MATERIAL CERTIFICATE



www.materials.sandvik/en/

Cert#: 180037012

Plant Location: 425 Sold To: 87000005	McCartney Str	reet, Arnprior	, ON, CA, K7	S 3P3	
SANDVIK MATERIALS TECH. NA		Ship To: GRAND PRAIRIE	V F ALBERTA		
CLARKS SUMMIT PA		GRAND PRAIRIE	AB		
Customer Order No: 0009074 Sandvik Order No: 359190/2	13 (1	Certification	Date: 20181	207	
		Quantity: 2040	FT		
Work Order/Lot: 289985	I	Location Numbe	r D2SI00062		
	1	Distributor As Order Number F	signed Order C1834	Num	
ASTM A213-17, ASTM A269-15a ASME SA-213, ASME Section 1	A, ASTM A511-1 [T. 2017 Editi	6, Mechanical	Tubing		
3rd Edition 2015-11-23, (Au	stenitic), NA	ACE MR0103/ISO	17495:2016		
SWAGELOK SMS-00333 Rev. D					
Cold Finished BRIGHT ANNEAL	LED Seamless 7	lube			
Type MT 316/MT 316L/TP316/1	TP316L	Size: .	500" X .083"		
Material Manufacturer: Sar	udvik MT. Cana	He <mark>at: 5</mark>	53481		
ANALYSIS %	-				
C Si M Heat .022 .41 1	ín P 1 40 024	S .009	Cr	Ni	
Prod .021 .40 1	fn P 1.49 .026 1.46 .026	5.009	16.91 16.75	12.47 12.33	
Fe Mo				11100	
Heat 2.05 Prod 2.01					
Mechanical Tests:					
Yield Strength 0.2% 1.0%	Tensile	Elo	ngation n %	Reduction	
psi MPa psi MPa	psi MPa	E2" E10"	E4d E5d	Of Area %	
44000 303.4 N/A	86000 593.	1 60 N/A	N/A N/A	N/A	
Hardness Test Results: 80H	IRBW, 80HRBW				
Flare Test per ASTM A450/A1	016 and ASME	93450/931016			
No. samples: 2 Result: Ac	ceptable			1	
Flattening Test per ASTM A4 Acceptable	50/A1016 and	ASME SA450/SA	1016:		
Country Of Origin: Canada					
Material Does Qualify for N	IAFTA				
Eddy Curent Examination - A Positive Material Identific	ation(PMT) -	Accentable			
Visual Surface Condition -	Acceptable	neechemic			
Dimensional Check - Accepta Material is capable of pass	ble	NOCO Descritos	84 mm au		
Seamless, Cold Finished, Br	ight (Solution	A202 Practice	·· H: ·· ·		
Atmospheric Quenched No weld repair has been performed on this material.					
Material is free from radio	active contam	s material.			
Traceability is through Work Order number linemarked on tube					
The material has not come i containing compounds.	n contact wit	h Mercury or M	fercury		
compounds.					

Cert#: 180037012

Page 2

This certification affirms that the contents of the report are correct and accurate and that all test results and operations performed by Sandvik Materials Technology Canada or our subcontractors are in compliance with the material specification. Inspection certificate produced in accordance with EN 10204 3.1 No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of Sandvik Materials Technology Canada. Unauthorized alterations to the Inspection Certificate, including introduction of false, fictitious, or fraudulent statements or entries, may be punishable by fines, imprisonment, or both. This Inspection Certificate may be copied only in the manner and for the purposes specified in Section 6 of EN 10204:2004. Contravention of this notice will be prosecuted to the fullest extent of applicable law. Melt Source: SMT SANDVIKEN, SWEDEN Melt Method: Electric Arc Furnace-AOD Refining The material is manufactured according to a quality system, approved and registered to ISO 9001:2015 certificate number GBG0000511 which expires November 30, 2019

Electronically Generated Certificate-Valid without signature Jakub Sauer, Quality Mgr, 10 (SWINST316 R34) (15) CF (BH9061)

