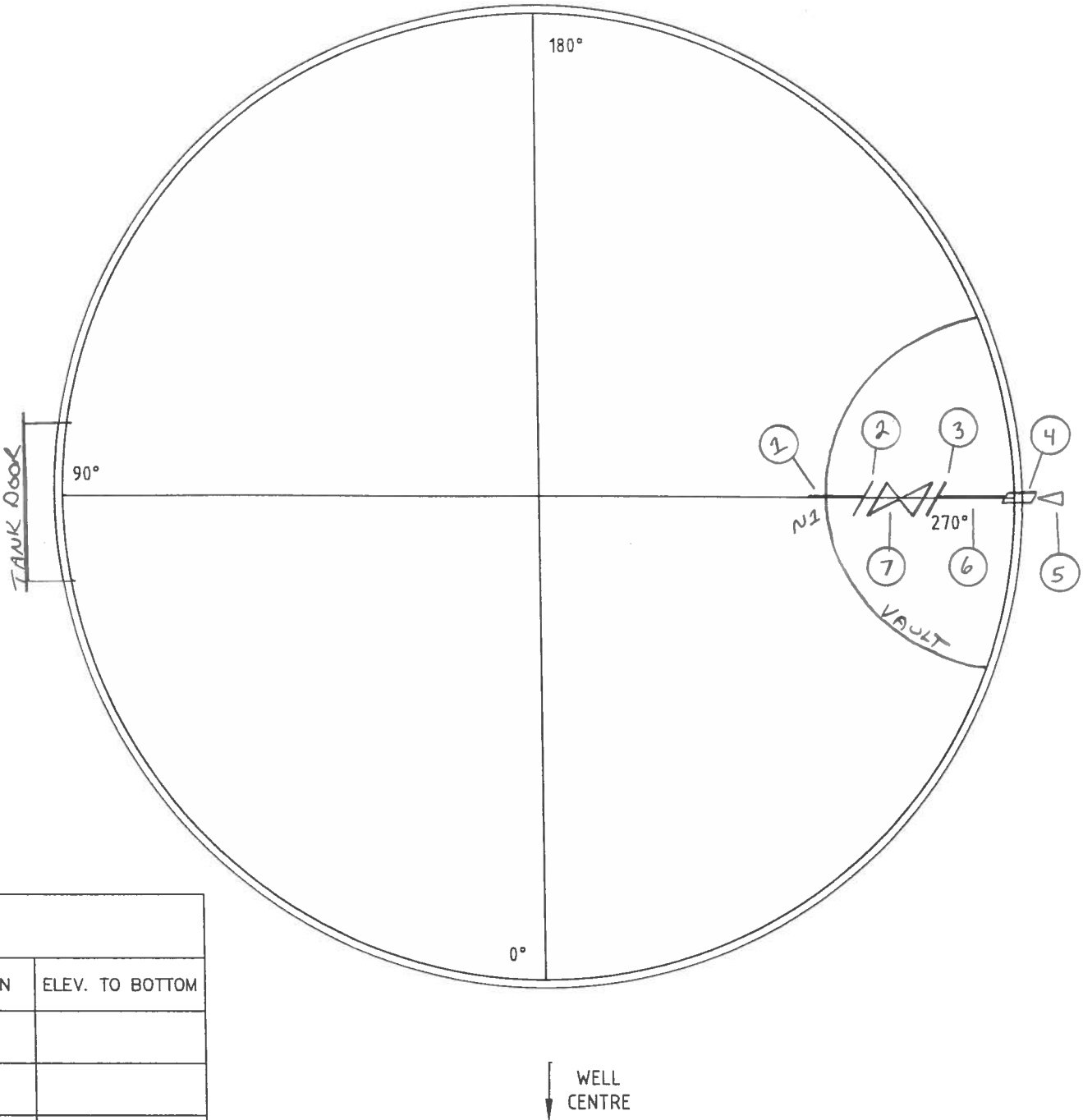


WELDERS

NAME	WELD ID
STEVE ROYAN	CN
COLBY FIELO	CF

x WELD PROCEDURE - L&L 15



PATCHES

ID	SIZE	THK	LOCATION	ELEV. TO BOTTOM
A				
B				
C				
D				

DESCRIPTION OF RE-PAIRS:

* REPLACE THE VAULT STING NOZZLE + ASSEMBLY.

BILL OF MATERIALS

ID	SCH	DESCRIPTION	HEAT
1	160	4" PIPE	11493
2		4" 150 RF SO	815555
3		4" 150 RF THD	12/72470
4		4" COLLAR	ACRX
5		4" PLUG, BULL	630
6	160	4" x 12" PIPE, NIPPLE	49799
7		4" 150 GATE VALVE	-
8			
9			
10			

NOZZLES

ID	LOCATION	ELEVATION
N1	VAULT, STING	6"
N2		
N3		
N4		
N5		
N6		

COMPANY NAME:

HUSKY ENERGY W.O# 81422566.

LSD: 102/11-14-049-02W4/00 TK#2

MANUFACTURE AND SERIAL NUMBER:

UNIV 02180-4

JOB NUMBER:

#280

AREA:

UNIT:

Unit

TYPE:

SCALE:

N.T.S.

SHEET:

SH of TL

REV.

REV

REV.

DESCRIPTION

Date

DATE

DRAWN

CHKD

APPD

CAD DRAWING: DO NOT CHANGE MANUALLY.

Type of Inspection: UT/Vis	Rev: N/A	Client: HUSKY OIL OPERATIONS	Date: 2019-Sep-22
Test Technique: o-deg		IRISNDT #: LYN1901578	WO #: 81422566
Equipment: DMS2 /Flashlight		Location: 102/11-14-49-2W4M	PO #: 8401358779
Code/Standard: Client Information		Item Inspected: Sales tank	Appr# 2Z-2020575

Inspection Results: Appr: Scott Stafford

Requisitioner: Arnie Domes

A Visual examination and UT thickness check was carried out on the following 1000Bbl tank for the purpose of determining tank condition and inspection interval. See attached pages for UT thickness readings and observations.

Name Plate



Overview



INSPECTION RESULTS:

Replace Vault sting nozzle

Remove Guide wires

Note Spot UT thickness readings give a General overall condition of the tank and are not a 100% Scan Method.

Inspection Limitation(s): First course access only

Unit#: 1039 Kilometers: 0 In: _____ Out: _____ Hrs: _____ In: _____ Out: _____ Hrs: _____ Personnel: Tristan Sommerfeld Steve White	Consumables: min	Interpretation by: Tristan Sommerfeld (Print) _____ (Sign) _____ Client Representative: I am in full agreement with report contents (Print) _____ (Sign) _____	SNT-TC-1A: _____ API-653 (Level) _____ CERT #: 98310
---	----------------------------	--	---

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616

www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK



Tank Inspection Report

Location: 102/11-14-49-2W4M

Tank Type: Sales

Date: 19-Sept-19

Mfg: Universal

Year blt: 2010

S/N: 021080-4

CAP: 1000 bbl

Floor Thk: 1/4"

Shell Thk: 1/4" X 3/16"

Roof Thk: 3/16"

Requisitioned by: Arnie Domes

Approver: Scott Stafford

Approver Code: 2Z-2020575

WO #: 81422566

PO#: 8401358779

CC:

SAP #:

EXTERNAL INSPECTION:

ID	Item	Yes	Good	N/A	See Notes
	GENERAL				
T1	Other (Please Explain)			x	
T2	Corrosion			x	
T3	Leaks			x	
T4	Vibration			x	
T5	Dissimilar Flange Rating			x	
T6	Ladder/Stairway	x	x		
T7	Platform	x	x		
T8	Electrical Ground	x	x		
T9	Cathodic Protection			x	
T10	Painted Inactive Corrosion			x	
T11	Coating/Painting	x	x		
T12	Level Gauge	x	x		
T13	Bottom	x	x		
T14	Secondary Containment	x	x		
T15	Shell	x	x		
T16	Roof	x	x		
T17	Agitator/ Mixer			x	
	SUPPORTS				
T31	Other (Please Explain)			x	
T32	Foundation	x	x		1
T33	Anchor Bolts			x	
T34	Windgirders			x	
	CONNECTIONS				
T41	Other (Please explain)				
T42	Small Branches			x	
T43	Nozzles	x	x		
T44	Pipe Manifolds			x	
T45	Swing Lines			x	
T46	Manways/Hatches	x	x		
T47	Reinforcing Pads	x	x		
T48	Inadequate Thread Engagement			x	
T49	Bolting	x	x		
T50	Flanges			x	
T51	Leak Clamps			x	
	INSULATION				
T61	Other (Please explain)			x	
T62	Damage			x	
T63	Penetrations	x	x		2
T64	Jacket			x	
T65	Banding			x	
T66	Seals/Joints			x	
	RELIEF DEVICE				
T71	Other (Please explain)			x	
T72	Corrosion			x	
T73	Leaks			x	
T74	Restricted InleUOutlet			x	
T75	Manual Operation Lever			x	

INTERNAL INSPECTION:

ID	Item	Yes	Good	N/A	See Notes
	GENERAL				
T1	Other (Please Explain)			x	
T2	Corrosion			x	
T3	Erosion			x	
T4	Distortion			x	
T5	Blisters			x	
T6	Deposits	x			3
T7	Welds	x	x		
T8	Nozzles	x			4
T9	Shell	x	x		
T10	Roof	x	x		
T11	Floor	x	x		
	GENERAL				
T21	Other - Firetube	x	x		
T21	Other - Anodes			x	
T22	Annular Ring			x	
T23	Sump			x	
T24	Roof Supports			x	
T25	Thermowells	x	x		
T26	Metallic Linings			x	
T27	Non Metallic Linings			x	
T28	Internal Steam Coil / other Piping	x	x		
T29	Level Gauge	x			5
T30	Other Welded Attachements	x	x		
	Backwelding Req'd			x	

