESTANDAR DE REFERENCIA (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 Barreno (Drilled Hole)=H Muesca (Notch)=N

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)

HACEMOS CONSTAR QUE EL MATERIAL DESCRITO HA SIDO FABRICADO, MUESTREADO, PROBADO E INSPECCIONADO POR TUBACERO CON LA ESPECIFICACION MENCIONADA, Y QUE LOS RESULTADOS SON COMO APARECEN EN LOS REGISTROS DE LA COMPAÑIA
(WE HEREBY VERIFY THAT MATERIAL DESCRIBED HEREIN HAS BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE SPECIFICATION MENTIONED AND THAT THESE TEST RESULT ARE AS THEY APPER IN RECORDS OF THE COMPANY)

Control de Calidad (Quality Control)

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