

**CERTIFICADO DE CALIDAD  
INSPECTION CERTIFICATE**  
( DIN EN 10204:2004E - ISO 10474 3.1.B )

Número: 24032  
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Vendido a: PROVEEDORA DE MATERIALES AN CER, S. A.  
Sold to: DE C.V.  
Pedido del Cliente No: 5823  
Customers Order No:  
Lista de Empaque: 12324  
Packing List:  
Fecha/Date: 9 de Noviembre

Especificaciones y Grados / Standard or Specification and Steel Grade  
Seamless Fittings according to ASTM A 234M WPB-07, NACE MR 01.75-2003  
Conform to ASME II Ed. 2001 ASME SA-234M Grade WPB, NACE MR0103-2003

Dimensiones y tolerancias / Dimension and tolerances  
ASME B 16.9 - 2007 and ASME B 16.28 - 1994

Factura/Invoice:  
Bocas / Ends  
Biselado / Bevelled ends

DESCRIPCION DE MATERIAL / MATERIAL DESCRIPTION				PRUEBAS MECANICAS / MECHANICAL TEST				PRUEBA DE IMPACTO 0°C / IMPACT TEST				
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	P
1	T51817	50	CODO 6 X 45° CED-STD	316	499	42	124					
2	T46857	4	RED. CONC. 10 X 8 CED-STD	327	499	41	134					
3	T49259	4	RED. CONC. 10 X 8 CED-STD	329	490	42	122					
4	T48110	1	RED. CONC. 10 X 8 CED-STD	318	493	43	93					
5	SGS6	8	CODO 3 X 45° CED-STD	344	488	35	125					
6	SDA6	1	CODO 3 X 45° CED-STD	328	470	40	124					
7	S28891	1	CODO 3 X 45° CED-STD	293	455	31	110					
8	S33021	1	CODO 3 X 45° CED-STD	317	483	31	118					
9	S33739	2	CODO 3 X 45° CED-STD	319	490	32	107					
10	NF5	1	CODO 3 X 45° CED-STD	396	515	37	129					
11	S31103	11	CODO 3 X 45° CED-STD	304	510	29	116					

ANALISIS QUIMICO / CHEMICAL ANALYSIS															Certificamos que los resultados de los Analisis Químicos y Pruebas Mecánicas verdaderos o una copia fiel de los certificados enviados por el Fabricante y/o de Materia Prima (Tubería Sin Costura) conforme ASTM A106 Grado B con N We certify that result of chemical analysis and mechanical test are true and copy of the test certificate issued by the manufacturer and/or supplier Raw material (Seamless Pipe) certs conform to ASTM A106 Grade B N°: 10047688 9060617 10049556 10024071 199014 801 473305 480023 0205919 460632
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	T51817	51817	0.330	0.190	0.710	0.011	0.002	0.300	0.050	0.054	0.027	0.030	0.000	0.000	
CF	T46857	46857	0.310	0.180	0.660	0.012	0.004	0.290	0.050	0.080	0.029	0.040	0.000	0.000	
CF	T49259	49259	0.300	0.170	0.680	0.011	0.002	0.270	0.040	0.073	0.023	0.030	0.000	0.000	
CF	T48110	48110	0.330	0.190	0.730	0.009	0.003	0.280	0.040	0.079	0.023	0.030	0.000	0.000	
HF	SGS6	30591	0.326	0.190	0.730	0.014	0.001	0.300	0.030	0.057	0.010	0.034	0.001	0.001	
HF	SDA6	29380	0.322	0.180	0.760	0.008	0.001	0.290	0.030	0.050	0.020	0.020	0.001	0.001	
HF	S28891	28891	0.340	0.200	0.750	0.010	0.002	0.280	0.030	0.029	0.010	0.033	0.001	0.000	
HF	S33021	33021	0.310	0.180	0.720	0.014	0.001	0.290	0.030	0.044	0.010	0.024	0.001	0.000	
HF	S33739	33739	0.340	0.200	0.730	0.009	0.001	0.270	0.040	0.032	0.010	0.017	0.001	0.000	
HF	NF5	97449	0.342	0.180	0.820	0.006	0.001	0.270	0.050	0.069	0.035	0.050	0.000	0.000	
HF	S31103	31103	0.320	0.180	0.750	0.009	0.001	0.290	0.050	0.056	0.010	0.040	0.001	0.001	

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.

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.

Quality Manager / Jefe de Calidad:  
ING. WALDO GALLEGOS GALVAN

The Products described herein were produced in accordance with the above referenced specification and are identical to the "R" which is permanently marked on each fitting. The values of hardness for fittings NPS 2 1/2" and smaller are 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 Brinell HBW mediante la tabla WILSON DESK CHART 60.