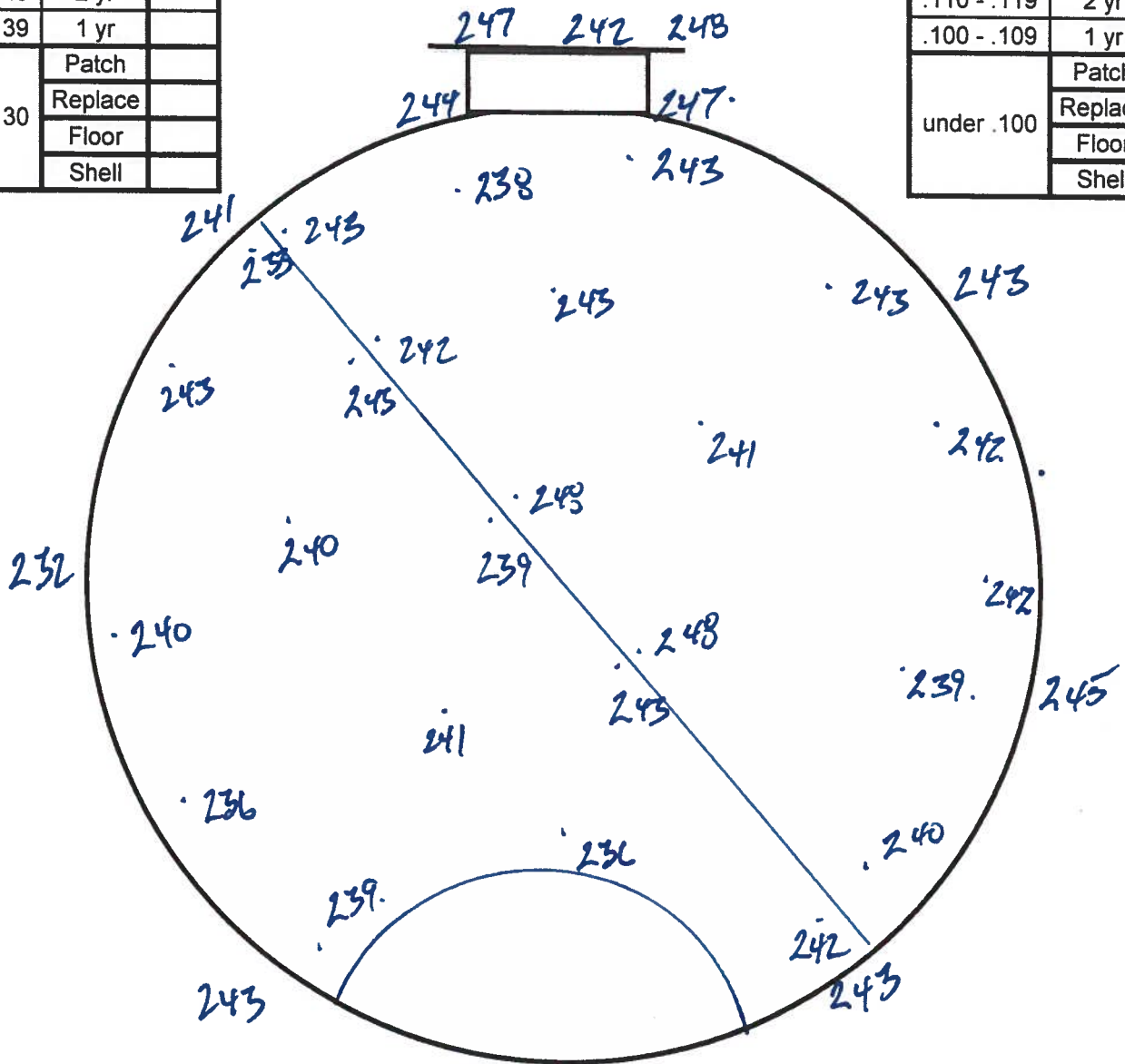
[illegible]

Without MFE		
.170 - up	5 yr	
.160 - .169	4 yr	
.150 - .159	3 yr	
.140 - .149	2 yr	
.130 - .139	1 yr	
under .130	Patch	
	Replace	
	Floor	
	Shell	

S/N: 021080-4

Location: 102/11-14-49-2W4M

With MFE		
.140 - .150	5 yr	
.130 - .139	4 yr	
.120 - .129	3 yr	
.110 - .119	2 yr	
.100 - .109	1 yr	
under .100	Patch	
	Replace	
	Floor	
	Shell	



Comments:

Replace Vault sting nozzle

Remove guide wires.

Inspected by:

Trista Sommer

Date:

22-Sept-19

Husky Inspector:

Date:



INSPECTION CERTIFICATE 3.1
CERTIFICADO DE INSPECCIÓN 3.1
(EN 10204 3.1:2004-ISO 10474 3.1:2013)

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Delino Villanueva Tejeria, Veracruz Veracruz
C.P. 81087 MEXICO
(52) 229 989 1100 Int.
(52) 229 989 1600 Int.

Page / Página:
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Number / Número:
18017537

Date / Día: **March 30, 2018**

Customer / Cliente: MBC CANADA ULC		Customer's Order Item / Orden Cliente - Item: S75952/6356 ITEM 41		Customer's Reference / Ref. del Cliente: N/A		Manufacturer's Works Order N° / Confirmación de Venta: 253291/20	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Product Type / Tipo de Producto: SEAMLESS LINE PIPE		Surface / Superficie: VARNISHED		Ends / Extremos: NORMAL REVEL	
Laminado en caliente sin costura		CONDUCCION SIN COSTURA		Steel Grade / Grado de acero: GR. B/250		Nominal Weight / Peso Nominal: 22.53 LB/FT	
Standard or Specification / Normas o Especificaciones: CSA Z245.1-14/MARCH 2014, CATTI SS, ASTM A106/15, ASME SA106/2017		Length / Longitud: 18.04 / 21.98 FT		Quantity / Cantidad: 56 Pcs/Pz		Nominal Weight / Peso Nominal: 22.53 LB/FT	
Dimensions / Dimensiones: 4.500 X 0.531 INCH		Schedule / Cédula: SCH 160		Quantity / Cantidad: 56 Pcs/Pz		Nominal Weight / Peso Nominal: 22.53 LB/FT	
1143 X 13.5 MM		5.50 / 6.70 MTS		327 890 MTS		11166.000 KG	

TENSILE TEST / ENSAYO DE TENSION

Heat N° Colada N°	Sample N° Muestra N°	Specimen condition Condición de la probeta	Specimen dimensions Dimensiones de la probeta	Test Temp. ensayo	Y.S. Bald.0.0 %	U.T.S. Req.	Elongation / Alargamiento	
							Lo	Obt.
11493 12049	27230 27228	B B	S S	L L	25.53 X 13.46 25.6 X 13.29	R.T R.T	0.63 0.64	2 2

AM: As manufactured / Según proceso de fabricación	Ls: Location of sample / Ubicación de la muestra	Ori: Orientation / Orientación	Sc: Specimen condition / Condición de la probeta
B: Body / Cuerpo	Max: Maximum / Máximo	Req. Max: Required maximum / Máximo requerido	Ss: Strip specimen / Muestra rectangular
L: Longitudinal / Longitudinal	Min: Minimum / Mínimo	Req. Required / Requerido	U.T.S.: Ultimate tensile strength / Resistencia
Lo: Initial length / Longitud inicial	Obt: Obtained / Obtenido	RT: Room temperature / Temperatura ambiente	Y.S.: Yield strength / Fluencia

		Composition % / Composición %																											
		X 100								X 1000								X 10000								X 100			
		C	Mn	Si	Mo	Cr	P	S	V	Nb	NI	Cu	Sn	Al	Ti	As	B	Ca	N	Co	1	Col. 2	Co	2	Col. 1	Col. 2	Co	2	
Heat N° Colada N°	Sample N° Muestra N°	25	135	50	15	40	30	35	80	110	400	400	—	—	110	—	10	—	—	—	—	—	—	—	—	—	—	—	—
		Min	—	29	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heat N° Colada N°	Sample N° Muestra N°	25	135	50	15	40	30	35	80	110	400	400	—	—	110	—	10	—	—	—	—	—	—	—	—	—	—	—	—
		Min	—	29	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heat N° Colada N°	Sample N° Muestra N°	21	91	21	0.7	4	4	2	1	0	50	80	5	20	0	1	0	11	56	39	433.33	17.8	—	—	—	—	—	—	—
		H	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

This certificate is issued by a computerized system and it is valid with electronic signatures. On the original certificate the trade mark, green colored "Tenaris" is stamped. In case the original certificate would release a copy of it, the user must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

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INSPECTION CERTIFICATE 3.1
CERTIFICADO DE INSPECCIÓN 3.1
(EN 10204 3.1:2004-ISO 10474 3.1:2013)

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Carretera Mexico Veracruz Km 433.7 SN
Defensa Viena de la Tierra Veracruz Veracruz
C.P. 91087 MEXICO
(52) 228 989 1100 Int.
(52) 228 989 1000 Fax

Page / Página:
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Number / Número:
18017537

Date / Día: March 30, 2018

Customer / Cliente: MRC CANADA ULC		Customer's Order Item / Orden Cliente - Item: N/A		Customer's Reference / Ref. del Cliente: 253281/20		Manufacturer's Works Order N° / Confirmación de Venta:	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Product Type / Tipo de Producto: SEAMLESS LINE PIPE		Surface / Superficie: VARNISHED		Ends / Extremos: NORMAL BEVEL	
LAMINADO EN CALIENTE SIN COSTURA		CONDUCCION SIN COSTURA		Steel Grade / Grado de acero: GR. B/290		BESELAO NORMAL	
Standard or Specification / Normas o Especificaciones: CSA Z245.1-14/MARCH 2014, CATTI SS, ASTM A106/15, ASME SA106/2017		Length / Longitud: 18.04 / 21.98 FT		Quantity / Cantidad: 56 Pcs/Pz		Nominal Weight / Peso Nominal: 22.53 LB/FT	
Dimensions / Dimensiones: 4.500 X 0.531 INCH		Schedule / Cédula: SCH 160		327 890 MTS		11166.000 KG	
114.3 X 13.5 MM							

COMPOSITION / COMPOSICION QUIMICA

		Composition % / Composición %																					
		X 100							X 1000														
		C	Mn	Si	Mo	Cr	P	S	V	Nb	Ni	Cu	Sn	Al	Ti	As	B	Ca	N	Ce. 2 Col. 1 Col. 2			
Heat N° Celda N°	Sample N° Muestra N°	H Max	25	135	50	15	40	30	35	80	110	400	400	--	--	110	--	10	--	--	40	--	99.99
		Min	--	29	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
11493	27230	P	22	91	20	0.8	4	4	2	0	0	40	79	6	22	0	2	0	9	61	40	413.63	16.7
		P	21	91	21	0.8	4	4	1.9	0	0	40	78	6	23	0	2	0	9	61	39	413.33	16.6
12049	00001	H	20	93	21	0.2	2	5	1.6	1	0	10	40	2	22	0	0	0	12	35	37	465	7.3
		P	20	92	21	0.2	2	5	1.4	0	0	10	32	3	24	0	1	0	11	61	37	460	6.4
12049	27228	P	20	92	21	0.2	2	5	1.1	0	0	10	31	3	24	0	1	0	10	58	37	460	6.3
		P	20	92	21	0.2	2	5	1.1	0	0	10	31	3	24	0	1	0	10	58	37	460	6.3

Ce. 2: Carbon equivalent(Canadian)/Carbono		Col. 1: REL Mn/C		Ht Heat / Coleado		Min: Minimum / Mínimo	
equivalent(Canadiense)		Col. 2: SJMA MoxCrNiH-Cu+V		Max: Maximum / Máximo		P: Product / Producto	

Required values Valores requeridos		Individuals / Individuales			Average / Promedio			Hardness type/Tipo de dureza:HRC																	
		Min: --	Max: 22.0	Var: --	Min: -- Max: -- Var: --			Specimen condition			Qued.		Scale		OD			MRW			ID			Var.	
Heat N°	Sample N°												Escala		1 2 3			1 2 3			1 2 3				
Colado N°	Muestra N°	Ls			Sc						1		HRA/W		77.2 77.3 77.5			77.8 78.0 78.7			77.8 78.2 77.9			0.6	
11493	27200	B			AM								HRA/W		75.5 75.6 75.7			75.8 76.0 75.8			75.7 75.7 76.0			0.4	
12049	27728	R			AM								HRA/W		75.5 75.6 75.7			75.8 76.0 75.8			75.7 75.7 75.8			0.4	

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(EN 10204 3.1:2004-ISO 10474 3.1:2013)

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Df. México Veracruz Veracruz, Veracruz
C.P. 91487 JEX-MCO
(52) 228 889 1100 Int.
(52) 228 889 1000 Ext.

