



Tubos de Acero de México, S.A.
Carr. Mty-Laredo Km 24.2
Apartado Postal 43
(65550) C. de Flores, N.L. Méx.
(52) 81 8305 9600 tel
(52) 81 8305 9620 fax

CERTIFICADO DE CALIDAD INSPECTION CERTIFICATE (DIN EN 10204:2004E - ISO 10474 3.1.B)		Numero: Number: 28362	Pagina/Page: 2
--	--	---------------------------------	-----------------------

Vendido a: Sold to:	PROVEEDORA DE MATERIALES ANKER, S.A. DE C.V.	Pedido del Cliente No: Customers Order No:	6879 - 6863 -	Lista de Empaque: Packing List:	14761	Fecha/Date:	6 de marzo de 2014
Especificaciones y Grados / Standard or Specification and Steel Grade Seamless Fittings according to ASTM A 234 WPB-10, NACE MR 01.75-2003 Conform to ASME II Ed. 2001 ASME SA-234, Grade WPB, NACE MR0103-2003		Dimensiones y tolerancias / Dimension and tolerances ASME B 16.9 - 2007			Factura/Invoice: Bocas / Ends Biselado / Bevelled ends		

DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION				PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST 0°C				
ART. ITEM	COLADA HEAT CODE	CANTIDAD QUANTITY	DESCRIPCION / DESCRIPTION	ESF. CEDENCIA YIELD STRENGTH (Mpa)	ESF. RUPTURA TENSILE STRENGTH (Mpa)	ELONG. %2"	DUREZA HARDNESS HBW	DIMENSIONES SAMPLE DIM mm	1 Joules	2 Joules	3 Joules	PROMEDIO AVERAGE Joules
12	T62024	2	CODO 10 X 45° CED-80	301	470	38	137					
13	T63744	5	RED. CONC. 12 X 6 CED-STD	331	498	32	145					
14	T6079	59	RED. CONC. 3 X 1 1/2 CED-XS	281	472	34	156					
15	T65719	1	RED. CONC. 12 X 10 CED-40	327	492	42	141					
16	T5465	13	CODO 5 X 90° R.C. CED-XS	268	477	34	152					
17	T65719	4	RED. CONC. 12 X 8 CED-40	327	492	42	141					
18	T6407	5	RED. CONC. 5 X 4 CED-STD	331	496	41	146					

ANALISIS QUIMICO / CHEMICAL ANALYSIS														
PROCESO PROCESS	COLADA HEAT CODE	COLADA/HEAT M.P./MOTHER PIPE	%C.E.	%C	%Mn	%P	%S	%Si	%Cr	%Cu	%Mo	%Ni	%V	%Nb
HF	T62024	62024	0.310	0.180	0.660	0.010	0.001	0.290	0.060	0.075	0.026	0.040	0.000	0.000
CF	T63744	63744	0.330	0.170	0.820	0.015	0.001	0.290	0.050	0.080	0.037	0.040	0.000	0.000
CF	T6079	6079	0.300	0.170	0.710	0.005	0.002	0.270	0.020	0.039	0.007	0.020	0.000	0.000
CF	T65719	65719	0.310	0.180	0.660	0.005	0.002	0.270	0.040	0.062	0.014	0.040	0.000	0.000
HF	T5465	5465	0.300	0.160	0.780	0.007	0.002	0.300	0.020	0.045	0.008	0.020	0.000	0.000
CF	T65719	65719	0.310	0.180	0.660	0.005	0.002	0.270	0.040	0.062	0.014	0.040	0.000	0.000
CF	T6407	6407	0.300	0.170	0.740	0.006	0.001	0.300	0.020	0.035	0.006	0.020	0.000	0.000

Certificamos que los resultados de los Análisis Químicos y Pruebas Mecánicas son verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o el proveedor de Materia Prima (Tubería Sin Costura) conforme ASTM A106 Grado B con N°: 12063317 13009957 13030289 13047573 13000819 13047573 13053788

We certify that result of chemical analysis and mechanical test are true and correct copy of the test certificate issued by the manufacturer and/or supplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B N°: 12063317 13009957 13030289 13047573 13000819 13047573 13053788

"Este material cumple con los requerimientos especificados en la orden".
The material of this certificate heat number mentioned above is in compliance with the requirements specified in the order".

Notas: Formado en caliente a 620°C-980°C, enfriado al aire; Formado en frío normalizado a 940°C max. Tiempo de permanencia 10'. Inspección Dimensional: Satisfactoria. HF: FORMADO EN CALIENTE/HOT FORMED	Notes: Hot formed fittings in a range from 620°C to 980°C, cooled in still air, Cold formed normalized at 940°C max. Holding time 10'. Visual dimensional check: Satisfactory. CF: FORMADO EN FRIO/COLD FORMED	 Quality Manager/Jefe de Calidad: ING. WALDO GALLEGOS GALVAN	The Products described herein were produced in accordance with the above referenced specification and are identified with the "R" which is permanently marked on each fitting./ The values of hardness for fittings NPS 2 1/2" and smaller ones obtain from the conversion of hardness Rockwell B to hardness Brinell HBW by means of table WILSON DESK CHART 60. Los valores de dureza para conexiones de NPS de 2 1/2" y menores, se obtienen de la conversión de dureza Rockwell B a dureza Brinell HBW mediante la tabla WILSON DESK CHART 60.
--	---	--	---