

**CONSTANCIA DE INSPECCION
(INSPECTION CONSTANCY)**

N° CONSTANCIA (CONSTANCY N°):

160781

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CLIENTE (CUSTOMER):

PLESA ANÁHUAC Y CIAS, S.A. DE C.V.

ORDEN DE COMPRA (PURCHASE ORDER):

23449

DIRECCION (ADDRESS):

AV. VALLE DE LAS ALAMEDAS # 66-O COL. SAN FCO. CHILPAN

TULTITLÁN, EDO. DE MEXICO C.P. 54940

ORDEN DE PREPARACION
(PREPARATION ORDER)
SB-082-2016

ORDEN DE TRABAJO
(JOB ORDER)
33704

DIAMETRO
(SPECIFIED OUTSIDE DIAMETER)
14.000"

ESPESOR
(SPECIFIED WALL THICKNESS)
0.250"

ESPECIFICACION
(SPECIFICATION)
API 5L 45 ED./A.S.T.M.

GRADO
(PIPE GRADE)
X42/B/A53B

CONDICION DE ENTREGA
(DELIVERY CONDITION)
-

NIVEL DE ESPECIFICACION DE PRODUCTO
(PRODUCT SPECIFICATION LEVEL)
1

TIPO DE TUBO
(TYPE OF PIPE)
HF/WERW

PROVEEDOR
(SUPPLIER)
AHMSA

FECHA
(DATE)
14/04/2016

COLADA/PLACA HEAT PLATE PLATE	TAMAÑO DE GRANO GRAIN SIZE	C	ANÁLISIS QUÍMICO (%) CHEMICAL ANALYSIS (%)																					
			C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Ca	Pcm	CE	Nb+V+Ti	Nb+V	(Cu+Ni+Cr+Mo+V)	
159715	-	H	0.16	0.83	0.015	0.003	0.12	0.039	0.013	0.017	0.018	0.00	0.002	0.000	0.0002	0.005	0.000	-	0.21	0.31	0.007	0.005	0.06	-
		P	0.16	0.82	0.015	0.002	0.12	0.038	0.012	0.016	0.018	0.00	0.002	0.000	0.0002	0.004	0.000	-	0.21	0.30	0.006	0.004	0.05	-
		P	0.15	0.82	0.015	0.002	0.11	0.038	0.013	0.017	0.017	0.00	0.002	0.000	0.0002	0.004	0.000	-	0.20	0.29	0.006	0.004	0.05	-
259149	-	H	0.17	0.81	0.020	0.009	0.13	0.039	0.019	0.027	0.022	0.00	0.003	0.000	0.0001	0.004	0.000	-	0.22	0.31	0.007	0.004	0.08	-
		P	0.16	0.81	0.020	0.008	0.12	0.038	0.018	0.026	0.022	0.00	0.003	0.000	0.0001	0.003	0.000	-	0.21	0.30	0.006	0.003	0.07	-
		P	0.17	0.80	0.020	0.007	0.13	0.039	0.019	0.026	0.021	0.00	0.002	0.000	0.0001	0.003	0.000	-	0.22	0.31	0.005	0.003	0.07	-
159622	-	H	0.16	1.00	0.014	0.007	0.01	0.033	0.013	0.021	0.018	0.00	0.001	0.000	0.0002	0.003	0.000	-	0.21	0.33	0.004	0.003	0.06	-
		P	0.16	0.98	0.013	0.007	0.02	0.032	0.012	0.021	0.017	0.00	0.001	0.000	0.0002	0.002	0.000	-	0.21	0.33	0.003	0.002	0.06	-
		P	0.15	0.99	0.014	0.007	0.02	0.032	0.013	0.020	0.018	0.00	0.001	0.000	0.0002	0.003	0.000	-	0.20	0.32	0.004	0.003	0.06	-
455490	-	H	0.16	0.83	0.021	0.005	0.10	0.044	0.019	0.024	0.022	0.01	0.002	0.000	0.0004	0.002	0.000	-	0.21	0.31	0.005	0.003	0.07	-
		P	0.16	0.81	0.020	0.005	0.10	0.041	0.018	0.022	0.020	0.01	0.002	0.000	0.0004	0.002	0.000	-	0.21	0.30	0.004	0.002	0.07	-
		P	0.15	0.82	0.019	0.004	0.11	0.040	0.017	0.023	0.020	0.01	0.002	0.000	0.0004	0.003	0.000	-	0.20	0.29	0.005	0.003	0.05	-
259672	-	H	0.18	0.85	0.016	0.005	0.01	0.037	0.020	0.018	0.022	0.01	0.001	0.000	0.0003	0.004	0.000	-	0.23	0.33	0.005	0.004	0.07	-
		P	0.18	0.84	0.015	0.004	0.01	0.036	0.020	0.017	0.020	0.01	0.001	0.000	0.0003	0.004	0.000	-	0.23	0.33	0.005	0.004	0.07	-
		P	0.17	0.84	0.014	0.005	0.01	0.035	0.020	0.016	0.021	0.01	0.001	0.000	0.0003	0.004	0.000	-	0.22	0.32	0.005	0.004	0.07	-
159719	-	H	0.16	0.83	0.013	0.006	0.12	0.042	0.020	0.026	0.025	0.01	0.002	0.000	0.0004	0.003	0.000	-	0.21	0.31	0.005	0.003	0.08	-
		P	0.16	0.83	0.012	0.005	0.12	0.041	0.020	0.025	0.024	0.01	0.002	0.000	0.0004	0.002	0.000	-	0.21	0.31	0.004	0.002	0.08	-
		P	0.16	0.82	0.013	0.006	0.11	0.040	0.019	0.026	0.023	0.01	0.002	0.000	0.0004	0.003	0.000	-	0.21	0.31	0.005	0.003	0.08	-