Number / Número:
18017537

Page / Páginas:
3 / 6

Date / Día: **March 30, 2018**

Customer / Cliente: MRC CANADA ULC	Customer's Order Item / Orden Cliente - Item: 5759326336 ITEM 41	Customer's Reference / Ref. del Cliente: N/A	Manufacturer's Works Order N° / Confirmación de Venta: 253281/20
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED	Product Type / Tipo de Producto: SEAMLESS LINE PIPE	Surface / Superficie: VARNISHED	
LAMINADO EN CALIENTE SIN COSTURA	CONDUCCION SIN COSTURA	BARNIZADO	
Standard or Specification / Normas o Especificaciones: CSA Z245.1-14/MABCH 2014, CATTI SS, ASTM A106/JS, ASME SA106/2017	Steel Grade / Grado de acero: GR. B/250	Ends / Extremos: NORMAL REVEL	
		RESELADO NORMAL	
Dimensions / Dimensiones: 4.500 X 0.531 INCH 114.3 X 13.5 MM	Schedule / Cédula: SCH 160	Quantity / Cantidad: 56 Pcs/Pz 1075.755 FT 327.890 MTS	Nominal Weight / Peso Nominal: 24616.836 LB 11166.000 KG

INSPECTION WILL VALIDATE / PUEDE EN LA ESPESOR

AM: As manufactured / Según proceso de fabricación	ID: Internal diameter / Diámetro interno	Min: Minimum / Mínimo	Quad: Quadrant / Cuadrante
Avg: Average / Promedio	Ls: Location of sample / Ubicación de la muestra	MM: Middle wall / Centro	Sc: Specimen condition / Condición de la probeta
B: Body / Cuerpo	Max: Maximum / Máximo	OD: Outside diameter / Diámetro externo	Var: Variation / Variación

INSPECTION WILL VALIDATE / PUEDE EN LA ESPESOR

Standard / Norma: /			
Heat N°	Sample N°	Sc	Result
Cóida N°	Muestra N°		Resultado
11483	27230	B	AM
			Good / Bueno

AM: As manufactured / Según proceso de fabricación	B: Body / Cuerpo	Ls: Location of sample / Ubicación de la muestra	Sc: Specimen condition / Condición de la probeta
--	------------------	--	--

INSPECTION WILL VALIDATE / PUEDE EN LA ESPESOR

Pressure / Presión		Time / Tiempo		Results / Resultado	
Unit / Unidad	Value / Valor	Seconds / Segundos			
mpa	207	5			Satisfactory / Satisfactorio

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INSPECTION CERTIFICATE 3.1
CERTIFICADO DE INSPECCIÓN 3.1
(EN 10204 3.1:2004-ISO 10474 3.1:2013)

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Carretera México Veracruz KM 433 7 SN
Defino Vaquería Tepic Veracruz Veracruz
C.P. 91897 MÉXICO
(52) 228 988 1100 Int.
(52) 228 988 1600 Int.

Customer / Cliente: MRC CANADA ULC		Customer's Order Item / Orden Cliente - Item: 57992636 ITEM 41		Customer's Reference / Ref. del Cliente: N/A		Manufacturer's Works Order N° / Confirmación de Venta: 25328120	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED				Surface / Superficie: VARNISHED			
LAMINADO EN CALIENTE SIN COSTURA				BARNIZADO			
Standard or Specification / Normas o Especificaciones: CSA Z245.1-14/MARCH 2014, CANADA, ASTM A106/15, ASME SA106/2017				Ends / Extremos: NORMAL REVEL			
Schedule / Cédula: SCH 160				BUSELADO NORMAL			
Dimensions / Dimensiones: 4.500 X 0.531 INCH		Length / Longitud: 18.04 / 21.98 FT		Quantity / Cantidad: 24516.834 LB		Nominal Weight / Peso Nominal: 22.53 LB/FT	
114.3 X 13.5 MM		5.30 / 6.70 MTS		327.890 MTS		33.54 KG/M	

HEAT TREATMENT / TRATAMIENTO TÉRMICO

Heat treatment / Tratamiento térmico: Pipe / Tubo	
Quench media of heat treatment process / Medio de enfriamiento del tratamiento térmico: n/a	
Temperature Scale / Escala de Temperatura: n/a	
Type	
Tipo	
As Rolled	

Supplementary Information	
Información Suplementaria	
MANUFACTURED BY TENARIS TAMSA - MEXICO	FABRICADO POR TENARIS TAMSA - MEXICO
STEEL MAKING PROCESS	FABRICACIÓN DEL ACERO
ELECTRIC ARC FURNACE-LADLE FURNACE-CONTINUOUS CASTING MACHINE	HORNO DE ARCO ELÉCTRICO-HORNO DE AFINACIÓN-MÁQUINA DE COLADA CONTINUA
ALUMINIUM FULLY KILLED STEEL, FINE GRAIN PRACTICE	ACERO CALMADO CON ALUMINIO, PRÁCTICA DE GRANO FINO
THE LADLE FURNACE PRACTICE INCLUDES ARGON RINSE AND FINAL INJECTION OF CALCIUM SILICIDE WIRE	LA PRÁCTICA EN EL HORNO DE AFINACIÓN INCLUYE AGITACIÓN POR ARGÓN E INYECCIÓN FINAL DE SILICIO DE
FOR MICROINCLUSION SHAPE CONTROL	DE CALCIO PARA OBTENER UNA FORMA GLOBULAR DE EVENTUALES MICROINCLUSIONES
MANUFACTURING PROCESS OF PIPE	FABRICACIÓN DEL TUBO
SEAMLESS HOT ROLLED	LAMINADO EN CALIENTE SIN COSTURA
NOT REPAIRED BY WELDING	NO REPARADO POR SOLDADURA
NON DESTRUCTIVE TEST (NDT) SATISFACTORY	ENSAYO DE CONTROL NO DESTRUCTIVO (CND): SATISFACTORIO
INSPECTION METHOD:	MÉTODO DE INSPECCIÓN:
EMI - MPI	EMI - MPI
VISUAL INSPECTION	INSPECCIÓN VISUAL

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(EN 10204 3.1:2004-ISO 10474 3.1:2013)

Tubos de Acero de Mexico S.A.
Carretera México Veracruz KM 433 7 SN
Defensa Veracruz Veracruz México
C.P. 91971 MEXICO
(52) 228 888 1100 Int.
(52) 228 888 1000 fax

Number / Número:
18017537

Page / Páginas:
5 / 6

Date / Día: March 30, 2018

Customer / Cliente: MRC CANADA ULC		Customer's Order Item / Orden Cliente - Item:	N/A	Customer's Reference / Ref. del Cliente:	Manufacturer's Works Order N° / Confirmación de Venta:
Manufacturing Process / Proceso de Manufactura:		Product Type / Tipo de Producto:	Surface / Superficie:		
SEAMLESS HOT ROLLED		SEAMLESS LINE PIPE	VARNISHED		
LAMINADO EN CALIENTE SIN COSTURA		CONDUCCION SIN COSTURA	Ends / Extremos:		
Standard or Specification / Normas o Especificaciones:		Steel Grade / Grado de acero:	NORMAL REVEL		
CSA Z245.1-14/MARCH 2014, CATTI SS, ASTM A106/15, ASME SA106/2017		GR B/250	BISELADO NORMAL		
Dimensions / Dimensiones:	Schedule / Cédula:	Quantity / Cantidad: 56 Pcs/Pz	Nominal Weight / Peso Nominal:		
	SCH 160	1075.755 FT	24616.836 LB		
4.500 X 0.531 INCH	Length / Longitud:	327.890 MTS	11166.000 KG		
	1143 X 13.5 MM	5.50 / 6.70 MTS			

SUPPLEMENTARY INFORMATION / INFORMACIÓN SUPLEMENTARIA

Supplementary Information / Información Suplementaria	
DIMENSIONAL INSPECTION	INSPECCIÓN DIMENSIONAL
VERIFICACION DE LAMINACIONES POR UT	VERIFICACION DE LAMINACIONES POR UT
MATERIAL ACCORDING TO ANSINACE MB0175ISO 15156-2:2015 AND ANSINACE MB0103/ISO 17945:2015	MATERIAL DE ACUERDO A ANSINACE MB0175ISO 15156-2:2015 Y ANSINACE MB0103/ISO 17945:2015
ONLY FOR HARDNESS 22 HRC MAX.	SOLO DUREZA MAX. 22HRC
ULTRASONIC TESTING - 10% O.D. & I.D. LONG. & TRANSV.	PRUEBA DE ULTRASONIDO - 10% O.D. & I.D. LONG. & TRANSV.
TAMSA REF: 19353	TAMSA REF: 19353

MARKING / MARCACIÓN

Marking / Marcación	
PIPE STENCIL:	MARCABILLA DE TUBO ESTARCIDO:
#N°-----TENARIS TM ASTM A106/ASME SA106 / CSA Z245.1 #PE1 1143 11.50 33.54 SCH 160 GR B/250	#N°-----TENARIS TM ASTM A106/ASME SA106 / CSA Z245.1 #PE1 1143 11.50 33.54 SCH 160 GR B/250
CAT 1555 TESTED 20.7 MPA / NDE #M°--- MT #K°--- KG HEAT #C°--- O.P°----- / #N°-----	CAT 1555 TESTED 20.7 MPA / NDE #M°--- MT #K°--- KG HEAT #C°--- O.P°----- / #N°-----
POS7393243503118950-10 MADE IN MEXICO	POS7393243503118950-10 MADE IN MEXICO
WHERE:	DONDE:
Production Order O.P°-----	Orden de Producción O.P°-----
Heat number #C°---	Numero de coque #C°---
Manufacturing Date #PE1:	Fecha de Fabricación #PE1:
Net weight of pipe in Kgs #K°---	Peso neto de tubo en Kgs #K°---
Length Mts #M°---	Longitud del tubo en Mts #M°---
Pipe number #N°---	Numero de secuencia #N°---

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark given colored "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

Este certificado se emite mediante sistema computarizado y es válido con firma electrónica. El certificado original posee impreso el logo "Tenaris" en color. En caso de que el poseedor del certificado entregue una copia, deberá garantizar la conformidad con el original haciéndose responsable por cualquier uso ilegal o no autorizado. Cualquier alteración por falsificación estará sujeta a la ley.



