



No. 3729 Rd.
 COL. DEL NORTE
 Monterrey, N.L. Mexico
 C.P. 64600
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CERTIFICADO DE TUBERIA

PIPE CERTIFICATE

O.T. (order no.) 33177	DIAMETRO (outside diam.) 12.750"	ESPESOR (thickness) 0.225"	GRADO (grade) A53-B / A53-A	ESPECIFICACION (specification) ASTM	PROCESO (process) ERW	PEDIDO (contract) S/N	O. PREPARACION (preparation order) B-025-2002	PROVEEDOR (supplier) HYLSA	FECHA (date) 28/04/02	No. CERTIFICADO (certificate No.): 020183	CLIENTE (customer): HYLSA S.A. DE C.V.	DIRECCION (address): AV. GUERRERO No. 151 SAN NICOLAS DE LOS GARZA, N.L. C.P. 66452
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TUBO (PIPE)	SOLDADA (WELD)	T Y P O P C	UNDADES (inches)	ORIENTACION (orientation)	TAMANO (size)	BEND HARDNESS	PRUEBA DE IMPACTO BRINELL (B)			PRUEBA DE IMPACTO CHARPY (C)			ANALISIS QUIMICO (CHEMICAL ANALYSIS)																				
							10 °C ORIENTACION (orientation)	TAMANO (size)	C °	10 °C ORIENTACION (orientation)	TAMANO (size)	C °	C	Mn	P	S	SI	Al	CU	CR	NI	MO	TI	Nb	B	V	N	As	Ca	PCM	CE		
2	20029	H 7	6	57615	67288	32	0.85	1	2	3	AVG	1	2	3	AVG	0.008	0.005	0.052	0.041	0.038	0.008	0.021	0.001	0.006	0.001	0.0002	0.002	-	-	-	0.004	0.10	0.14
121	20282	H 7	6	63108	71753	32	0.87	1	2	3	AVG	1	2	3	AVG	0.008	0.003	0.052	0.032	0.025	0.004	0.022	0.001	0.005	0.001	0.0002	0.002	-	-	-	0.004	0.11	0.14
134	15558	H 7	6	58551	66079	36	0.88	1	2	3	AVG	1	2	3	AVG	0.008	0.003	0.052	0.031	0.031	0.004	0.022	0.001	0.005	0.001	0.0002	0.001	-	-	-	0.002	0.10	0.14
215	20031	H 7	6	52731	60801	45	0.87	1	2	3	AVG	1	2	3	AVG	0.008	0.003	0.052	0.032	0.025	0.004	0.022	0.001	0.005	0.001	0.0002	0.002	-	-	-	0.005	0.10	0.14
286	15363	H 7	6	49799	61374	44	0.81	1	2	3	AVG	1	2	3	AVG	0.008	0.003	0.052	0.031	0.035	0.006	0.022	0.001	0.005	0.001	0.0002	0.002	-	-	-	0.003	0.10	0.14

PRUEBA HIDROSTATICA: (hydrostatic test)	PRESSION: (pressure)	TIEMPO: (time)	ORIENTACION (orientation):	GRAN S/N	C	Mn	P	S	SI	Al	CU	CR	NI	MO	TI	Nb	B	V	N	As	Ca	PCM	CE	
20029	720	10	1. TRANSVERSAL (transverse)	0.008	0.005	0.008	0.005	0.004	0.052	0.041	0.038	0.008	0.021	0.001	0.006	0.001	0.0002	0.002	-	-	-	0.004	0.10	0.14
20282	720	10	2. LONGITUDINAL (longitudinal)	0.008	0.003	0.007	0.003	0.003	0.052	0.032	0.025	0.004	0.022	0.001	0.005	0.001	0.0002	0.002	-	-	-	0.004	0.11	0.14
15558	720	10	3. RECTANGULAR (rectangular)	0.008	0.003	0.007	0.003	0.003	0.052	0.031	0.031	0.004	0.022	0.001	0.005	0.001	0.0002	0.001	-	-	-	0.002	0.10	0.14
20031	720	10	4. CILINDRICAL (round bar)	0.008	0.003	0.007	0.003	0.003	0.052	0.032	0.025	0.004	0.022	0.001	0.005	0.001	0.0002	0.002	-	-	-	0.005	0.10	0.14
15363	720	10	5. CILINDRICAL (round bar)	0.008	0.003	0.007	0.003	0.003	0.052	0.031	0.035	0.006	0.022	0.001	0.005	0.001	0.0002	0.002	-	-	-	0.003	0.10	0.14

ULTRASONICO (L): STANDARD DE REFERENCIA G
 ULTRASONICO (L): REFERENCE STANDARD G
 RAYOS X (RT): PENETROMETRO (penetrometer) N/A
 NORMALIZADO DE SOLDADURA: TEMPERATURA (temperature): 1600° F Min.
 (heat treatment weld)
 REFERENCIA 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 2-21 O: RT HOLE 2-4T

6. SOLDADURA (weld)
 7. METAL BASE (base metal)
 8. ZONA AFECTADA (a. z.)
 9. LINEA DE FUSION (fusion line)
 H: COLADA (heat)
 P: PRODUCTO (product)
 R: REMUESTRO (reheat)

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 COMPANIA. 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)
 F-TUME-013