MATERIAL CERTIFICATE



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Cert#: 180037013

SOID TO: 87000005 SANDVIK MATERIALS TECH. NAFTA CLARKS SUMMIT PA	treet, Arnprior, ON, CA, K7S 3P3 Ship To: GRAND PRAIRIE V F ALBERTA GRAND PRAIRIE AB Certification Date: 20181207				
	Quantity: 2080 FT Location Number D2SIO0062 Distributor Assigned Order Num				
	Order Number FC1834				
ASTM A213-17, ASTM A269-15a, ASTM A511 ASME SA-213, ASME Section II, 2017 Edi 3rd Edition 2015-11-23, (Austenitic), SWAGELOK SMS-00333 Rev. D	tion, NACE MR0175/TSO 15156				
Cold Finished BRIGHT ANNEALED Seamless Type MT 316/MT 316L/TP316/TP316L	Tube Size: .500" X .083" Heat: 553481				
Material Manufacturer: Sandvik MT, Ca ANALYSIS %	nada				
C Si Mn P	S Cr Ni				
C Si Mn P Heat .022 .41 1.49 .0 Prod .021 .40 1.46 .0	26 .009 16.91 12.47				
	26 .007 16.75 12.33				
Heat 2.05					
Yield Strength Tensile	Elongation Reduction in % Of Area a E2" E10" E4d E5d %				
0.2% 1.0% Strength	in % Of Area				
0.2% 1.0% Strength psi MPa psi MPa Strength 39000 269.0 N/A 84000 57	a E2" E10" E4d E5d %				
	Y I I I I I I I I I I I I I I I I I I I				
Hardness Test Results: 78HRBW, 78HRBW					
Flare Test per ASTM A450/A1016 and ASM	E SA450/SA1016.				
No. samples: 2 Result: Acceptable					
Flattening Test per ASTM A450/A1016 and Acceptable	d ASME SA450/SA1016:				
Country Of Origin: Canada					
Material Does Qualify for NAFTA					
Eddy Curent Examination - Acceptable Positive Material Identification(PMI)	- Accentable				
Visual Surface Condition - Acceptable					
Dimensional Check - Acceptable					
Material is capable of passing the ASTM A262 Practice "E". Seamless, Cold Finished, Bright (Solution) Anealed &					
Atmospheric Quenched					
No weld repair has been performed on this material. Material is free from radioactive contamination.					
Traceability is through Work Order number linemarked on tube					
The material has not come in contact win containing compounds.	th Mercury or Mercury				

Cert#: 180037013

Page 2

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Electronically Generated Certificate-Valid without signature Jakub Sauer, Quality Mgr, 10 (SWINST316 R34) (15) CF (BH9061)

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MATERIAL CERTIFICATE



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Cert#: 180037014

Plant Location: 425 McCartney Street, Arnprior, ON, C Sold To: 87000005 Ship To:	A, K7S 3P3				
SANDVIK MATERIALS TECH. NAFTA CLARKS SUMMIT PA GRAND PRAIRIE V F AL GRAND PRAIRIE AB	BERTA				
Customer Order No: 00090743 Certification Date: Sandvik Order No: 359190/1	20181207				
Work Order/Lot: 289987 Distributor Assigned	0062 Order Num				
Order Number FC1834					
ASTM A213-17, ASTM A269-15a, ASTM A511-16, Mechanical Tubing ASME SA-213, ASME Section II, 2017 Edition, NACE MR0175/ISO 3rd Edition 2015-11-23, (Austenitic), NACE MR0103/ISO 17495: SWAGELOK SMS-00333 Rev. D	16166				
Cold Finished BRIGHT ANNEALED Seamless Tube					
Type MT 316/MT 316L/TP316/TP316L Size: .500" X	.083"				
Material Manufacturer: Sandvik MT, Canada ANALYSIS %					
C Si Mn P S Cr Heat .022 .41 1.49 .026 .009 16.97					
Prod .021 .40 1.46 026 007 16 7	1 12.47 5 12.33				
Heat 2.05					
Yield Strength Tensile Florgation	Reduction				
psi MPa psi MPa psi MPa E24 E104 E44	— —				
39000 269.0 N/A 83000 572.4 60 N/A N/A N	E5d % N/A N/A				
Hardness Test Results: 78HRBW, 80HRBW					
Flare Test per ASTM A450/A1016 and ASME SA450/SA1016,					
No. samples: 2 Result: Acceptable Flattening Test per ASTM A450/A1016 and ASME SA450/SA1016:					
vccebrabie					
Country Of Origin: Canada Material Does Qualify for NAFTA					
Eddy Curent Examination - Acceptable					
Positive Material Identification (PMI) - Acceptable Visual Surface Condition - Acceptable					
Dimensional Check - Acceptable					
Material is capable of passing the Agmy A262 processes way					
Seamless, Cold Finished, Bright (Solution) Anealed & Atmospheric Quenched					
No weld repair has been performed on this material					
Material is free from radioactive contamination. Traceability is through Work Order number linemarked on tube					
The material has not come in contact with Mercury or Mercury containing compounds.					

Cert#: 180037014

Page 2

This certification affirms that the contents of the report are correct and accurate and that all test results and operations performed by Sandvik Materials Technology Canada or our subcontractors are in compliance with the material specification. Inspection certificate produced in accordance with EN 10204 3.1 No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of Sandvik Materials Technology Canada. Unauthorized alterations to the Inspection Certificate, including introduction of false, fictitious, or fraudulent statements or entries, may be punishable by fines, imprisonment, or both. This Inspection Certificate may be copied only in the manner and for the purposes specified in Section 6 of EN 10204:2004. Contravention of this notice will be prosecuted to the fullest extent of applicable law. Melt Source: SMT SANDVIKEN, SWEDEN Melt Method: Electric Arc Furnace-AOD Refining The material is manufactured according to a quality system, approved and registered to ISO 9001:2015 certificate number GBG0000511 which expires November 30, 2019

Electronically Generated Certificate-Valid without signature Jakub Sauer, Quality Mgr, 10 (SWINST316 R34) (15) CF (BH9061)