INSPECTION CERTIFICATE 3.1
CERTIFICADO DE INSPECCIÓN 3.1
(EN 10204 3.1:2004-ISO 10474 3.1:2013)

Tubos de Acero de México, S.A.
Carretera México Veracruz KM 423.7 SM
Carretera Veracruz Toluca Veracruz, Veracruz
C.P. 91087 MEXICO
(52) 229 989 1100 Tel
(52) 229 989 1000 Fax

Customer / Cliente: MRC CANADA ULC		Customer's Order Item / Orden Cliente - Item: 57593636 ITEM 41		Customer's Reference / Ref. del Cliente: N/A		Manufacturer's Works Order N° / Confirmación de Venta: 25328120	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Product Type / Tipo de Producto: SEAMLESS LINE PIPE		Surface / Superficie: VARNISHED		Ends / Extremos: NORMAL BEVEL	
Laminado en caliente sin costura		CONDUCCION SIN COSTURA		Steel Grade / Grado de acero: GR. B720		BISelado NORMAL	
Standard or Specification / Normas o Especificaciones: CSA Z245.1-14/MARCH 2014, CATI SS, ASTM A106/15, ASME SA106/2017		Length / Longitud: 18.04 / 21.98 FT		Quantity / Cantidad: 36 Pcs/Pz		Nominal Weight / Peso Nominal: 22.53 LB/FT	
Dimensions / Dimensiones: 4.500 X 0.531 INCH		Schedule / Cédula: SCH 160		327.890 MTS		33.54 KG/M	
1143 X 13.5 MM							

SUMMARY DATA / DATOS RESUMEN

Heat N° Colada N°	Quantity Cantidad (Pieces)	Length Longitud (ft)	Weight Peso (Tons)
11493	22	422.01	128.63
			4.378

Average length per pipe Longitud promedio por tubo (ft)	Nominal weight per pipe Peso nominal por tubo (lb/ft)	Weight Peso (kg/m)
19.21	5.855	22.883
		34.054

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance with purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Por el presente certificamos que el material aquí descrito ha sido fabricado, muestreado, ensayado e inspeccionado de acuerdo a los requisitos de su orden de compra. Este certificado no es, ni puede ser usado, como una declaración de origen.

CUSTOMER - THIRD PARTY		TENARIS QUALITY DEPARTMENT SIGNATURE	
INSPECTION COMPANY COMPAÑIA DE INSPECCIÓN NO APLICA Employee Name: N/A		QUALITY CERTIFICATION DEPT. DEPTO. DE CERTIFICACIÓN DE CALIDAD Héctor Manuel Romero Cadenas	
		CHIEF OF QUALITY CERTIFICATION DEPT. RESPONSABLE DEL DEPTO. DE CERTIFICACIÓN DE CALIDAD Angel César Alemán Gil	

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KIA00519
 4" 150 RF SO A105N
 # 815555

SAN ENG STEEL FORGING CO LTD
 311, Jen Hsin Road, Jen Wu Dist
 Kaohsiung, Taiwan, R.O.C
 TEL: 07-3724249; FAX: 07-3712923
 URL: www.saneng.com.tw
 e-mail: saneng@ksis.seed.net.tw



MILL TEST CERTIFICATE

EN10204-3.1
 Customer: TRANS AM PIPING PRODUCTS LTD.
 Order No. 7015873(4)-T/A

Certificate No.: SE15673D
 Date: 01/10/2019
 Page: 1 OF 1

PRODUCT			MATERIAL SPECIFICATIONS										DIMENSIONAL SPECIFICATIONS									
FORGED CARBON STEEL FLANGES			ASTM A105-14/ASME SA105-2017										ASME B16.5-13 CSA Z245.12									
Item No.	CODE NO	DESCRIPTION	QUANTITY		CHEMICAL COMPOSITION (%)															HEAT TREATMENT(°C)	REMARKS	
			Min	Max	C	Si	Mn	P	S	Cu	Cr	Ni	Mo	V	Nb	N	Ti	B	CE(*)			
1	B0765000	600 BLRF 8" A105N	0.210	0.190	0.350	0.100	0.600	0.035	0.040	0.400	0.300	0.400	0.120	0.080	0.020	0.001	0.007	0.003	0.000	0.422		
2	B0604000	150 SORF 4" A105N	0.199	0.260	0.350	0.260	1.073	0.070	0.006	0.010	0.025	0.050	0.005	0.003	0.005	0.003	0.002	0.000	0.388			
3	B0609000	150 SORF 12" A105N	0.200	0.190	0.350	0.190	1.019	0.017	0.006	0.070	0.080	0.020	0.020	0.001	0.001	0.008	0.003	0.000	0.395			
Item No.	Heat No.	T.S.(*) (MPa)	Y.S.(*) (MPa)	E.L.(*) (%)	Hardness (HB)	R.A.(*) (%)	Impact Test: Temp. Minimum		Joule		Material Supplier											
1	Y401750	529.0	372.0	36.2	154/151	59.5	1	2	3	KOTOBUKI, JAPAN												
2	815555	510.0	323.0	35.8	151/148	69.4				NTMK, RUSSIA												
3	Y601279	518.0	370.0	35.4	152/150	71.3				KOTOBUKI, JAPAN												
												*1: T.S. = Tensile Strength, Y.S.=Yield Strength, E.L.=Elongation, R.A.=Reduction of Area.										
												*2: N=Normalized, A=Annealed, Q=Quenched, T=Tempered, S.T=Stress Relieved, A.C=Air Cooled, F.C=Furnace Cooled, W.C=Water Cooled, O.C=Oil Cooled.										
												*3: C.E. Value = C + (Mn /6) + (Cr + Mo +V) / 5 + (Ni + Cu) / 15										
We hereby certify that the material has been tested in accordance with the above specification and also with the requirements called for by the above order																						
Manager of Quality Assurance Dept																						

*1: T.S. = Tensile Strength, Y.S. = Yield Strength, E.L. = Elongation, R.A. = Reduction of Area.

*2: N=Normalized, A=Annealed, Q=Quenched, T=Tempered, S.T.=Solution Treated, S.R.=Stress Relieved, A.C.=Air Cooled, F.C.=Furnace Cooled, W.C.=Water Cooled, O.C.=Oil Cooled.

*3: C.E. Value = $C + (Mn/16) + (Cr + Mo + V) / 5 + (Ni + Cu) / 15$

We hereby certify that the material has been tested in accordance with the above specification and also with the requirements called for by the above order

Manager of Quality Assurance Dept

M.E.G.A. S.p.A. - Via Dalla Chiesa, 3 - 24020 Scanzorosciate (Bergamo) - Italy - VAT IT 00210060166 - Ph. +39 035 661280 / 661199 - Fax +39 035 665535 - E-mail inspection@mega-fittings.com

REPORT N. Rapporto N.	TC-021036-17-0002	Issued on Revised on	26/03/2018	Customer Cliente	TRANS AM PIPING PRODUCTS LTD.	Job n. / Com. n. Purchase order and project/Ordine e progetto	21036 CI-17-740 REV.8	Page n. / Pagina n.	4 of 4
Revision Revisione	0	According to In accordo a	EN 10204:2004 UNI EN 10204:2005	Type Tipo	3.1	9335 ENDEAVOR DRIVE S.E. CALGARY, ALBERTA T3S 0A1 - CANADA			

We hereby certify that all items supplied for the above purchase orders meet all the requirements of the applicable specification of manufacture, the purchase item descriptions, purchase specifications and purchase order requirements. Visual, dimensional and marking check of items supplied has been carried out by our internal inspectors with satisfactory results.

The chemical and mechanical values shown on the EN 10204 certificate are true copy of the mill test certificate issued by the steel mill, or by the laboratory that determined it. All material is certified to be mercury free and free from radioactivity contamination. No weld repair was performed. Marking was performed by low stress stamps in accordance with MSS SP25 Ed. 2008

Manufacturing standards:
- 45° and 90° elbows, tees, crosses, full and half couplings, caps, square, hexagonal and round plugs, hexagonal and flush bushings, welding bosses are manufactured in accordance with ASMEB.16.11 Ed. 2016; threads in accordance with ANSI/ASME B1.20.1 Ed. 2013

- Outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2016, B.31.3 Ed. 2016 and MSS-SP-97 Ed. 2012

- Seamless swage nipples are manufactured in accordance with: BS3799-74 or MSS SP95 Ed. 2014

- Seamless pipe nipples are manufactured in accordance with: B36.10 Ed. 2015 or B36.19 Ed. 2004

- Flanged outlet branches are manufactured in accordance with: ASME B.31.1 Ed. 2016, B.31.3 Ed. 2016 and B.16.5 Ed. 2013

- Unions are manufactured in accordance with: BS 3799-74 or MSS SP-83 Ed. 2014

- When the length of flanged nipple is not specified in the description, it is 150 mm.

The material is according to ASTM and ASME Boiler and Pressure Vessel Code Section II.

When the Edition/Revision of the listed standards is not mentioned, it is assumed to be the latest.

Yield strength detected by 0.2% off-set method

Austenitic and duplex stainless steels have been pickled and passivated. Machined surfaces do not require pickling and passivation.

M.E.G.A. is approved with certificate 75/2002/MUC by T.U.V. (certification Body N.0036) to issue certificate of specific product control in accordance with the Pressure Equipment Directive 2014/68/EU (PED) Annex 1, Section 4.3.

Testing equipment used:

- Tensile test machine Galdabini Quasar 250 serial No. VAOG – Procedure MAC-03 Rev. 3
- Impact test Cermac JB-W500 serial No. 04031 – Procedure MAC-04 Rev. 3
- Brinell and Vickers Hardness test Wolpert Dia Testor 2RC serial No. 8900298/0001 – Procedure MAC-05 Rev. 3 (HBW); MAC-09 Rev.0 (HV10)
- Rockwell Hardness test EMCO Test D110 Serial No. 255 - Procedure MAC-06 Rev. 3
- Chemical analysis spectrometer Baird DV4 serial No. P017 (ASTM E415 and E1086) – Procedure QC-07 Rev. 0

Alloy N08020: Material from forgings according to ASTM B462; Material from bars according to ASTM B473; both grades ASTM B462 and ASTM B473 conform also ASTM B366

Alloy N10276: Material from forgings according to ASTM B564; Material from bars according to ASTM B574; both grades ASTM B564 and ASTM B574 conform also ASTM B366

Alloy N06625: Material from forgings according to ASTM B564; material from bars according to ASTM B446; material from pipes according to ASTM B444; all grades ASTM B564, ASTM B446 and ASTM B444 conform

also ASTM B366

Alloy N08825: Material from forgings according to ASTM B564; Material from bars according to ASTM B425; both grades ASTM B564 and ASTM B425 conform also ASTM B366

The product are manufactured in Italy.

Riccardo Scofsetti

Quality inspector representative

Ispettore controllo qualità

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trademark M.E.G.A. is printed in green color.

