



CERTIFICATE

No. A/10-943696 Rev 00
Date 2010-03-03 Page 1/2INSPECTION CERTIFICATE acc to
EN 10 204 3.1

PROCESSKONTROLL ITEMS AB

INSPECTION STAMP
QA-TUBE

Customer References		Sandvik References		
	Customer order 2010-03-03	Order No.	Subs No. ABSMT Dispatch note	
000-00000	PROCESSKONTROLL	ABSM T No. 300-00000	C.Code 11	
Material description SEAMLESS STAINLESS COLD FINISHED INSTRUMENTATION TUBING		Steel/material Designations Sandvik AISI 3R60 TP316/TP316L		
Steel making process Electric furnace				
Technical requirements ASTM A-632-04 NACE MR0175/ISO 15156-3:2003 PED 97/23/EC EN 10216-5 TC1 HRB MAX 80				
EXTENT OF DELIVERY				
It	Product designation	Heat	Lot Pieces Kg	
01	THT-3R60-3.18-0.71 3.18 X .71	047125	97689 1	
		Total	1	
KEY TO HEAT		KEY TO LOT		
Heat Code	Heat No.	Lot Code	Lot No.	
047125	514900	97689	163824	
TEST RESULTS				
Chemical composition (weight%)				
Heat	C	Si	Mn P S Cr Ni Mo	
047125	0.024	0.42	1.66 0.030 0.008 17.33 13.15 2.54	
	N			
047125	0.037			
Chemical composition, product (weight%)				
Heat	C	Si	Mn P S Cr Ni Mo	
047125	0.021	0.39	1.63 0.029 0.006 17.34 13.13 2.55	
	N			
047125	0.037			
Quality assurance - Per Eriksson/ QA-manager Tube & Pipe MTC Service / Certificates				

Tensile test at room temperature

	Yield strength		Tensile strength	Elongation	
	MPa	MPa	MPa	%	%
Lot	Rp0.2	Rp1.0	Rm	A	2"
97689	346	383	550	45	46

Hardness test

	Min	Max
Lot	HRB	HRB
97689	76	80

Following controls/tests have been satisfactorily performed:

- Flattening test.
- Flaring test
- PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Leak tightness test
- Visual inspection and dimensional control.

Heat Treatment:

Solution annealed and quenched.

Marking:

SANDVIK 3R60 ASTM A-632 TP 316/316L EN 10216-5 TC1 MS PK1 WNR 1.4435 EN 1.4435 COLD SMLS 3.18 X 0.71 MM 1/8" X 22 BWG HT 514900 SG LOT 163824 *QA-TUBE*

Approved acc. AD 2000-Merkblatt W0 and certified acc. to Pressure Equipment Directive (97/23/EC) by TUEV NORD GmbH; notified body, reg.no. 0045.

The number of tests are based on the size of the manufacturing lot before cutting to finished lengths.

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.

The certificate is produced with EDP and valid without signature.

TEST RESULTS TRANSFERRED FROM CERTIFICATE NO 29339