



**MATERIAL TEST REPORT - QUALITY MANAGEMENT SYSTEM**  
FORZA STEEL - PRODUCTION FACILITY :

Carretera Salinas Victoria K.m. 2 s/n Salinas Victoria, Nuevo León, México C.P. 65500 Tel: +52 (51) 1958-3780

Cod (Code):	FR
Edition (Edición):	0
Date of Rev (Fecha Rev):	25
Page (Hoja):	

CUSTOMER (Cliente)		PURCHASE ORDER (Orden de Compra)		DELIVERY (Remisión)		DATE (Fecha)		REFERENCE NO (No. Referenc)								
PLESA ANAHUAC Y CIAS, S.A DE C.V.		30531		5050320		18/12/2020		17122020-16								
PIPE TYPE PRODUCT (Tipo de producto)	FORZA WORK ORDER (OIF)	SIZE (Diámetro)	WALL THICKNESS (Espesor)	HEAT (No. Colada)	SPECIFICATI ON (Especificación n Norma)	GRADE (Grado)	LENGTH (Longitud)		MASS (Peso Unitario)		MASS PER METER (Peso Lineal Kg x metros)	HYDROSTATIC TEST (Prueba Hidrostática (psi))	SPECIAL REQUIREMENTS (Requisitos especiales)	TUBE NUMB (No. Piezas)		
							Metros	Pies	Lbs	Kg						
ERW		12.750	0.250	364066	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW		12.750	0.250	D17502296	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 2002	12.750	0.250	SQ71888	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	11		
ERW	OIF 2057	12.750	0.250	R00371	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2		
ERW	OIF 3008	12.750	0.250	AB7209	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 3008	12.750	0.250	AB7210	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2		
ERW	OIF 3008	12.750	0.250	AB7275	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2		
ERW	OIF 360	12.750	0.250	1342651012	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 723	12.750	0.250	261865	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 770	12.750	0.250	364066	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 796	12.750	0.250	D17802219	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 800	12.750	0.250	SP88451	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 890	12.750	0.250	SP95045	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 890	12.750	0.250	SP95051	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 952	12.750	0.250	D18502258	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 952	12.750	0.250	D18702270	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 952	12.750	0.250	D18702282	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2		
ERW	OIF 973	12.750	0.250	184650	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1		
ERW	OIF 973	12.750	0.250	184743	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	8		
ERW	OIF 973	12.750	0.250	184745	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	5		
<b>Chemical Analyses (Análisis Químico)</b> Tube 2002-3-18B,723-16-21A,2002-3-18A,2002-2-27A,973-18-1A,360-19-13,INV18-12250-15A,3008-10-26A,973-26-30,2002-1-27B,2002-2-28A,INV18-12250-1-973-49-24A,3008-1-23A,3008-2-4A,2057-80-26A,3008-10-1A,2002-1-27A,952-8-24F 29A,796-3-11A,973-5-13B,973-15-32A,952-1-7A,952-9-23B,952-7-17A,770-26-9A,2057-74-25A,890-13-12A,973-16-3A,770-20-4A,973-5-30A,890-45-30A,2002-2-16A,2002-3-9A,973-5-9A,2002-2-17A,973-3-19A,INV18-12250-14A,973-15-2C (Lots) 7A,973-15-5A,973-71-1A,2002-1-12A,2002-3-15,3008-1-21A,800-1-23A,973-82-34A																
<b>Mechanical Test (Pruebas mecánicas)</b>																
										Yield Strength (KSI) (Límite elástico)		Tensile Strength (KSI) (Última Tensión)		Tensile Strength (KSI) (Última Tensión)		Elongation (%) (Elongación)
										MB		W				
Heat (Colada)		C	Si	Mn	P	S	V	Cr	Cu	Ni	Mo					
364066																
364066																
D17502296																
SQ71888		0.067	0.187	0.983	0.0076	0.0016	0.001	0.017	0.011	0.007	0.005	54.90	78.20	N/A	35	
R00371		0.064	0.166	1.052	0.010	0.001	0.001	0.030	0.018	0.010	0.010	60.10	77.60	N/A	36	
AB7209		0.180	0.118	0.270	0.025	0.0041	0.0028	0.026	0.0081	0.0046	0.0034	60.40	70.48	N/A	26	
AB7210		0.176	0.121	0.274	0.031	0.0038	0.0032	0.030	0.0074	0.0044	0.0030	62.70	72.50	N/A	25	
AB7275		0.071	0.021	0.638	0.021	0.003	0.002	0.029	0.007	0.004	0.003	62.50	81.30	N/A	41	
1342651012																
261865																
364066																
364066																
D17802219																
SP88451		0.0689	0.195	0.999	0.010	0.0017	0.001	0.021	0.015	0.012	0.002	N/A	N/A	N/A	30	
SP95045		0.0717	0.189	1.000	0.0105	0.002	0.001	0.015	0.013	0.010	0.002	59.60	77.70	N/A	32	