Form QC-01 Rev. 0 2013-03-15

DIE00039

INSPECTION CERTIFICATE										DATE: JUN.23, 2014	
PURCHASER: CCTX FLOW PRODUCTS INC										ORDER NO.: 000027-CAN-G	
STANDARD: A234 WPB										WORK NO.: YGMC&C1405119	
DIMENSION: MSS SP-95										MTR NO.: GMIC-119	
6442 Roper Road, Edmonton, AB Canada, T6B 3P9										PAGE: 14/15	
TEL: 780-466-3024 FAX: 780-466-3451										SPECIFICATION FOR FORGED PIPE FITTINGS	
PRODUCT										SPECIFICATION FOR FORGED PIPE FITTINGS	
FORGED PIPE FITTINGS										MSS SP-95	
DESCRIPTION										CHEMICAL COMPOSITION%	
Q'TY										C	
HEAT NO.										S	
P										Cr	
Mn										Ni	
Si										Mo	
0.10										0.15	
0.29										0.40	
1.06										MAX	
0.050										MAX	
MAX										MAX	
0.18										0.14	
0.21										0.08	
0.43										0.008	
0.016										0.016	
REDUCTION OF AREA										HARDNESS	
%										HB	
-										197	
MIN										MAX	
32										<187	
415										GOOD	
585										GOOD	
460										GOOD	
305										GOOD	
630										GOOD	
14	A234 WPB STD Round bar, Round lop Bull Plug 37.5 degree NPT Electro Zinc Plated 4"	200	630								
STANDARD	YIELD STRENGTH	TENSILE STRENGTH	ELONGATION	REDUCTION OF AREA	HARDNESS	DIMENSION INSPECTION	SURFACE INSPECTION	REMARK			
HEAT NO.	Mpa	Mpa	%	%	HB						
	240	415	22	-	197						
	MIN	585	MIN	MIN	MAX						
	305	460	32	-	<187	GOOD	GOOD				

(NOTE) A: HOT FORMED WITH FINAL TEMPERATURE BETWEEN 780°C-980°C, AIR COOLING.
 N: NORMALIZING AT TEMPERATURE 880°Cx 0.5HR, AIR COOLING.
 NACE MR-01-75: SATISFACTORY

WE HEREBY CERTIFY THAT THE PRODUCT DESCRIBED HEREIN HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE SPECIFICATIONS CONCERNED AND ALSO WITH THE PURCHASER'S REQUIREMENTS AND THAT THE TEST RESULTS SHOWN HEREIN ARE CORRECT

CE=C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15

CHIEF OF INSPECTION DEPARTMENT

宋红柳
Song HongLiu

4" 5160 54106B

HT # 49799

01A00653.

MAR 22 2019



Tenaris

INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1: 2013)

Page / Página:

878486

Date / Día: July 20, 2018

Sidarc S.A.I.C.
Dr Jorge A. Simini 250
(B2804MHA) Compañia
Buenos Aires, Argentina
(54) 3489 433100 tel

Customer / Cliente: VAN LEEUWEN PIPE & TUBE (CANADA) INC.		Customer's Order Item / Orden Cliente - Item: 450019LS-00002		Customer's Reference / Ref. del Cliente: N/A		Manufacturer's Works Order N° / Confirmación de Venta: 549171002	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Product Type / Tipo de Producto: SEAMLESS CARBON STEEL PIPES		Surface / Superficie: INT BARE / EXT VARNISHED			
Standard or Specification / Normas o Especificaciones: ASTM/ASME A5A106+CSA Z245.1-14 CAT.1 SSPSP00373+NACE MR01750103+IPRO LP-006		Steel Grade / Grado de acero: B7290 CAT 1 SS		Ends / Extremos: BEVELLED AT 30 DEG. ASTM			
Dimensions / Dimensiones: 4 1/2 X 0.531 INCH / 114.30 X 13.49 MM		Schedule / Cédula: 160 ✓		Quantity / Cantidad: 27 Pcs/pz		Nominal Weight / Peso Nominal: 22.51 LB/FT / 33.54 KG/M	
Length / Longitud: 11.0/11.8 m		Section / Sección: 316.92 MTS		1039.76 FT			

TENSILE TEST / ENSAYO DE TENSION

Heat N° Colada N°	Sample N° Muestra N°	Zone Zona	Lot N° Lote N°	Pipe N° Tubo N°	Specimen condition Condición de la probeta	Specimen dimensions Dimensiones de la probeta	Test temp Temp ensayo	Y.S. Eul 0.50 %	U.T.S. Req. Min: 415 Max: 625	Y.S./U.T.S. Req. Max: 0.93	Elongation / Alargamiento Lo Min 2"	Obt % 27.5
49799		B1	14971		Size Tamaño	Area Sección	mm ²	MPa	MPa		mm	%
					24.94 x 14.20	358.00	RT	124	497	0.65	50.8	41.5

AM: As manufactured / Según proceso de fabricación
B: Body / Cuerpo
E1 / E2: Ends of Sampling / Extremos de Muestra
L: Longitudinal / Longitudinal
Lo: Initial length / Longitud inicial

Req. Max: Required maximum / Máximo requerido
Req. Required / Requerido
RT: Room temperature / Temperatura ambiente
Sc: Specimen condition / Condición de la probeta
Ss: Strip specimen / Muestra rectangular

U.T.S: Ultimate tensile strength / Resistencia
Y.S: Yield strength / Fluencia

CHEMICAL COMPOSITION / COMPOSICIÓN QUÍMICA

Composition % / Composición %																				
				X 100					X 1000					X 10000			X 100000			
				C	Mn	Si	Cr	Mo	Cu	P	Ni	V	Nb	Ti	S	B	Ce.1	Ce.2	F.1	F.2
H	Max	Min		25	135	50	40	15	40	25	400	80	110	110	100	10	42	40	9,900	—
				—	29	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
P	Max	Min		25	135	50	40	15	40	25	400	80	110	110	100	10	42	40	9,900	—
				—	29	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heat N° Colada N° 49799	Sample N° Muestra N°	Lot N° Lote N°	Pipe N° Tubo N°	H	16	108	24	7	3	5	10	35	27	3	4	10	37	36	2,120	6.75

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(BS EN 10204 3.1: 2004 - ISO 10474 3.1: 2013)

Date / Dia: July 20, 2018

Siderca S.A.C.
Dr Jorge A Simini 250
(B2804MHA) Campana
Buenos Aires, Argentina
(54) 3488 433 100 tel

Customer / Cliente: **VAN LEEUWEN PIPE & TUBE (CANADA) INC.**

Manufacturing Process / Processo de Manufatura:
SEAMLESS HOT ROLLED

Product Type / Tipo de Producto
SEAMLESS CARBON STEEL

SEAMLESS CARBON STEEL PIPES

Customer's Reference / Ref. del Cliente:

54917A02

Surface / Superficie:

INT BARE /EXT VARNISHED

Standard or Specification / Normas o Especificaciones.

ASTM/ASME A5A106+CSA Z245.1-14 CAT J SSPSP00373+NACE MR017540103+IPRO LP-006

Steel Grade / Grado de acero:
B/290 CATISS

Dimensions / Dimensions: Schedule / Cédula

4 1/2 X 0.531 INCH

Length / Longitude:

2

Quantity / Cantidad: 27 Pcs/oz

23495 LB

CHEMICAL COMPOSITION / COMPOSICIÓN QUÍMICA

		Composición % / Composición %															
		X 100							X 1000					X 10000			
		C	Mn	Si	Cr	Mo	Cu	P	Ni	V	Nb	Ti	S	B	Ce 1	Ce 2	X i
H	Max	25	135	50	40	15	40	25	400	80	110	110	100	10	42	40	9.900
	Min	--	29	10	--	--	--	--	--	--	--	--	--	--	--	--	--
P	Max	25	135	50	40	15	40	25	400	80	110	110	100	10	42	40	9.900
	Min	--	29	10	--	--	--	--	--	--	--	--	--	--	--	--	--
P	1	16	108	24	7	3	5	10	33	28	1	4	6	37	36	2.110	6.75

$$\text{Ce. 1: C} + (\text{Mn}/6) + (\text{Cr} + \text{Mo} + \text{V})/5 + (\text{Ni} + \text{Cu})/15$$

(5-B)

1

H: Heat / Colada

$$\text{E. 1: CR} + \text{CU} + \text{MO} + \text{NI} + \text{V}$$

Max: Maximum / Máximo

7 MIN

Min: Minimum / Minimo

THROUGH WALL HARDNESS / DUREZA EN EL ESPESOR

[illegible]

Avg: Average / Promedio

ID: Internal diameter / Diámetro interno

Min: Minimum / Mínimo

Quad: Quadrant / Cuadrante

3: Body / Cuerpo

Location of sample / Ubicación de la muestra

vw: Middle wall / Centro

Var: Variation / Variación

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Tenaris

INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1: 2013)

Customer / Cliente: VAN LEEUWEN PIPE & TUBE (CANADA) INC.		Number / Número: 878486		Page / Página: 3 / 5	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Date / Día: July 20, 2018			
Standard or Specification / Norma o Especificaciones: ASTM/ASME A5A106+CSA Z245.1-14 CAT 1 SSPS00373+NACE MR01750103+IPRO LP-006		Customer's Order Item / Orden Cliente - Item: 45001915-00002		Manufacturer's Works Order N° / Confirmación de Venta: 5491702	
Product Type / Tipo de Producto: SEAMLESS CARBON STEEL PIPES		Customer's Reference / Ref. del Cliente: N/A		Surface / Superficie: INT BARE / EXT VARNISHED	
Schedule / Cédula: 160		Steel Grade / Grado de acero: B7290 CAT 1 SS		Ends / Extremos: BEVELLED AT 30 DEG. ASTM	
Dimensions / Dimensiones: 4 1/2 X 0.531 INCH 114.30 X 13.49 MM		Quantity / Cantidad: 27 Pcs/pz 1039.76 FT 316.92 MTS		Nominal Weight / Peso Nominal: 22.51 LB/FT 33.54 KG/M	
Length / Longitud: 11.0/11.8 m					

THROUGH WALL HARDNESS / DUREZA EN EL ESPESOR

E1 / E2: Ends of Sampling / Extremos de Muestra	Max: Maximum / Máximo	OD: Outside diameter / Diámetro externo
---	-----------------------	---

HYDROSTATIC TEST / PRUEBA HIDRAULICA

Pressure / Presión	Time / Tiempo	Results / Resultado
Unit / Unidad	Value / Valor	Seconds / Segundos
psi	3,460	5

SPECIAL REQUIREMENTS / REQUERIMIENTOS ESPECIALES

Condition / Condición	Description / Descripción
Pipe residual magnetism / Magnetismo remanente de tubo	30 GAUSS
End protectors / Protector de extremo	NON LIFTABLE CLOSED PLASTIC PROTECTOR FOR FLAT / BEVELED PIPE. SUPPLIER METALCENTRO.

SUPPLEMENTARY INFORMATION / INFORMACIÓN SUPLEMENTARIA

Supplementary Information / Información Suplementaria	
"MELTED AND MANUFACTURED BY TENARIS SIDERCA - ARGENTINA"	"FUNDIDO Y FABRICADO POR TENARIS SIDERCA - ARGENTINA"
"ACIERAGE PROCESS"	"PROCESO DE ACERACIÓN"
STEEL MAKING PROCESS: E.A.F.A.F. AND CONTINUOUS CASTING - FULL ALUMINIUM KILLED AND FINE GRAIN PRACTICE.	FABRICACIÓN DE ACERO: FUNDICIÓN POR ARCO ELÉCTRICO Y COLADO CONTINUO - ACERO CALMADO AL ALUMINIO Y PRACTICA DE GRANO FINO

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the owner's green color is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. An alteration and/or falsification will be subjected to the law.

Este certificado se emite mediante sistema computarizado y es válido con firma electrónica. El certificado original posee impreso el logo Tenaris color verde. En caso de que el poseedor del certificado entregue una copia, deberá garantizar la conformidad con el original haciéndose responsable por cualquier uso ilegal o indebido. Cualquier alteración y/o falsificación estará sujeta a la ley.



INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1: 2013)

Siderca S.A.I.C.
Dr. Jorge A. Simón 260
(B2804MHA) Campana
Buenos Aires, Argentina
(54) 3488 433100 14

Page / Página:

4 / 5

Number / Número:

878486

Date / Día: July 20, 2018

Customer / Cliente: VAN LEEUWEN PIPE & TUBE (CANADA) INC.		Customer's Order Item / Orden Cliente - Item:	N/A		Manufacturer's Works Order N° / Confirmación de Venta:
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Product Type / Tipo de Producto:	SEAMLESS CARBON STEEL PIPES		Surface / Superficie: INT BARE /EXT VARNISHED
Standard or Specification / Normas o Especificaciones: ASTM/ASME A5A106+CSA Z245.1-14 CAT.1 SSP00373+NACE MR0175/0103+IPRO LP-006		Steel Grade / Grado de acero:	B7290 CAT 1 SS		Ends / Extremos: BEVELLED AT 30 DEG. ASTM
Dimensions / Dimensiones: 4 1/2 X 0.531 INCH 114.30 X 13.49 MM		Quantity / Cantidad: 27 Pcs/pz	23495 LB 10657 KG		Nominal Weight / Peso Nominal: 22.51 LB/FT 33.54 KG/M
Schedule / Cédula: 160		Length / Longitud:	11.0/11.8 m		

SUPPLEMENTARY INFORMATION / INFORMACIÓN SUPLEMENTARIA

Supplementary Information Información Suplementaria	
-THE LP PRACTICE INCLUDES ARGON RINSE AND A FINAL INJECTION OF CALCIUM SILICIDE WIRE FOR MICROINCLUSION SHAPE CONTROL.	
-AXIAL FREE FROM MERCURY CONTAMINATION.	
-ROLLING PROCESS*	
-MANUFACTURING PROCESS: SEAMLESS HOT ROLLED.	
-CONTROLS*	
-VISUAL AND DIMENSIONAL INSPECTION: SATISFACTORY.	
-POSITIVE INDICATION OF MATERIAL (STEEL GRADE): SATISFACTORY.	
-MATERIAL CONDITIONS*	
-NOT REPAIRED BY WELDING.	
-STANDARDS*	
-EDITION OF REGULATION: ASTM A 106/A 106M-2018	
-EDITION REGULATION: ASME SA 106/2017	
-EDITION OF REGULATION: NACE MR-01-03 EDITION 2015.	
-EDITION OF REGULATION: NACE MR 01-75 - 2015 - ISO 15156-2 - 2015	
-EDITION OF REGULATION: CSA Z245.1 - 14	
-LA PRÁCTICA DE AFINO EN EL HORNO - CUCHARA INCLUYE AGITACIÓN POR ARGÓN Y UNA INYECCIÓN FINAL DE UNA VARILLA DE SILICIO DE CALCIO PARA OBTENER UNA FORMA GLOBULAR DE EVENTUALES MICROINCLUSIONES.	
-MATERIAL LIBRE DE CONTAMINACIÓN DE MERCURIO.	
-PROCESO DE LAMINACIÓN*	
-FABRICACIÓN DE TUBO: LAMINADO EN CALIENTE Y SIN COSTURA.	
-CONTROLES*	
-CONTROL VISUAL Y DIMENSIONAL: SATISFACTORIO.	
-INDICACIÓN POSITIVA DE MATERIAL (Grado ACERO): SATISFACTORIO.	
-CONDICIONES DEL MATERIAL*	
-NO REPARADO POR SOLDADURA.	
-NORMAS*	
-EDICIÓN DE LA NORMA: ASTM A106/A 106M - 2018	
-EDICIÓN DE LA NORMA: ASME SA 106/2017	
-EDICIÓN DE LA NORMA: NACE MR-01-03 EDICIÓN 2015	
-EDICIÓN DE LA NORMA: NACE MR 01-75 - 2015 - ISO 15156-2 - 2015	
-EDICIÓN DE LA NORMA: CSA Z245.1 - 14	

Additional Information
Información Adicional

Additional Information
Información Adicional

INSPECTION METHODS: UT; LONGITUDINAL; EXT/INT NOTCH 10 %.

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Tenaris

INSPECTION CERTIFICATE

(BS EN 10204 3.1: 2004 - ISO 10474 3.1: 2013)

Customer / Cliente: VAN LEEUWEN PIPE & TUBE (CANADA) INC.		Customer's Order Item / Orden Cliente - Item: 45001915-00002		Number / Número: 878486		Page / Página: 5 / 5	
Manufacturing Process / Proceso de Manufactura: SEAMLESS HOT ROLLED		Product Type / Tipo de Producto: SEAMLESS CARBON STEEL PIPES		Date / Día: July 20, 2018		Manufacturer's Works Order N° / Confirmación de Venta: 5491702	
Standard or Specification / Normas o Especificaciones: ASTM/ASME A/SA106+CSA Z245.1-14 CAT.1 SSPSP00373+NACE MR0175/0103+IPRO LP-006		Steel Grade / Grado de acero: B790 CAT 1 SS		Customer's Reference / Ref. del Cliente: N/A		Surface / Superficie: INT BARE /EXT VARNISHED	
Dimensions / Dimensiones: 4 1/2 X 0.531 INCH 114.30 X 13.49 MM		Schedule / Cédula: 160		Quantity / Cantidad: 27 Pcs/pz 1039.76 FT 316.92 MTS		Ends / Extremos: BEVELLED AT 30 DEG. ASTM	
Length / Longitud: 11.0/11.8 m		Nominal Weight / Peso Nominal: 23495 LB 10657 KG		Nominal Weight / Peso Nominal: 22.51 LB/FT 33.54 KG/M			

MARKING / MARCACIÓN

Marking Marcación	Marking Marcación
- & = Monogram / Monogram API - NNNNN = Número de tubo / Nbr of pipe - LLL = Longitud / Length - PPP = Peso / Weight	- @ = Monogram / Monogram API - MMYY = Mes / Año Month / Year - Y/T = Año / Trimestre Year / Quarter - HNXCCXX = Colada / Heat
Stencilling (Pipe) Estarcido (Tubo)	Stencilling (Pipe) Estarcido (Tubo)
TENARIS SD MMYY CSA Z245.1-14 114.3 13.49 B/290 CAT 1 SS ASTM/ASME A/SA 106 NDE/ 20.7MFA 4 SCH	160 P041001915/SC3121 0144-20 1 INXXXXXX NNNNN LLLL MADE IN ARGENTINA

This is to certify that the product described here has been manufactured, sampled, tested, and inspected in accordance with purchaser order requirements. This certificate is not a declaration of origin nor may it be used as a declaration of origin.

Por el presente certificamos que el material aquí descrito ha sido fabricado, muestreado, ensayado e inspeccionado de acuerdo a los requisitos de su orden de compra. Este certificado no es, ni puede ser usado, como una declaración de origen.

CUSTOMER - THIRD PARTY

TENARIS QUALITY DEPARTMENT SIGNATURE

INSPECTION COMPANY
COMPANIA DE INSPECCION
Company Name: N/A
Employee Name: N/A

QUALITY CERTIFICATION DEPT.
DEPTO. DE CERTIFICACIÓN DE CALIDAD
CADELAGO Romina

CHIEF OF QUALITY CERTIFICATION DEPT.
RESPONSABLE DEL DEPTO. DE CERTIFICACIÓN DE CALIDAD
PAOLINA Soledad

This certificate is issued by a computerized system and it is valid with electronic signature. On the original certificate the trade-mark "green colour" "Tenaris" is stamped. In case the owner of the original certificate would release a copy of it, he must attest its conformity to the original one taking upon himself the responsibility for any unlawful or not allowed use. Any alteration and/or falsification will be subjected to the law.

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Customer Name

Customer PO#

Shipper No

Heat Number

VARSTEEL LTD. - SASKATOON (IN ST-1039835

10472

531813

Test Certificate

Form TCI: Revision 2: Date 13 Feb 2017

EVRAZ

EVRAZ INC. NA

P.O. Box 1670, Regina, Saskatchewan, Canada S4P 3C7

Customer:
VARSTEEL LTD
330-220 4TH STREET
LETHBRIDGE
AB T1J4T7

Customer P.O. No.: CTL-536
Product Description: CSA G40.21(2004/44)/300/38W/ASTM A36(04)
A709(01A)36/ASME SA36(01ED)
CSA G40.21(2004)/260W

Mill Order No.: 41-25491-06 Shipping Manifest: RT103935

Ship Date: 26 Mar 19
Cert Date: 26 Mar 19
Cert No: 071095169
(Page 1 of 1)

Size (Min): 0.240 X 60.00 X COIL (IN)

Tested Pieces

Tensiles

Charpy Impact Tests

Heat Id	Piece Id	Piece Dimensions	Tst Loc	YS (PSI)	UTS (PSI)	%RA	Elong %			Average Hardness	Abs. Energy(FTLB)			% Shear			Tst Temp	Tst Dir	Tst Szt	BDWTT		
							2in	5in	Dir		1	2	3	Avg	1	2					3	Avg
Chemical Analysis																					ORGN	
Heat Ids	C	Mn	P	S	Si	Tot Al	Ca	Ni	Cr	Mo	Cu	V	Ti	E	N							
531655	.06	.79	.012	.012	.27	.036	.26	.19	.13	.06	.073	.003	.021	.0005	.0067					CAN		
531655	.06	.79	.012	.012	.27	.035	.26	.19	.13	.06	.073	.003	.020	.0005	.0065					CAN		
531655	.06	.79	.012	.012	.27	.039	.30	.11	.09	.04	.030	.003	.020	.0004	.0084					CAN		
531812	.05	1.02	.008	.009	.29	.037	.30	.12	.09	.04	.024	.003	.021	.0005	.0078					CAN		
531812	.05	.85	.008	.007	.28	.037	.32	.12	.09	.04	.024	.003	.021	.0005	.0078					CAN		
531812	.05	.85	.008	.007	.28	.037	.32	.12	.09	.04	.024	.003	.021	.0005	.0078					CAN		
531812	.05	.85	.008	.007	.28	.032	.33	.12	.09	.04	.022	.002	.020	.0004	.0076					CAN		
531812	.04	.80	.008	.005	.30	.036	.34	.10	.07	.03	.071	.002	.021	.0004	.0082					CAN		

MERCURY IS NOT A METALLURGICAL COMPONENT OF THE STEEL AND NO MERCURY WAS INTENTIONALLY ADDED

DURING THE MANUFACTURE OF THIS PRODUCT
HOT-ROLLED COIL INTENDED FOR CONVERSION TO GRADE. CERTIFIED TO CHEMISTRY ONLY.
COIL END PHYSICAL TEST RESULTS, IF REPORTED, ARE FOR INFORMATION ONLY.

