

INSPECTION CERTIFICATE acc to EN 10 204 3.1

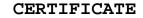
Processkontroll Items AB Box 2088 444 02 STORA HÖGA SWEDEN

INSPECTION STAMP QA-TUBE

Customer References	Sandvik References				
	Customer			ABSMT Dispatch note	
751782	order	403450	589873	45638/54	
	2015-04-23	ABSMT No.	C.Code		
		300-29045	15		
003-00991 ITEMS					
Material description		Steel/mate	rial Desig	qnations	
SEAMLESS STAINLESS COLI	FINISHED	Sandvik	-	AISI	
HYDRAULIC TUBING		3R60		TP316/TP316L	
		EN no			
		1.4435			
Steel making process					
Electric furnace					
Technical requirements			0 6 0 1 0		
ASTM A-213-13 AW, ASME		AW, ASTM A-	269-13		
NACE MR0175/ISO 15156-3					
PED 97/23/EC EN 10216-5	5 TC1				
HRB MAX 80					

EXTENT OF DELIVERY									
It		t designat	ion	Heat	Lot	Pieces	5	М	
02	THT-3R6	0-16-2		048118	93455	15	62.0	90.	00
	16.00 X	2.00							
					Total	15	62.0	90.	00
KEY TO H	EAT						KEY TO LO	ТС	
Heat Cod	e l	Heat No.					Lot Code	Lot No.	
048118	ļ	541177					93455	179849	
TEST RES	ULTS								
Chemical	composi	ition (wei	ight%)						
Heat	C	Si	Mn	Р		S	Cr	Ni	Mo
048118	0.020	0.39	1.63	0.0	30	0.008	17.31	13.05	2.54
	N								
048118	0.039								
Chemical composition, product (weight%)									
Heat	C	Si	Mn	Р		S	Cr	Ni	Mo
048118	0.019	0.40	1.63	0.0	31	0.007	17.42	13.08	2.57
	N								
048118	0.043								
Quality assurance - Lars-Åke Bergqvist / QA-manager									
	MTC Service / Certificates								

AB SANDVIK MATERIALS TECHNOLOGY Reg No. 556234-6832 VAT No. SE663000-060901 SE-81181 SANDVIKEN SWEDEN www.smt.sandvik.com mtc\_service.smt@sandvik.com





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Tensile test		_				
		strength	Tensile strength	-		
Lot	MPA Bro 2	MPa Rp1.0	MPa Rm	%% A 2"		
93455	270	—	552	<b>A 2</b> 48 46		
55155	264		550	47 45		
	201	500	220	1, 10		
Hardness test	:					
	Min	Max				
Lot	HRB	HRB				
93455	73	76				
<pre>Following controls/tests have been satisfactorily performed: - Flattening test Flaring test - PMI-test Intergranular corrosion test acc to ASTM A-262 PR.E - Leak test: Eddy current test acc to EN 10246-2, ASME SA-1016.</pre>						
- Visual inspection and dimensional control. Heat Treatment: Solution annealed at a temperature of Min 1040° C and quenched.						
Marking: SANDVIK 3R60 ASTM/ASME A/SA-213AW/A-269 EN 10216-5 TC1 EN 10305-1 TP 316/TP 31 6L EN 1.4435 M S NDE 16.00 X 2.00 MM HT 541177 SG LOT 179849 MADE BY SANDVIK * QA-TUBE*						
The raw material is free from radioactive contamination.						
Material free from mercury contamination.						
Approved acc. AD 2000-Merkblatt W0 and certified acc. to Pressure Equipment Directive (97/23/EC) by TUEV NORD; 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 9001:2008.						
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.						
The certifica 	te is p	roduced with	EDP and valid withou	t signature.		



TEST RESULTS TRANSFERRED FROM CERTIFICATE NO 46586