



**CERTIFICATE**

**No. A/11-197364 Rev 00**  
**Date 2011-10-13 Page 1/2**

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>	
710625	Customer order 2011-10-12	Order No. 263795	Subs No. 512203
003-00991	ITEMS	ABSMT No. 300-52764	ABSMT Dispatch note 03638/54 C.Code 68

<b>Material description</b> SEAMLESS STAINLESS COLD FINISHED PIPE	<b>Steel/material Designations</b> Sandvik 3R12 AISI TP304/TP304L
<b>Steel making process</b> Electric furnace	

**Technical requirements**  
ASTM A-312-09, ASME SA-312-ED-10  
NACE MR0175/ISO 15156-3:2009

**EXTENT OF DELIVERY**

It	Product designation	Heat	Lot	Pieces	Kg	M
01	TST-3R12-1/2-SCH40 21.34 X 2.77	527432	24150	2	14.0	11.96
				<b>Total</b>	<b>2</b>	<b>14.0 11.96</b>

**TEST RESULTS**

**Chemical composition (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	N
527432	0.013	0.39	1.02	0.027	0.009	18.33	10.15	0.050

**Chemical composition, product (weight%)**

Lot	C	Si	Mn	P	S	Cr	Ni	N
24150	0.015	0.37	1.02	0.026	0.008	18.33	10.13	0.041

**Tensile test at room temperature**

Lot	Yield strength		Tensile strength		Elongation	
	MPa		MPa		%	%
24150	<b>Rp0.2</b>		<b>Rm</b>		<b>A</b>	<b>2"</b>
	260		606		58	61
	269		608		57	61

**Quality assurance - Ulrik Rodling / QA-manager Tube & Pipe**  
**MTC Service / Certificates**

**Hardness test**

	<b>Min</b>	<b>Max</b>
<b>Lot</b>	<b>HRB</b>	<b>HRB</b>
24150	73	76

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

- Flattening test.
- Ring expansion test
- PMI-test.
- Intergranular corrosion test acc to ASTM A-262 PR.E
- Leak test: Eddy current test acc to ASME SA-999.
- Visual inspection and dimensional control.

**Heat Treatment:**

Solution annealed and quenched.

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.