



MATERIAL TEST REPORT - QUALITY MANAGEMENT SYSTEM
 FORZA STEEL - PRODUCTION FACILITY:
 Carretera Salinas Victoria Km. 2 s/n Salinas Victoria, Nuevo León, México C.P. 65500 Tel: +52 (51) 1958 3780

Packing List	0	Code (Code):	FPD-PR-01-06
		Edition (Edition):	Rev: 4
		Date of Rev (Fecha Rev):	27 Nov 2018
		Page (Hoja):	1/2

CUSTOMER (Cliente)		PURCHASE ORDER (Orden de Compra)		DELIVERY (Remisión)		DATE (Fecha)		REFERENCE NUMBER (No. Referencia)				
ACEROS TEPOTZTLAN, S.A. DE C.V.		002-002046-1		5039779		09/11/2019		28082019-7026				
PIPE TYPE PRODUCT (Tipo de producto)	FORZA WORK ORDER (O/F)	SIZE (Diámetro)	WALL THICKNESS (Espesor)	HEAT (No. Colada)	SPECIFICATI ON (Especificación 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 NUMBER (No. Piezas)
HSS	O/F 778	6x4	0.312	171111	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	2
HSS	O/F 778	6x4	0.312	271135	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	16
HSS	O/F 900	6x4	0.312	AB3471	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	12
HSS	O/F 900	6x4	0.312	AB3472	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	12
HSS	O/F 988	6x4	0.312	18115487	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	1
HSS	O/F 988	6x4	0.312	18115540	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	35
HSS	O/F 988	6x4	0.312	18115542	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	18
HSS	O/F 988	6x4	0.312	18337018	ASTM A500	B	12.20	40.03	760.67	345.03	28.30	3

Chemical Analyses (Analisis Químico)

Heat (Colada)	C	Si	Mn	P	S	V	Cr	Cu	Ni	Mo
171111	0.165	0.048	0.875	0.009	0.0036	0.0022	0.034	0.033	0.0270	0.0045
271135	0.141	0.057	0.885	0.014	0.0062	0.0016	0.038	0.031	0.0290	0.0027
AB3471	0.065	0.0015	0.812	0.015	0.0035	0.0053	0.0053	0.0005	0.029	0.0092
AB3472	0.0051	0.0015	0.724	0.02	0.0022	0.0039	0.102	0.24	0.104	0.022
18115487	0.118	0.048	0.844	0.016	0.015	0.0015	0.037	0.034	0.26	0.0034
18115540	0.132	0.059	0.846	0.014	0.0069	0.0019	0.037	0.033	0.034	0.0043
18115542	0.136	0.057	0.872	0.019	0.0078	0.0016	0.031	0.037	0.027	0.0044
18337018	0.143	0.062	0.856	0.016	0.0071	0.0017	0.039	0.030	0.032	0.0032

Mechanical Test (Pruebas mecánicas)

Yield Strength (KSI) (Límite elástico)	Tensile Strength (KSI) (Última tensión)	Elongation (%) (Elongación)
48.16	58.37	28
51.47	58.44	27
50.10	62.70	36
53.50	64.70	30
50.80	62.40	35
53.70	67.60	37
54.00	64.90	31
53.80	64.60	38

Certify By (Autorizo)

Edgar Eduardo Olivo Hernández
Ing. Edgar Eduardo Olivo Hernández
QUALITY ASSURANCE MANAGER

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.