SP95051	0.070	0.189	0.986	0.011	0.0018	0.002	0.019	0.021	0.010	0.006	54.10	77.70	N/A	32
D18502258	0.104	0.184	0.246	0.021	0.003	0.0009	0.046	0.0096	0.0015	0.001	55.80	68.90	N/A	35
D18702270	0.115	0.164	0.25	0.021	0.0027	0.0008	0.046	0.0096	0.0015	0.001	52.70	67.40	78.20	34
D18702282	0.116	0.160	0.230	0.012	0.006	0.001	0.034	0.010	0.001	0.001	53.11	70.30	N/A	33
184650	0.181	0.034	0.723	0.018	0.009	0.0051	0.045	0.053	0.038	0.0046	54.50	69.90	N/A	31
184743	0.182	0.027	0.705	0.017	0.0091	0.0053	0.044	0.053	0.035	0.0047	56.40	72.50	N/A	30
184745	0.192	0.035	0.736	0.017	0.0083	0.0055	0.047	0.052	0.039	0.0044	51.70	74.10	N/A	33

Forza Steel certifica que los productos descritos en este documento fueron fabricados en cumplimiento con los requerimientos de la especificación descrita, obteniendo resultados satisfactorios en todas sus pruebas e inspecciones incluidas en los planes de calidad de fuerza steel para cumplir con los requerimientos del pedido en referencia.

Forza steel certifies that the products described in this document were manufactured in compliance with the requirements of the specification described, obtaining satisfactory results in all tests and inspections included in the quality plans of Forza Steel to meet the requirements of the order in reference.

Certify By (Autorizó)