INFORMACION ADICIONAL (ADDITIONAL INFORMATION)

CRITERIO DE ACEPTACION (ACCEPTANCE CRITERIA)	MIN. MAX:	C	Mn	P	S	Si	Al	Cu	Cr	Ni	Mo	Ti	Nb	B	V	N	Ca	Pcm	CE	Nb+V+Ti	Nb+V	(Cu+Ni+Cr+Mo+V)
	0.26	1.20	0.030	0.030	-	-	0.400	0.400	0.400	0.15	-	-	-	0.001	0.080	-	-	-	-	0.15	0.06	1.0

<p>PRUEBA HIDROSTATICA (HYDROSTATIC TEST):</p> <p>PRESSION: 1280 PSI (PRESSURE): TIEMPO DE PRUEBA: 5 s (HOLDING TIME):</p>	<p>PRUEBA DE ULTRASONIDO (ULTRASONIC TEST):</p> <p>ESTANDAR DE REFERENCIA: 29 (REFERENCE STANDARD):</p>	<p>METODO DE PND EN SOLDADURA (METHOD OF WELD NDE):</p> <p>SOLDADURA LONGITUDINAL (LONGITUDINAL WELD): RAYOS X (X RAY) (RT) INDICADOR DE CALIDAD DE IMAGEN (IQI): N/A TIPO Y TAMAÑO (TYPE AND SIZE):</p> <p>JUNTAS (JOINTERS WELDS): RAYOS X TIEMPO REAL (X RAY) (R) INDICADOR DE CALIDAD DE IMAGEN (IQI): N/A TIPO Y TAMAÑO (TYPE AND SIZE):</p>	<p>TRATAMIENTO TERMICO SOLDADURA (HEAT TREATMENT WELD):</p> <p>TEMPERATURA: 1600° F MIN (TEMPERATURE):</p>	<p>PRUEBA DE APLASTAMIENTO (FLATTENING TEST):</p> <p>0° OK 90° OK</p>	<p>CLAVE (KEY):</p> <p>A. %FACTOR DE EXPANSION PARA TUBERIA EXPANDIDA EN FRIO: % EXPANSION FACTOR FOR COLD-EXPANDED PIPE):</p> <p>B. TIPO (TYPE):</p> <p>1. MUESTRA EN TIRA (STRIP TEST PIECE) 2. APLANADO (FLATTENED) 3. SIN APLANAR (UNFLATTENED)</p> <p>C. FRECUENCIA DE PRUEBA (FREQUENCY OF TEST):</p> <p>H: COLADA (HEAT) P: PRODUCTO (PRODUCT) R: REMUESTREO (RETESTING) T: UNIDAD DE PRUEBA (TEST UNIT)</p> <p>CRITERIOS DE ACEPTACION (ACCEPTANCE CRITERIA):</p> <p>* CUALQUIER COLADA (ANY HEAT) ** PROMEDIO DE LAS COLADAS (ALL HEAT AVERAGE) *** PROMEDIO MINIMO DE LAS COLADAS (ALL HEAT AVERAGE MIN)</p>	<p>D. LOCALIZACION Y ORIENTACION (ORIENTATION AND LOCATION): (THE SOURCE)</p> <p>4. CORDON DE SOLDADURA (SEAM WELD) 1W 5. CUERPO DEL TUBO (PIPE BODY) 1T180 6. CUERPO DEL TUBO (PIPE BODY) 1L90 7. CORDON DE SOLDADURA (SEAM WELD) 3W 8. CUERPO DEL TUBO (PIPE BODY) 3T90 9. CORDON DE SOLDADURA (SEAM WELD) 3 HAZ 10. CUERPO DEL TUBO (PIPE BODY) 2T90 11. 2W 12. TRANSVERSAL (TRANSVERSE) 13. LONGITUDINAL (LONGITUDINAL) 31. LINEA DE FUSION (FUSION LINE SEAM WELD 3 HAZ)</p> <p>E. SIZE (TAMAÑO)</p> <p>14. 1.500" X 18" (38 mm x 457.2 mm) 15. CILINDRICA (ROUND BAR) 0.500" (12.5 mm) 16. CILINDRICA (ROUND BAR) 0.350" (8.75 mm) 17. FULL SIZE (COMPLETO)</p>	<p>F: TIPO DE RANURA DWTT (DWTT TYPE OF NOTCH):</p> <p>21. CHEVRON (CHEVRON) 22. PRENSADA (PRESSED)</p> <p>G: LOCALIZACION (LOCATION):</p> <p>23. EXTERIOR (OUTSIDE) 24. INTERIOR (INSIDE) 25. CENTER (CENTRO)</p> <p>H: ESTANDAR DE REFERENCIA (REFERENCE STANDARD):</p> <p>26. BARRENO (DRILLED HOLE) 1/16" (1.6 mm) 27. RANURA RECTANGULAR (RECTANGULAR NOTCH N-5) 28. BARRENO 1.2 mm DIAMETER MID-WALL STANDARDIZATION 29. RANURA RECTANGULAR (RECTANGULAR NOTCH) N-10 30. BARRENO (DRILLED HOLE) 1/8" (3.2 mm)</p>
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HACEMOS CONSTAR QUE EL MATERIAL DESCRITO HA SIDO FABRICADO, MUESTREADO, PROBADO E INSPECCIONADO DE ACUERDO CON LA ESPECIFICACION A.S.T.M./API 5L 45 ED. 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 A.S.T.M./API 5L 45 ED. AND THAT THESE TEST RESULT, ARE AS THEY APPEAR IN RECORDS OF THE COMPANY.)

Lic. Enrique Padron Navarro
JEFE DE LABORATORIO (HEAD OF LABORATORY)