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CONSTANCIA DE INSPECCION

INSPECTION CONSTANCY

No. CONSTANCIA (constancy No.): **090902**

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)
33489	12.750"	0.406"	X42/5LB PSL1/A53B	API SPEC 5L 44TH ED./A.S.T.M.	ERW	6559	TB-137-2009	TERNIUM	12/06/2009

TUBO (pipe) O SERIE (SERIAL)	COLADA (heat)	TYPE	LOC	PRUEBA DE TENSION(tensile test) UNIDADES: (units)	ORIENTACION: (orientation)	TAMAÑO: (size)		BEND	HARDNESS	PRUEBA DE IMPACTO (impact test) °C °F -10 ORIENTACION (orientation)				TAMAÑO: (size) 1:1				DWTT -10			GRAIN SIZE
				PSI (Y.S.)	(T.S.)	% EL.	Y.S/T.S.			ENERGY (lbs/ft) 1	2	3	AVG	SHEAR AREA 1	2	3	AVG	SHEAR AREA 1	2	AVG	
			6		78000																
108	0812862	H	7	55300	69400	42	0.79														
			6		75000																
20	0842929	H	7	51200	67100	42	0.76														
			6		73800																
158	0832928	H	7	48200	62600	40	0.77														
			6		72000																
120	0812861	H	7	53600	67100	38	0.79														
			6		76300																
254	0812864	H	7	57600	70500	40	0.81														
12	0822875		6																		9
46	0812861		6																		9
150	0832928		6																		9
179	0842929		6																		9
340	0822877		6																		9
366	0822875		6																		9
426	0812862		6																		9
CRITERIOS DE ACEPTACION: (Acceptance critera)			MIN:	42.1	60.2	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
			MAX:																		
			PROMEDIO (AVG.)																		

(%)ANALISIS QUIMICO / chemical analysis (%)

TUBO (pipe) O SERIE (SERIAL)	COLADA (heat)	TYPE	LOC	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Als	Ca	PCM	CE
108	0812862	H	7	0.20	0.71	0.010	0.002	0.188	0.028	-	-	-	-	-	-	-	-	-	-	-	-	-
		P	7	0.23	0.71	0.014	0.001	0.185	0.020	0.002	0.001	0.001	0.001	0.001	0.001	0.0002	0.001	-	-	0.001	0.28	0.35
		P	7	0.23	0.71	0.014	0.001	0.185	0.019	0.002	0.001	0.001	0.001	0.001	0.002	0.0001	0.001	-	-	0.001	0.28	0.35
20	0842929	H	7	0.18	0.75	0.011	0.001	0.188	0.035	-	-	-	-	-	-	-	-	-	-	-	-	-
		P	7	0.17	0.74	0.014	0.001	0.191	0.026	0.001	0.001	0.001	0.001	0.001	0.001	0.0002	0.001	-	-	0.001	0.21	0.29
		P	7	0.16	0.73	0.014	0.001	0.189	0.024	0.002	0.001	0.001	0.001	0.001	0.001	0.0002	0.001	-	-	0.001	0.21	0.28
158	0832928	H	7	0.18	0.68	0.013	0.001	0.131	0.036	0.006	0.012	0.006	0.009	0.000	0.000	0.0001	0.001	-	-	-	-	-
		P	7	0.22	0.72	0.013	0.001	0.191	0.025	0.001	0.001	0.001	0.001	0.001	0.001	0.0002	0.001	-	-	0.001	0.27	0.34
		P	7	0.21	0.70	0.013	0.001	0.193	0.025	0.001	0.001	0.001	0.001	0.001	0.001	0.0001	0.001	-	-	0.001	0.25	0.33
120	0812861	H	7	0.19	0.68	0.011	0.003	0.185	0.042	-	-	-	-	-	-	-	-	-	-	-	-	-
		P	7	0.14	0.66	0.014	0.002	0.196	0.033	0.001	0.001	0.001	0.001	0.001	0.001	0.0001	0.001	-	-	0.001	0.18	0.25
		P	7	0.17	0.67	0.015	0.002	0.190	0.034	0.001	0.001	0.001	0.001	0.001	0.001	0.0020	0.001	-	-	0.001	0.22	0.28
254	0812864	H	7	0.19	0.70	0.011	0.003	0.185	0.033	-	-	-	-	-	-	-	-	-	-	-	-	-
		P	7	0.24	0.69	0.014	0.002	0.185	0.023	0.001	0.001	0.001	0.001	0.002	0.001	0.0002	0.002	-	-	0.001	0.28	0.35
		P	7	0.23	0.71	0.013	0.002	0.195	0.025	0.001	0.001	0.001	0.001	0.001	0.001	0.0001	0.002	-	-	0.001	0.27	0.35
CRITERIOS DE ACEPTACION: (Acceptance critera)		MIN:	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		MAX:		0.26	1.20	0.030	0.030	-	-	0.500	0.400	0.400	0.150	0.040	-	-	0.080	-	-	-	-	-
		PROMEDIO (AVG.)																				

PRUEBA HIDROSTATICA: (hidrostatic test) — PRESION: (pressure) 2280 Psi — TIEMPO: (time) 10 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 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 APPEAR IN RECORDS OF THE COMPANY).

Control de Calidad (Quality Control)

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