Tubacero

Ave. Guerrero No. 3728 Ote. Col. Del Norte Monterrey N.L. México CP.64500 TEL.3055566

CONSTANCIA DE INSPECCION

INSPECTION CONSTANCY

No. CONSTANCIA (constancy No.): **132241**

CLIENTE(customer): PLESA ANAHUAC Y CIAS., 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)
23135	24.000"	0.375"	X42/B PSL1/A53B	API 5L 43 ED/A.S.T.M.	SAWL	16450	TB-156-2013	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.	SENO	HARDNESS HRB	PRUEBA DE IMPACTO (impact test) 0 °C °F ORIENTACION (orientation) TAMAÑO: (size) 1:1 ENERGY (lb/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	DWTT SHEAR AREA 1	2	AVG	GRAIN SIZE
			6		66500																
5	272142	H	7	49800	67200	36	0.74														
			6		67200																
131	272138	H	7	47100	64500	37	0.73														
			6		68800																
135	272141	H	7	46200	65400	34	0.70														
			6		69100																
139	173062	H	7	42400	62000	33	0.68														
			6		67000																
165	272144	H	7	45200	64300	32	0.70														
			6		73300																
45	272145	H	7	58600	75500	34	0.77														
5	272142		6					OK													
73	272144		6					OK													
145	272141		6					OK													
165	272144		6					OK													

(%)ANALISIS QUIMICO / chemical analysis (%)

TUBO (pipe) O SERIE (SERIAL)	TYPE	LOC	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Als	Ca	PCM	CE
5	H	7	0.18	0.61	0.018	0.008	0.125	0.043	0.020	0.040	0.030	0.008	0.004	0.003	-	0.004	-	-	-	-	-
	P	7	0.16	0.60	0.015	0.007	0.120	0.040	0.018	0.037	0.030	0.005	0.002	0.002	0.0002	0.001	-	-	0.002	0.20	0.27
	P	7	0.15	0.58	0.016	0.006	0.118	0.042	0.020	0.035	0.028	0.006	0.005	0.001	0.0002	0.001	-	-	0.002	0.19	0.26
131	H	7	0.18	0.60	0.017	0.008	0.114	0.041	0.020	0.040	0.030	0.006	0.004	0.004	-	0.004	-	-	-	-	-
	P	7	0.15	0.60	0.015	0.005	0.110	0.040	0.018	0.050	0.028	0.005	0.003	0.002	0.0001	0.002	-	-	0.001	0.19	0.26
	P	7	0.17	0.58	0.014	0.006	0.115	0.038	0.020	0.042	0.027	0.004	0.002	0.002	0.0002	0.001	-	-	0.001	0.21	0.28
135	H	7	0.18	0.62	0.020	0.010	0.102	0.050	0.020	0.040	0.030	0.006	0.004	0.004	-	0.005	-	-	-	-	-
	P	7	0.17	0.60	0.018	0.010	0.105	0.045	0.018	0.038	0.028	0.005	0.002	0.002	0.0001	0.004	-	-	0.002	0.21	0.28
	P	7	0.15	0.58	0.016	0.009	0.110	0.050	0.018	0.035	0.026	0.004	0.003	0.003	0.0002	0.003	-	-	0.001	0.19	0.26
139	H	7	0.17	0.55	0.011	0.008	0.118	0.040	0.020	0.020	0.030	0.003	0.002	0.001	-	0.002	-	-	-	-	-
	P	7	0.16	0.54	0.012	0.006	0.112	0.038	0.015	0.018	0.028	0.002	0.001	0.001	0.0002	0.001	-	-	0.001	0.19	0.26
	P	7	0.15	0.50	0.010	0.004	0.110	0.035	0.016	0.016	0.027	0.003	0.002	0.002	0.0001	0.002	-	-	0.002	0.18	0.24
165	H	7	0.17	0.63	0.023	0.009	0.113	0.048	0.050	0.050	0.050	0.013	0.004	0.004	-	0.005	-	-	-	-	-
	P	7	0.16	0.60	0.020	0.007	0.112	0.042	0.040	0.048	0.048	0.010	0.003	0.003	0.0002	0.004	-	-	0.001	0.20	0.28
	P	7	0.14	0.58	0.018	0.004	0.110	0.040	0.048	0.040	0.045	0.012	0.002	0.002	0.0001	0.003	-	-	0.002	0.18	0.25
45	H	7	0.17	0.62	0.023	0.008	0.114	0.049	0.050	0.050	0.050	0.021	0.004	0.004	-	0.004	-	-	-	-	-
	P	7	0.15	0.60	0.020	0.006	0.110	0.045	0.050	0.043	0.043	0.018	0.002	0.003	0.0002	0.002	-	-	0.002	0.19	0.27
	P	7	0.17	0.58	0.018	0.005	0.108	0.040	0.048	0.045	0.048	0.015	0.005	0.002	0.0001	0.001	-	-	0.001	0.21	0.29

CRITERIOS DE ACEPTACION: (Acceptance criteria)		YS	TS	% EL	Y.S/T.S.	SENO	HRB	ENERGY 1	ENERGY 2	ENERGY 3	ENERGY AVG	SHEAR AREA 1	SHEAR AREA 2	SHEAR AREA 3	SHEAR AREA AVG	DWTT 1	DWTT 2	DWTT AVG	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Als	Ca	PCM	CE
	MIN:	42000	60000	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	MAX:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.26	1.20	0.030	0.030	-	-	0.500	0.400	0.400	0.150	0.040	-	-	0.080	-	-	-	-	0.43
	PROMEDIO (AVG.)	-	-	-	-	* No se Aceptan grietas >1/8"		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PRUEBA HIDROSTATICA: (hidrostatic test) — PRESION: (pressure) 1180 Psi — TIEMPO: (time) 10 sec

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

RAYOS-X (RT): (x-ray) — PENETROMETRO (penetrometer): N° 12 A.S.T.M.

NORMALIZADO DE SOLDADURA: (heat treatment weld) — TEMPERATURA (temperature): N/A

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).

TUBACERO, S. DE R.L. DE C.V. 04

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