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CUSTOMER (Cliente)		PURCHASE ORDER (Orden de Compra)		DELIVERY (Remisión)		DATE (Fecha)		REFERENCE NÚ (No. Referenc)							
PLESA ANAHUAC Y CIA S, S.A DE C.V.		30531		5050320		18/12/2020		17122020-16							
PIPE TYPE PRODUCT (Tipo de producto)	FORZA WORK ORDER (OIF)	SIZE (Diámetro)	WALL THICKNESS (Espesor)	HEAT (No. Colada)	SPECIFICATI ON (Especificació n Norma)	GRADE (Grado)	LENGTH (Longitud)		MASS PER METER (Peso Lineal kg x metros)	HYDROSTATIC TEST (Prueba Hidrostática (psi))	SPECIAL REQUIREMENTS (Requerimientos especiales)	TUBE NUMB (No. Piezas)			
							Metros	Pies					Lbs	Kg	
ERW		12.750	0.250	364066	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW		12.750	0.250	D17502296	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 2002	12.750	0.250	SQ71888	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	11	
ERW	OIF 2057	12.750	0.250	R00371	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2	
ERW	OIF 3008	12.750	0.250	AB7209	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2	
ERW	OIF 3008	12.750	0.250	AB7210	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2	
ERW	OIF 3008	12.750	0.250	AB7275	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2	
ERW	OIF 360	12.750	0.250	1342651012	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 723	12.750	0.250	261865	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 770	12.750	0.250	364066	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 796	12.750	0.250	D17802219	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 800	12.750	0.250	SP88451	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 890	12.750	0.250	SP96045	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 890	12.750	0.250	SP96051	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 952	12.750	0.250	D18502258	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 952	12.750	0.250	D18702270	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 952	12.750	0.250	D18702282	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	2	
ERW	OIF 973	12.750	0.250	184650	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	1	
ERW	OIF 973	12.750	0.250	184743	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	8	
ERW	OIF 973	12.750	0.250	184745	ASTM A500	B	6.20	20.34	668.21	303.09	49.72	N/A	N/A	5	
<b>Chemical Analyses (Análisis Químico)</b> Tube (Lotess) 2002-3-18B, 723-16-21A, 2002-3-18A, 2002-2-27A, 973-18-1A, 360-19-13, INV18-12250-15A, 3008-10-26A, 973-26-30, 2002-1-27B, 2002-2-28A, INV18-12250-1, 973-49-24A, 3008-1-23A, 3008-2-4A, 2057-80-26A, 3008-10-1A, 2002-1-27A, 952-8-24A, 29A, 996-3-11A, 973-5-13B, 973-15-32A, 952-1-7A, 952-9-23B, 952-7-17A, 770-26-9A, 2057-7-4-25A, 890-13-12A, 973-16-3A, 770-20-4A, 973-5-30A, 890-45-30A, 2002-2-16A, 2002-3-9A, 973-5-9A, 2002-2-17A, 973-3-19A, INV18-12250-14A, 973-15-2: 7A, 973-15-5A, 973-77-1A, 2002-1-12A, 2002-3-15, 3008-1-21A, 800-1-23A, 973-82-34A															
<b>Mechanical Test (Pruebas mecánicas)</b>															
										MB		W			
										Yield Strength (KSI) (Límite elástico)		Tensile Strength (KSI) (Última Tensión)	Tensile Strength (KSI) (Última Tensión)	Elongation (%) (Elongación)	
Heat (Colada)	C	Si	Mn	P	S	V	Cr	Cu	Ni	Mo	54.90	78.20	77.60	N/A	35
364066											60.10	77.60	N/A	36	
D17502296											60.40	70.48	N/A	26	
SQ71888	0.067	0.187	0.983	0.0076	0.0016	0.001	0.017	0.011	0.007	0.005	62.70	72.50	N/A	25	
R00371	0.064	0.165	1.052	0.010	0.001	0.001	0.030	0.018	0.010	0.010	62.50	81.30	N/A	41	
AB7209	0.180	0.118	0.270	0.025	0.0041	0.0028	0.026	0.0081	0.0046	0.0034	N/A	N/A	N/A	N/A	
AB7210	0.176	0.121	0.274	0.031	0.0038	0.0032	0.030	0.0074	0.0044	0.0030	N/A	N/A	N/A	N/A	
AB7275	0.071	0.021	0.638	0.021	0.003	0.002	0.029	0.007	0.004	0.003	N/A	N/A	N/A	N/A	
1342651012											N/A	N/A	N/A	N/A	
261865											N/A	N/A	N/A	N/A	
364066											N/A	N/A	N/A	N/A	
D17802219											N/A	N/A	N/A	N/A	
SP88451	0.0689	0.195	0.999	0.010	0.0017	0.001	0.021	0.015	0.012	0.002	N/A	N/A	75.80	30	
SP95045	0.0717	0.189	1.000	0.0105	0.002	0.001	0.015	0.013	0.010	0.002	59.60	77.70	N/A	32	

SP95051	0.070	0.189	0.986	0.011	0.0018	0.002	0.019	0.021	0.010	0.006	54.10	77.70	N/A	32
D18502238	0.104	0.184	0.246	0.021	0.003	0.0009	0.046	0.0096	0.0015	0.001	55.80	68.90	N/A	35
D18702270	0.115	0.164	0.25	0.021	0.0027	0.0008	0.046	0.0096	0.0015	0.001	52.70	67.40	78.20	34
D18702292	0.116	0.160	0.230	0.012	0.006	0.001	0.034	0.010	0.001	0.001	53.11	70.30	N/A	33
184650	0.181	0.034	0.723	0.018	0.009	0.0051	0.045	0.053	0.038	0.0046	54.50	69.90	N/A	31
184743	0.182	0.027	0.705	0.017	0.0091	0.0053	0.044	0.053	0.035	0.0047	56.40	72.50	N/A	30
184745	0.192	0.035	0.736	0.017	0.0083	0.0055	0.047	0.052	0.039	0.0044	51.70	74.10	N/A	33

Forza Steel certifica que los productos descritos en este documento fueron fabricados en cumplimiento con los requerimientos de la especificación descrita, obteniendo resultados satisfactorios en todas sus pruebas e inspecciones incluidas en los planes de calidad de fuerza steel para cumplir con los requerimientos del pedido en referencia.

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