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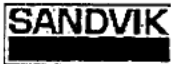
INSPECTION CERTIFICATE acc to
EN 10204 3.1

SANDVIK MATERIALS TECHNOLOGY
P O BOX 1220
SCRANTON, PA 18501
USA

Customer References 212246 450-00991 MAGELLAN CORP Customer order 2018-01-22		Sandvik References Order No. Subs No. ABSMT Dispatch note 82707 07059/53 ABSMT No. C.Code 284-50949 03																																					
Material description HOT WORKED STAINLESS BAR STEEL FORGED ANNEALED PEEL TURNED Ingot Melt Source SMT SANDVIKEN SWEDEN Steel making process Origin ELECTRIC FURNACE+AOD Sweden		Steel/material Designations Sandvik SANMAC 304/SANMAC 304L AISI UNS 304/304L S30400/S30403 W.nr EN no 1.4301 1.4301/1.4307																																					
Technical requirements EN 10088-3:-2014, MIC 1702 SUPPLEMENT AISI 304, API 6A PSL3, AMS-QQS-763C, NACE MR0175/ISO 15156-3:2009, NACE MR0103:2012 ASTM A-276-17, ASTM A-479-18, ASME SA-479-ED-17 SEC II PART A Suitable for manufacturing of components in acc. with ASTM A-182-16A																																							
EXTENT OF DELIVERY <table border="1"> <thead> <tr> <th>It</th> <th>Product designation</th> <th>Heat</th> <th>Lot</th> <th>Pieces</th> <th>Kg</th> <th>Lbs</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>MBR-SANMAC-304L-11" MI-6120-</td> <td>551814</td> <td>90861</td> <td>2</td> <td>3236.0</td> <td>7133.04</td> </tr> <tr> <td colspan="4"></td> <td>Total</td> <td>2</td> <td>3236.0 7133.04</td> </tr> </tbody> </table>				It	Product designation	Heat	Lot	Pieces	Kg	Lbs	12	MBR-SANMAC-304L-11" MI-6120-	551814	90861	2	3236.0	7133.04					Total	2	3236.0 7133.04															
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Quality assurance - Erik Jansson/QA-manager Primary Products MTC Service / Certificates																																							

AB SANDVIK MATERIALS TECHNOLOGY Reg No. 556234-6832 VAT No. SE663000-06901
SE-91181 SANDVIKEN SWEDEN www.smt.sandvik.com mtc_service.smt@sandvik.com

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Hardness test				
Mid-Radius				
Lot	Min	Max	Average	
90861	HB	HB		
	132	138	136	
Surface				
Lot	Min	Max	Average	
90861	HV	HV		
	176	181		
Grain size acc to ASTM E-112 ED-13				
Lot				
90861	2.0	2.0		
Impact test, J, 20 °C				
Lot	Single values			Average
	Joule			Joule
90861	411	414	419	415
Impact test, J, 20°C, Transversal acc. to ISO 148-1				
Lot	Single values			Average
	Joule			Joule
90861	134	138	143	138
Following controls/tests have been satisfactorily performed:				
- Intergranular corrosion test acc to ASTM A-262 FR.E				
- Material Identification.				
- Macrostructure				
- ASTM-A 388 satisfactory ASME VIII Division 2				
- Visual inspection and dimensional control.				
Melt Source				
Heat 551814 SMT SANDVIKEN SWEDEN				
HEAT TREATMENT:				
1"-5.75": In process annealed according to ASTM A484 above the minimum hot rolling temperature of 1010°C and rapidly cooled.				
6"-13.75": Material soaking 1065°C, min. 30 minutes. Quenched in water. Water temp pre-quench max 40°C, after quench max 50°C.				
14"-14.5": Material soaking 1050°C, min. 60 minutes. Quenched in water. Water temp pre-quench max 40°C, after quench max 50°C.				
14.75"-17.5": Material soaking 1050°C, min. 120 minutes. Quenched in water. Water temp pre-quench max 40°C, after quench max 50°C.				

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ASTM A-314-13A, ASTM A-484-16, ASTM A-751-14A,
 ASTM A-370-13 (hardness test)
 ASTM A-473-13 (Chemical composition and mechanical properties only)
 ASME SA-193-ED-15 section 2 Part A Grade B8M (Chemical composition only)
 ASME SA320 (Studs and bolts) Class 1B8M (Chemical composition only)
 ASTM A-193-16 (Fasteners) Grade B8 (Chemical composition only)
 ASTM A-320-14 Class 1 B8 (Bolting materials): (Chemical composition only)
 ASME SA-182-ED-15 section 2 part A
 AMS 5639 J
 AMS 5647 K
 API 6A-PSL3 (Ultrasonic testing)
 RoHS Compliant

Final product meets the maximum levels of inclusions, thin 3.0 and heavy 2.5, as per ASTM E45 Method A.

Round Stainless Steel Bar material

The raw material is free from radioactive contamination.

Material free from mercury contamination.

Reduction ratio= 4.2 times.

No welding or weld repair.

This Material complies with DFARS 252.225-7014 & Alternate 1

Country Of Origin: Sweden

This Material does not comply with FAR BAA (FAR 52.225-1)

This Material complies with DFARS BAA (DFARS 252.225-7001) and FAR TAA (FAR 52.225-5)

The material is conforming to directive 2005/53/EC, 2002/95/EC and CD 2005/618/EC.

This is to certify that the contents of this certified material test report are correct and accurate and that all test results and operations are in compliance with the material specification.

The delivered products comply with the specifications and requirements of the order.

The material is manufactured according to a Quality system, approved and registered to ISO 9001:2008.

No unauthorized alterations. The contents of this Inspection Certificate may not be modified or revised in any way without the prior written approval of AB Sandvik Materials Technology. 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.

The certificate is produced with EDP and valid without signature.

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MOR: 353257
SR: 20233508

Packing List / Certificate of Conformance

Sold To: EMJ-Schaumburg
Producing Mill: Sandvik Materials Technology NAFTA

Customer PO / Item	Bundle #	Description	Heat # / Lot #	Pieces	Weight
P978393-423 / 509105	803592	304-RTANN-BRRD-11.0000	551814 / 90861	1	3.652
				1	3.652