BALANCE OF CHEMISTRY IS IRON (FE)

531655

A3142

B0024

B0034

B0037

PCES: 1, WGT: 61840

PCES: 1, WGT: 61800

PCES: 1, WGT: 61700

PCES: 1, WGT: 61680

531812

531813

531813

B0023

B0033

B0035

PCES: 1, WGT: 51800

PCES: 1, WGT: 51640

PCES: 1, WGT: 51740

WE HEREBY CERTIFY THAT THIS MATERIAL
WAS TESTED IN ACCORDANCE WITH THE
APPROPRIATE SPECIFICATION

Cust Practice:

Approved By: Kendal Dummett
Quality Control Manager

WELDING PROCEDURE SPECIFICATION NO.: _____ L & L-15 (Rev.1)

WELDING PROCEDURE QUALIFICATION RECORD NO.(S): _____ WPS NO. L & L-15

QUALIFIED FOR

Base Metal (Typical): _____ P1 to P1 (SA 36, SA 106 Gr.B, SA 105, SA 516 Gr.70 etc.)
Process(es): _____ SMAW Weld Types: _____ GROOVE & FILLET
Position: _____ ALL POSITIONS Diameter: _____ ALL DIAMETERS
Filler Metal: _____ E6010, E7018-1

BASE METAL CONDITIONS & GROOVE THICKNESS RANGE QUALIFIED:

STANDARD APPLICATIONS AS WELDED

BASE METAL THICKNESS RANGE _____ 4.8 to 38.1 mm (0.188 to 1.50 in.) inclusive

COMBINED DEPOSITED WELD METAL THICKNESS

ASME B31.1	_____ 19.1 mm (0.750 in.) maximum
ASME B31.3	_____ 19.1 mm (0.750 in.) maximum
ASME SECTION VIII, DIVISION 1	_____ 38.1 mm (1.50 in.) maximum

SAFETY CODES ACT - PROVINCE OF ALBERTA
WELDING PROCEDURE

Reg. No. WP _____ 1914.2
Spec. No. _____ L+L-15 (REV.1)
Weld Process _____ SMAW
Mati. Gr. P No. _____ 1 to P No. _____ 1
Elec. Gr. F No. _____ 3+4 A No. _____ 1
Th. Qual. For _____ 38.1mm P.W.H.T. _____ NO

Yr. 10, Mo. 01, Day 14, Signed _____
R. ROSEBERG, P.ENG.
WELDING SPECIALIST

PROVINCIAL REGISTRATION

Ministry of Corrections, Public Safety and Policing
Boiler & P.V. Safety Unit
Province of Saskatchewan
Welding Procedure & Qualification

Reg. No. WP _____ 580.3
Spec. No. _____ L+L-15 (Rev.1)
Weld Process _____ SMAW
Mati. Gr. P No. _____ 1 to P No. _____ 1
Elec. Gr. F No. _____ 3+4 A No. _____ 1+1
Th. Qual. _____ (4.8-38.1)mm P.W.H.T. _____ NO

Remarks _____ Supporting R2P signed and dated 23/8/1999
Date _____ 6 April 2010
Approved _____ J. Chahrenan



Lakeland College

AOQP NO. 7105 (C)

WELDER PERFORMANCE QUALIFICATION CARD

Name **Stephen Royan** ABSA File No. W **15850**

This card is issued pursuant to the Safety Codes Act and the Pressure Welders Regulation. The performance qualification is in accordance with Section IX of the ASME Code and subject to the limitations on the reverse side.

09-Apr-18

Date of Test

Signature of Welder

Steve Dunn

Welding Examiner

5993

Card No.

PERFORMANCE QUALIFICATION

Card No.: 5993

Process(es)	SMAW	SMAW	(P.No.)	P1 - 15F
Filler Metal			Materials	
Group (F.No)	F3	F4		
Max. Deposited			Min. Outside	
Weld Metal	5.36mm	max	Diameter	25.4mm
Backing	w/wo	w	Position(s)	
			Qualified	all
Progression	uphill	uphill	Backing Gas	n/a

09-Apr-20

P.Q. Expiry Date

Welding Examiner Signature

E 00569

Examiner File No.



Technical
Safety Authority
of Saskatchewan

Issued On: **Apr 12, 2018**

This pressure welder's licence authorizes
to weld on pressure equipment within the Province of Saskatchewan and is a record that
the holder has been tested in accordance with ASME Section IX. This licence may be
revoked at any time by the request of the Inspector or if the holder has not welded with
a process during a period of 6 months or more.

Out-of-Province Transfer

ID No. : **5993**

Welder's Licence

No : **028905**

Pipe Tested Class : **M**
Groove Weld
Ticket

Stephen Royan

Chief Inspector

Name:

Stephen Royan

Weld Symbol :

SLR

Process(es) QW350-357 (QW416):	SMAW	SMAW	Material P No. QW403.18 and QW423.1:	P1-15F P34,P4x
Filler Metal F No. QW404.15 and QW433:	F3	F4	Minimum Pipe O.D. QW303 / 403.16:	25 mm
Max Deposited Weld Metal(mm) QW404.30:	5.36	MAX	Weld Progression QW405.3:	Upward
Backing QW- 408.8 or QW402.4:	None	Metal	Positions Qualified QW461.9:	
			Groove	Fillet
Current Type / Polarity QW409.4:	ANY	ANY	ALL	ALL

SK ID No. : **000743**

Expires On: **09-Apr-2020**



WELDER PERFORMANCE QUALIFICATION CARD

NAME: Colby Field ABSA FILE NO. W23252

This card is issued pursuant to the Alberta Safety Codes Act and Pressure Welders Regulation. The performance qualification is in accordance with Section IX of the ASME Code and subject to the limitations on the reverse side.

APRIL 10/18
Date of Test

Colby Field
Signature of Welder or Machine-Welding Operator

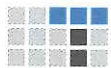
JAMES A COLLINS
Welding Examiner (Print/Type)

Card No. **0591**

PERFORMANCE QUALIFICATION

Card No. **0591**

Process(es) SMaw SMAW Material (p-No.) P1-P11
Filler Metal _____ Min. Outside _____
Group (F-No.) F3 F4 Pipe Diameter 25mm
Max. Deposited _____ Position(s) _____
Weld Metal 6.34mm 19.7mm Qualified All
Backing no weld metal Backing Gas NA
Progression uphill uphill ABSA Assigned Examiner File # E-00215
APRIL 10/20 _____
P.Q. Expiry Date _____ Welding Examiner Signature



**Technical
Safety Authority
of Saskatchewan**

Welder's Licence

No : **029090**

Pipe Tested Class : **M**
Groove Weld
Ticket

Colbey Field

Issued On: **May 07, 2018**

This pressure welder's licence authorizes to weld on pressure equipment within the Province of Saskatchewan and is a record that the holder has been tested in accordance with ASME Section IX. This licence may be revoked at any time by the request of the Inspector or if the holder has not welded with a process during a period of 6 months or more.

Out-of-Province Transfer

ID No. : **0591**

Chief Inspector

Name:

Colbey Field

Weld Symbol :

CF

Process(es) QW350-357 (QW416):	SMAW	SMAW	Material P No. QW403.18 and QW423.1:	P1-15F P34,P4x
Filler Metal F No. QW404.15 and QW433:	F3	F4	Minimum Pipe O.D. QW303 / 403.16:	25 mm
Max Deposited Weld Metal(mm) QW404.30:	6.34	15.79	Weld Progression QW405.3:	Upward
Backing QW- 408.8 or QW402.4:	None	Metal	Positions Qualified QW461.9:	
			Groove	Fillet
Current Type / Polarity QW409.4:	ANY	ANY	ALL	ALL

SK ID No. : **002013**

Expires On: **10-Apr-2020**

Welders name	Province	Welder	Process	Weld procedure	P#	F#	Position	Max Dep Weld Metal T	Min Pipe D	Expiry Date	Date Left	Return Date	Comments
Phil Jezowski	AB,SK	PJ	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79 mm / 17.1mm	25 mm	Nov 5/2020			
Troy Ferguson	AB,SK	TF	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	4.8 mm/ 17.4 mm	25 mm	Feb 12 / 20			
Jeff Hansen	AB,SK	JH	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	6.35 mm / Max	25 mm	Mar 2/21			
Mike Lantz	AB,SK	ML	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P11	F3-F4	All	6.34 mm / 15.79mm	25 mm	Aug 31/21			
Phil Jezowski	AB,SK	PJ	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	5.36mm / MAX mm	25mm	Aug 29/20			
Rodger Darren	AB,SK	RD	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	4.8 mm / 17.4 mm	25 mm	June 20/20			
Steve Royan	AB,SK	CN	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	6 mm/Max	25 mm	April 9/20			
Steve Royan	AB,SK	CN	GTAW/SMAW	L&L 17	P1-P15F/P34,P4x	F6-F5	All	2.79 mm / 17.1 mm	25 mm	Feb 13/20			
Waylon Marshall	AB,SK	WM	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	5mm / 17 mm	25 mm	Mar 27/20			
Rodger Darren	AB,SK	RD	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79 mm / 17.1mm	25 mm	Feb 7/21			
Shawn Rhinehart	AB,SK	SR	SMAW	L&L 15 / L&L 16 / L&L 17 / LLOCL-1	P1-P15F/P34,P4x	F6-F5	All	5.36mm / MAX mm	25 mm	Sept 20/20			
Colby Field	AB,SK	CF	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	ALL	6.35 mm / 15.79mm	25 mm	April 10/20			
Devon Falk	AB,SK	DF	GMAW/SMAW	L&L 17	P1-P15F/P34,P4x	F6-F4	F (1F)	2.79mm / 16.92 mm	25 mm	May 28/20			
Devon Falk	AB,SK	DF	SMAW/SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	ALL	5.36 mm / Max	25 mm	Feb 26/20			
Devon Falk	AB,SK	DF	GTAW/SMAW	L&L 18	P8-P8	F6-F5	All	5.03 mm / 17.1 mm	25.4 mm	May 28/20			
Jamie Elliott	AB,SK	JE	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	6 mm/Max	25 mm	June 6/20			
Waylon Marshall	AB,SK	WM	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79 mm / 17.1 mm	25 mm	Feb 13/20			
Michael Lantz	AB,SK	ML	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79 mm / 17.1 mm	25 mm	Feb 13/20			
Steve Royan	AB,SK	CN	SMAW	L&L 18 Rev 0	P1-P15F/P34,P4x	F5	All	Max	25 mm	April 9/20			
Shawn Rhinehart	AB,SK	SR	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	F(1G)	2.79mm / 16.92 mm	25 mm	Oct 15/20			
Randy Flint	AB,SK	RF	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79 mm / 17.1 mm	25 mm	Feb 13/20			
Randy Flint	AB,SK	RF	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	4.8 mm / 17.4 mm	25mm	Feb 15/21			
Kevin Wilson	AB,SK	KW	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79mm / 17.1 mm	25mm	Jun 25/21			Tested On June 20, 2019
Robert Johnston	AB,SK	RJ	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	5.36 mm / Max	25.4 mm	May 30/20			
Robert Johnston	AB,SK	RJ	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79 mm / 16.92 mm	25.4 mm	May 30/20			
Brad Andrews	AB,SK	BA	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79mm / 16.92 mm	25 mm	May 28/20			
Brad Andrews	AB,SK	BA	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	5.36 mm/Max	25 mm	Mar 31/21			
Christopher Flath	AB,SK	CFF	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	6 mm/ 16mm	25 mm	Sept 27/18	Dec 7,2018		
Christopher Flath	AB,SK	CFF	GMAW/SMAW	L&L 17 Rev 0	P1-P15F/P34,P4x	F6-F4	All	2.79mm / Max	25.4 mm	May 30/20	Dec 7,2018		
Kevin Wilson	AB,SK	KW	SMAW	L&L 15/LLOCL-1/L&L WH-1,2,3/L&L CC-1/L&L 17,16	P1-P15F/P34,P4x	F3-F4	All	6.35 mm / Max	25 mm	Mar 20/20			Tested On June 20, 2019

