



**CERTIFICATE**

**No. V/10-048065 Rev 00**  
**Date 2010-09-10 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>  709087	<b>Sandvik References</b> Order No. Subs No. Dispatch note 211824 184628 097488 Suppl. No C.Code 184628 68
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<b>Material description</b> SEAMLESS STAINLESS COLD FINISHED PIPE   <b>Steel making process</b> Electric furnace	<b>Steel/material Designations</b> Sandvik AISI 3R12 TP304/TP304L AFNOR Z2CN18-10
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**Technical requirements**  
ASTM A-312-08, ASME SA-312-ED-07 AD-09B  
NACE MR0175/ISO 15156-3:2003  
NFA 49-117-09/85, tolerances and leak test acc. to ASTM A312/A999

**EXTENT OF DELIVERY**

It	Product designation	Heat	Lot	Kg	M
01	TST-3R12-1/2-SCH40 21.34 X 2.77	523968	55557	8.5	6.63
Total				8.5	6.63

**TEST RESULTS**

**Chemical composition (weight%)**

Heat	C	Si	Mn	P	S	Cr	Ni	N
523968	0.005	0.38	1.19	0.027	0.008	18.33	10.11	0.057

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

Heat	C	Si	Mn	P	S	Cr	Ni	N
523968	0.007	0.38	1.19	0.027	0.007	18.27	10.10	0.054

**Tensile test at room temperature**

Lot	Yield strength		Tensile strength		Elongation	
	MPa		MPa		%	%
	Rp0.2		Rm		A	2"
55557	267		599		55	61
	276		595		55	59
	243		599		57	61
	256		590		55	59

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

**Hardness test**

	<b>Min</b>	<b>Max</b>
<b>Lot</b>	<b>HRB</b>	<b>HRB</b>
55557	77	80

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

- Flattening test.
- Ring expansion test
- Flaring 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.