



**CERTIFICATE**

**No. A/12-281803**

**Rev 00**

**Date 2012-09-27**

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INSPECTION CERTIFICATE acc to  
EN 10 204 3.1

Processkontroll Items AB  
Box 2088  
444 02 STORA HÖGA  
SWEDEN

INSPECTION STAMP  
QA-TUBE

<b>Customer References</b>		<b>Sandvik References</b>		
711943	Customer order 2012-09-27	Order No. 306327	Subs No. 535733	ABSMT Dispatch note 31970/54
003-00991	ITEMS	ABSMT No. 300-73419	C.Code 13	

<b>Material description</b> SEAMLESS STAINLESS COLD FINISHED INSTRUMENTATION TUBING	<b>Steel/material Designations</b> Sandvik UNS 254 SMO S31254
<b>Steel making process</b> Electric furnace	

<b>Technical requirements</b> ASTM A-269-10
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<b>EXTENT OF DELIVERY</b>								
It	Product designation	Heat	Lot	Pieces	Kg	M		
02	THT-254SMO-12.7-1.65 12.70 X 1.65	531196	41537	10	27.0	60.00		
				Total	10	27.0	60.00	
<b>TEST RESULTS</b>								
<b>Chemical composition (weight%)</b>								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
531196	0.009	0.46	0.46	0.022	0.0005	19.99	17.77	6.20
	Cu	N						
531196	0.53	0.22						
<b>Chemical composition, product (weight%)</b>								
Heat	C	Si	Mn	P	S	Cr	Ni	Mo
531196	0.010	0.47	0.45	0.023	<0.001	20.04	17.73	6.27
	Cu	N						
531196	0.53	0.22						

**Quality assurance - Per Eriksson / QA-manager**  
**MTC Service / Certificates**



**Tensile test at room temperature**

	<b>Yield strength</b>	<b>Tensile strength</b>	<b>Elongation</b>
	<b>MPa</b>	<b>MPa</b>	<b>%</b>
<b>Lot</b>	<b>Rp0.2</b>	<b>Rm</b>	<b>2"</b>
41537	384	720	47
	388	719	46

**Hardness test**

	<b>Min</b>	<b>Max</b>
<b>Lot</b>	<b>HRB</b>	<b>HRB</b>
41537	85	89

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

- Flaring test
- PMI-test.
- Leak test: Eddy current test acc to ASTM A-1016.
- Visual inspection and dimensional control.

**Heat Treatment:**

Solution annealed and quenched.

The raw material is free from radioactive contamination.

Material free from mercury contamination.

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.

The certificate is produced with EDP and valid without signature.