

INSPECTION STAMP  
SVQ

<b>Customer References</b>		<b>Sandvik References</b>	
821612	Customer order 2016-08-19	Order No. 451115	Subs No. ABSMT Dispatch note 615103 32169/53
125-06911	SVERDRUP S	ABSMT No. 284-18653	C.Code 47

<b>Material description</b> HOT WORKED STAINLESS BAR STEEL ROLLED ANNEALED & STRAIGHTENED PEEL TURNED AND POLISHED	<b>Steel/material Designations</b> Sandvik SANMAC 316/SANMAC 316L AISI UNS 316/316L S31600/S31603 W.nr EN no 1.4401/1.4404 1.4401/1.4404
<b>Steel making process</b> Electric furnace	

<p><b>Technical requirements</b></p> <p>EN 10088-3:-2005, NACE MR0175/ISO 15156-3:2009</p> <p>ASTM A-182-15,(Chemical composition and mechanical properties only)</p> <p>ASTM A-276-16, A-479-16, ASME SA-479-ED-15 SEC II PART A</p> <p>NORSOK M-630 ED.5, NORSOK MDS S01 REV.4</p>
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EXTENT OF DELIVERY					
It	Product designation	Heat	Lot	Pieces	Kg
06	MBR-SANMAC316L-80	546361	13301	2	530.0
			Total	2	530.0

TEST RESULTS								
Chemical composition (weight%)								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
546361	0.019	0.27	1.76	0.029	0.024	16.81	10.20	2.03
	V	N						
546361	0.048	0.046						

Tensile test at room temperature						
Lot	Yield strength		Tensile strength	Elongation		Red.of Area
	MPa	MPa	MPa	%	%	%
	Rp0.2	Rp1.0	Rm	A	2"	Z
13301	290	334	591	53	53	75

Hardness test		
	Min	Max
Lot	HB	HB
13301	137	142

Quality assurance - Viktor Hellberg/QA-manager Primary Products  
MTC Service / Certificates



## CERTIFICATE

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Lot	Min HRB	Max HRB
13301	74	75

**Grain size acc to ASTM E-112.**

Lot	Grain size
13301	8.0

**Impact test, J, 20°C, Longitudinal acc. to ISO 148-1**

Lot	Single values		Average
	Joule	Joule	Joule
13301	292	310	285
			296

**Following controls/tests have been satisfactorily performed:**

- Intergranular corrosion test acc to ASTM A-262 PR.E
- Material Identification.
- Ultrasonic test acc to EN 10308 Quality Class 3/EN 10228-4  
Quality Class 3/ASTM A388/API 6A PSL 3
- Visual inspection and dimensional control.

**Heat Treatment:**

Solution annealed and quenched.

The raw material is free from radioactive contamination.

Material free from mercury contamination.

No welding or weld repair.

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.