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MATERIAL CERTIFICATE

Cert#: 180037011 Page 1

Plant Location: 425 McCartney Street, Arnprior, ON, CA, K7S 3P3 Sold To: 87000005 Ship To: SANDVIK MATERIALS TECH. NAFTA GRAND PRAIRIE V F ALBERTA CLARKS SUMMIT PA GRAND PRAIRIE AB Customer Order No: 00090743 Certification Date: 20181207 Sandvik Order No: 359190/1 Quantity: 1980 FT Work Order/Lot: 289150 Location Number D2SI00062 Distributor Assigned Order Num Order Number FC1834 ASTM A213-17, ASTM A269-15a, ASTM A511-16, Mechanical Tubing ASME SA-213, ASME Section II, 2017 Edition, NACE MR0175/ISO 15156 3rd Edition 2015-11-23, (Austenitic), NACE MR0103/ISO 17495:2016 SWAGELOK SMS-00333 Rev. D Cold Finished BRIGHT ANNEALED Seamless Tube Type MT 316/MT 316L/TP316/TP316L Size: .500" X .083" Heat: 553481 Material Manufacturer: Sandvik MT, Canada ANALYSIS % C Si Mn P S Cr Ni .022 .41 Heat 1.49 .009 .026 16.91 12.47 .021 Prod .40 1.46 .026 .007 16.75 12.33 Fe Mo Heat 2.05 Prod 2.01 Mechanical Tests: Yield Strength Tensile Elongation Reduction 0.2% 1.0% Strength in % Of Area psi MPa psi MPa MPa E2" psi E10" E4d E5d ૠ 39000 269.0 N/A 83000 572.4 56 N/A N/A N/A N/A Hardness Test Results: 78HRBW, 78HRBW Flare Test per ASTM A450/A1016 and ASME SA450/SA1016, No. samples: 2 Result: Acceptable Flattening Test per ASTM A450/A1016 and ASME SA450/SA1016: Acceptable Country Of Origin: Canada Material Does Qualify for NAFTA Eddy Curent Examination - Acceptable Positive Material Identification (PMI) - Acceptable Visual Surface Condition - Acceptable Dimensional Check - Acceptable Material is capable of passing the ASTM A262 Practice "E". Seamless, Cold Finished, Bright (Solution) Anealed & Atmospheric Quenched No weld repair has been performed on this material. Material is free from radioactive contamination. Traceability is through Work Order number linemarked on tube The material has not come in contact with Mercury or Mercury containing compounds.

Cert#: 180037011

Page 2

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MATERIAL CERTIFICATE

Cert#: 180037015

Plant Location: 425 McCartney Street, Arnprior, ON, CA, K7S 3P3Sold To: 87000005Ship To:SANDVIK MATERIALS TECH. NAFTAGRAND PRAIRIE V F ALBERTACLARKS SUMMIT PAGRAND PRAIRIE ABCustomer Order No: 00090743Certification Date: 20181207Sandvik Order No: 359190/1Street, Arnprior, ON, CA, K7S 3P3	_				
Work Order/Lot: 289988 Work Order/Lot: 289988 Order Number D2SI00062 Distributor Assigned Order Num Order Number FC1834					
ASTM A213-17, ASTM A269-15a, ASTM A511-16, Mechanical Tubing ASME SA-213, ASME Section II, 2017 Edition, NACE MR0175/ISO 15156 3rd Edition 2015-11-23, (Austenitic), NACE MR0103/ISO 17495:2016 SWAGELOK SMS-00333 Rev. D					
Cold Finished BRIGHT ANNEALED Seamless Tube Type MT 316/MT 316L/TP316/TP316L Size: .500" X .083" Heat: 553481					
Material Manufacturer: Sandvik MT, Canada ANALYSIS %					
Heat .022 .41 1.49 .026 .009 16.91 12.42	,				
Prod .021 .40 1.46 .026 .007 16.75 12.33					
re Mo	,				
Heat 2.05 Prod 2.01					
Mechanical Tests:					
Yield Strength Mensile manual					
0.2% 1.0% Strongth					
nci MDa ngi MDa!	itea i				
46000 317.2 N/A 90000 620.7 60 N/A N/A N/A N/	A				
Hardness Test Results: 78HRBW, 78HRBW	1				
Flare Test per ASTM A450/A1016 and ASME SA450/SA1016,					
NO. SAMDIES: 2 Result: Acceptable					
Flattening Test per ASTM A450/A1016 and ASME SA450/SA1016:					
Acceptable Country Of Origin: Canada					
Material Does Qualify for NAFTA					
Eddy Curent Examination - Acceptable					
Positive Material Identification(PMT) - Acceptable					
visual Surface Condition - Acceptable					
Dimensional Check - Acceptable					
Material is capable of passing the ASTM A262 Practice "E". Seamless, Cold Finished, Bright (Solution) Anealed &					
Acmospheric Quenched					
No weld repair has been performed on this material.					
Material is free from radioactive contamination					
Traceability is through Work Order number linemarked on tube					
The material has not come in contact with Mercury or Mercury containing compounds.					

Cert#: 180037015

Page 2

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