Exhibit 12.1

Certifying Statement

Acceptance of Procedures Manual

L&L Oilfield Construction 1990 Ltd. has reviewed the written practices, procedures records and certification of:

IRIS NDT

5311-86ST.EDM.AB

T6E-5T8

In our opinion, they comply in all respects with the requirements of:

CGSB/ASNT

(CGSB/ASNT)

L&L Oilfield Construction hereby appoints the aforementioned NDE company to perform the following:

RT,UT,MT,PT

(RT,UT,PT,MT,ET,VT and/orLT)

For
L&L Oilfield Construction 1990 Ltd.
Box 313
Marshall, SK
S0M 1R0

CURTIS SZEMAN

Quality Control Manager

Procedure: 5.0 Technique: MT-2V Code/Standard: API 650 - Sect 8.2.4 Other: N/A	Rev: 3.0 Client: L & L OILFIELD CON. (1990) LTD IRISNDT #: LYN1901531 Location: L & L Oilfield Item Inspected: Future use Nozzles	Date: 2019-Sep-13 WO #: N/A PO #: N/A Appr# Tyson M
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Requisitioner Tyson Mohrbutter	Approver N/A
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Specification: N/A	Standard: N/A
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Surface Condition: Buffed	Material: Carbon Steel	Thickness: > 3/16"	Heat Treatment: Not Applicable
Magnetizing Equipment: Yoke	Method of Magnetization: AC Continuous	Asset #: 40123	Mfg: Contour probe
Verification Date: 2019-Sep-13	Verification Weight: ☒ 10 lb. ☐ 40 lb.	Asset #: 49037	Verification per ASME V Art 7 T-762

Magnetic Particles: Dry ☐ Wet ☒ Batch #: 65050117	Red ☐ Grey ☐ Black ☒ Fluorescent ☐ Manufacture: Ardrex	Type: 8032
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☒ Background		
Batch #: 65041718	Manufacture: Ardrex	Type: 8901W

☐ Blacklight (N/A)		
Asset #:	Blacklight meter: Asset #:	Cal Due Date:

☒ Whitelight	
Lighting Equipment: Yoke Light (10W)	Verification per ASME V Art 7 T-777.1

Inspection Scope: To perform a wet black on white magnetic particle inspection on the following SOL fillet welds

Wet Black MPI was carried out on the following 16 4" Sch 160 RFSO nozzle fillet welds (Internal and External)

Welder ID: CN



Inspection results: Acceptable to Code

Inspection Limitation(s): N/A

Unit#: 1039 Kilometers: _____ In: _____ Out: _____ Hrs: _____ In: _____ Out: _____ Hrs: _____ Personnel: Tristan Sommerfeld Jordan Ross	Consumables: N/A	Interpretation by: Tristan Sommerfeld (Print)  (Sign) Client Representative: _____ (Print) I am in full agreement with report contents (Sign)	SNT-TC-1A: II C G S B: II (Level) C G S B #: 7829
--	----------------------------	---	---



Natural Resources
Canada

Ressources naturelles
Canada



Name/
Nom **Tristan D. Sommerfeld**
Reg. No. /
No. matricule **7829**
Issue Date/
Date d'émission **2016/12/02**

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Corrective lenses for [] near [X] far vision.

Verres correctifs pour la vision de [] près [X] distance.

Signature [

Canada

[Signature]

[Signature]



Natural Resources
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Canada

Certified to/ Certifié selon : CAN/CGSB-48.9712

7829

Method Méthode	Level Niveau	Sector Secteur	Cert. Date Date cert.	Date recert. Date recert.	Expires Expiration
MT	2	EMC	2000/09/08		2021/09/15
PT	2	EMC	2000/09/08		2021/09/15
RT	2	EMC	2004/01/29		2021/09/15

For verification of certification status, policies and definitions, visit website:
<http://ndt.nrcan.gc.ca/> Pour la vérification de la certification, les politiques, et les définitions,
visitez le site web: <http://ndt.nrcan.gc.ca/>

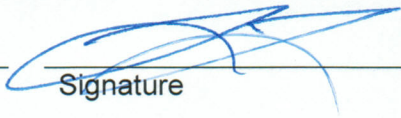
Manager, Certifying Agency
Gestionnaire, Organisme de certification

[Signature]

NAME: Tristan Sommerfeld

NEAR VISION:

uncorrected RE _____ LE _____

corrected RE J1 LE J1COLOUR VISION: 14/14 Pass SHADES OF GREY: 17/17 PassDATE OF EXAM: 2-Jan-19 DATE OF EXPIRY: 2-Jan-20EXAMINER: Sheldon Trachuk
Print
Signature

REQUIREMENTS:

- 1) NEAR-VISION - The examination shall assure natural or corrected near-distance acuity in at least one eye such that the applicant is capable of reading a minimum of Jaeger Number 2 or equivalent type and size letter at a distance of not less than 30 cm (12 inches) on a standard Jaeger test chart. The ability to perceive an Ortho-Rater minimum of 10 or similar test patterns is also acceptable. This test shall be administered annually.
- 2) COLOUR-VISION - The examination, by use of Ishihara plates, or other similar method, shall demonstrate the capability of distinguishing contrast among colours used in non-destructive examination. All 14 Ishihara plates shall be used in the assessment and the individual must correctly identify 13 out of 14 plates. Successful completion of a practical test in the applicable method shall be accepted as demonstrating acceptable colour contrast differentiation. This test shall be administered annually.
- 3) SHADES OF GREY - An examination, by use of a calibrated step tablet or other similar method, shall demonstrate the capability of distinguishing contrast among shades of grey used in non-destructive examination. The individual must correctly identify all the steps presented. Successful completion of a practical test in the applicable method shall be accepted as demonstrating acceptable differentiation in shades of grey. This test shall be administered annually..

Procedure: 5.0	Rev: 3.0	Client: HUSKY OIL OPERATIONS LIMITED	Date: 2019-Sep-27
Technique: MT-2V		IRISNDT #: LYN1901614	WO #: 81422566
Code/Standard: API 650 - Sect 8.2.4		Location: 11-14-49-02w4	PO #: 8401382216
Other:		Item Inspected: Tank #2 items	APPR# 2Z-2001456

Requested By: Arnie Domes	Approver: Jay Sinclair
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Specification:	Standard:
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Surface Condition: As Welded	Material: P1	Thickness: >1/8"	Heat Treatment: Not Applicable
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Magnetizing Equipment: Yoke	Method of Magnetization: AC Continuous	Asset #: 40385	Mfg: Contour Probe
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Verification Date: 2019-Sep-27	Verification Weight: ☒ 10 lb. ☐ 40 lb.	Asset #: 40490	Verification per ASME V Art 7 T-762
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Magnetic Particles: Dry ☐ Wet ☒	Red ☐ Grey ☐ Black ☒ Fluorescent ☐
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Batch #: 65100617	Manufacture: ARDROX	Type: 8032
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☒ Background
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Batch #: 65110817	Manufacture: ARDROX	Type: 8901W
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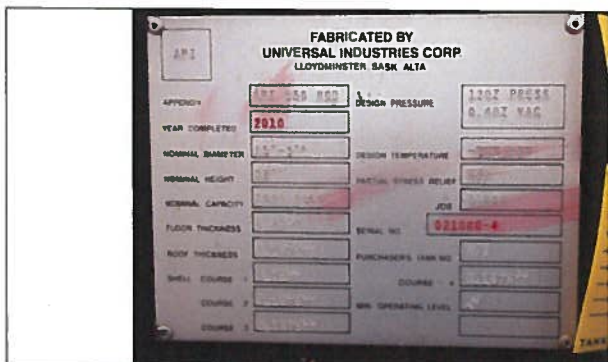
☐ Blacklight (N/A)

Asset #:	Blacklight meter: Asset #:	Cal Due Date:
----------	----------------------------	---------------

☒ Whitelight
--

Lighting Equipment: Yoke Light (10W)	Verification per ASME V Art 7 T-777.1
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Inspection Scope: To perform a wet black on white magnetic particle inspection on the following tank items
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Results: No indications noted. Acceptable to code

Inspection Limitation(s): N/A

Unit#: 1194	Kilometers: _____	Consumables: _____	Interpretation by: Logan Skinner	SNT-TC-1A: 2
In: _____	Out: _____	Hrs: _____	(Print) <i>[Signature]</i>	C.G.S.B.: 2
In: _____	Out: _____	Hrs: _____	(Sign) _____	(Level)
Personnel:			Client Representative: _____	C.G.S.B #: 17159
Logan Skinner			(Print)	
Brayden McGinnis			I am in full agreement with report contents	
			(Sign)	

5311 - 86 Street NW, Edmonton, Alberta T6E 5T8 Phone (780) 437-4747 Fax (780) 436-4873
 Calgary (403) 279-6121 Cold Lake (780) 826-6105
 Lloydminster (780) 875-6455 Fort McMurray (780) 743-1536
 Barrhead (780) 674-3018 Red Deer (403) 347-1742
 Nisku (780) 955-7616 www.irisndt.com

Engineering, Calgary (403) 217-9684
 Engineering, Edmonton (780) 437-2022
 Rope Access Services (780) 437-2022
 Offices also located in USA and UK



Natural Resources
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Canada



Name/
Nom **Logan Skinner**
Reg. No. /
No. matricule **17159**
Issue Date/
Date d'émission **2016/12/01**

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Corrective lenses for [] near [] far vision.
Verres correctifs pour la vision de [] près [] distance.

Signature :

Canada



Natural Resources
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Certified to/Certifié selon : CAN/CGSB-48.9712

17159

Method Méthode	Level Niveau	Sector Secteur	Cert. Date Date cert.	Date recert. Date recert.	Expires Expiration
MT	2	EMC	2016/07/04		2020/07/15
PT	2	EMC	2016/08/10		2021/07/15
UT	1	EMC	2014/07/25		2021/07/15

For verification of certification status, policies and definitions, visit website:
<http://ndt.lrcan.gc.ca/> Pour la vérification de la certification, les politiques, et les définitions,
visitez le site web: <http://ndt.lrcan.gc.ca/>

Manager, Certifying Agency
Gestionnaire, Organisme de certification

NAME: Logan Skinner

NEAR VISION:

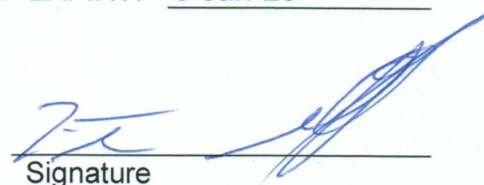
uncorrected RE J1 LE J1

corrected RE LE

COLOUR VISION: 14/14 Pass SHADES OF GREY: 17/17 Pass

DATE OF EXAM: 3-Jan-19 DATE OF EXPIRY: 3-Jan-20

EXAMINER: Tristan Sommerfeld
Print


Signature

REQUIREMENTS:

- 1) NEAR-VISION - The examination shall assure natural or corrected near-distance acuity in at least one eye such that the applicant is capable of reading a minimum of Jaeger Number 2 or equivalent type and size letter at a distance of not less than 30 cm (12 inches) on a standard Jaeger test chart. The ability to perceive an Ortho-Rater minimum of 10 or similar test patterns is also acceptable. This test shall be administered annually.
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