Tubacero
Ave. Guerrero
No. 3729 nte.
Col. Del Norte
Monterrey N.L. México
CP.64500
TEL:3055555
FAX:3055580

CONSTANCIA DE INSPECCION

INSPECTION CONSTANCY

No. CONSTANCIA (constancy No.): **132263**

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 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)
33614	14.000"	0.312"	X42/ B PSL 1/A53B	API SPEC 5L 44TH ED./A.S.T.M.	HFW/ERW	16842	SB-184-2013	AHMSA	21/10/2013

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 ORIENTACION (orientation) ENERGY (lbs/ft) 1	2	3	AVG	TAMAÑO: (size) SHEAR AREA 1	2	3	AVG	DWTT SHEAR AREA 1	2	AVG	GRAIN SIZE
105	129743	T	6		81400																
			7	57000	70300	41	0.81														
45	129832	T	6		79900																
			7	57400	72300	40	0.79														
32	229715	T	6		73400																
			7	53500	69200	40	0.77														
131	229716	T	6		76000																
			7	54700	70800	40	0.77														
202	424976	T	6		81600																
			7	60900	77300	43	0.79														
167	424977	T	6		85200																
			7	58900	74300	40	0.79														
14	424977		6																		9
91	424977		6																		9
28	229715		6																		9
111	129743		6																		9
299	424976		6																		9
CRITERIOS DE ACEPTACION: (Acceptance criteria)			MIN:	42100	60200	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			MAX:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
			PROMEDIO (AVG.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

(%)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	0.82	0.011	0.008	0.127	0.037	0.026	0.024	0.019	0.009	-	-	-	-	-	-	-	-	-
P	7	0.16	0.84	0.012	0.007	0.134	0.038	0.028	0.025	0.022	0.010	0.002	0.003	0.0001	0.002	-	-	0.005	0.21	0.31
P	7	0.17	0.83	0.014	0.008	0.129	0.036	0.027	0.027	0.020	0.011	0.003	0.005	0.0002	0.003	-	-	0.002	0.22	0.32
H	7	0.17	0.84	0.016	0.007	0.121	0.036	0.033	0.022	0.017	0.004	-	-	-	-	-	-	-	-	-
P	7	0.16	0.86	0.015	0.005	0.118	0.035	0.031	0.021	0.015	0.003	0.003	0.002	0.0001	0.002	-	-	0.004	0.21	0.31
P	7	0.18	0.85	0.014	0.006	0.132	0.033	0.032	0.020	0.016	0.005	0.002	0.004	0.0002	0.004	-	-	0.003	0.23	0.33
H	7	0.16	0.86	0.017	0.006	0.122	0.035	0.024	0.021	0.014	0.008	-	-	-	-	-	-	-	-	-
P	7	0.17	0.87	0.017	0.005	0.119	0.038	0.022	0.023	0.016	0.008	0.002	0.002	0.0002	0.003	-	-	0.006	0.22	0.32
P	7	0.16	0.88	0.016	0.006	0.128	0.036	0.023	0.024	0.015	0.006	0.001	0.003	0.0001	0.005	-	-	0.007	0.21	0.32
H	7	0.16	0.84	0.016	0.008	0.131	0.037	0.027	0.029	0.016	0.008	-	-	-	-	-	-	-	-	-
P	7	0.17	0.85	0.018	0.009	0.145	0.039	0.029	0.032	0.018	0.009	0.005	0.003	0.0002	0.004	-	-	0.006	0.22	0.32
P	7	0.16	0.86	0.017	0.008	0.137	0.036	0.028	0.034	0.020	0.011	0.004	0.002	0.0001	0.006	-	-	0.005	0.21	0.32
H	7	0.17	0.86	0.014	0.008	0.137	0.034	0.027	0.017	0.022	0.008	-	-	-	-	-	-	-	-	-
P	7	0.17	0.85	0.015	0.009	0.145	0.031	0.025	0.017	0.022	0.008	0.004	0.001	0.0001	0.002	-	-	0.008	0.22	0.32
P	7	0.16	0.84	0.014	0.008	0.152	0.029	0.026	0.019	0.024	0.007	0.002	0.002	0.0001	0.005	-	-	0.004	0.21	0.31
H	7	0.15	0.81	0.016	0.005	0.123	0.045	0.026	0.018	0.020	0.009	-	-	-	-	-	-	-	-	-
P	7	0.16	0.81	0.017	0.005	0.136	0.039	0.026	0.019	0.025	0.007	0.002	0.001	0.0002	0.004	-	-	0.008	0.21	0.30
P	7	0.17	0.83	0.018	0.004	0.128	0.042	0.027	0.018	0.024	0.009	0.003	0.002	0.0001	0.003	-	-	0.008	0.22	0.32
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		0.26	1.20	0.030	0.030	-	-	0.500	0.400	0.400	0.150	0.040	-	0.001	0.080	-	-	-	-	-
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PRUEBA HIDROSTATICA: (hidrostatic test) J — PRESION: (pressure) 1600 Psi — TIEMPO: (time) 10 sec

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

PRUEBA DE APLASTAMIENTO: (flattening test) 0° OK 90° OK

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)
T: UNIDAD DE PRUEBA (Test unit)

HACEMOS CONSTAR QUE EL MATERIAL DESCRITO HA SIDO FABRICADO, MUESTREADO, PROBADO E INSPECCIONADO DE ACUERDO 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).

PA

TUBACERO, S. DE R.L. DE C.V.

Control de Calidad (Quality Control)
Ing. Samuel Montoya Laguna.