



Inspection Order No. : IN-TJ-5601-11488

Boss No. : 1097800

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Date of issue: Jan.13, 2012

**INSPECTION REPORT**

(non-negotiable)

- Description and Quantity of  
Pipe EN10224 S275 508mm x7mm 85pcs  
Pipe EN10224 S275 508mm x9mm 625pcs

- Name & Address Of Seller: Changsha Hunan Steel Co.,LTD.  
Hunan Steel Industrial Zone, Furong  
Special District, Changsha City, Hunan, China

- Inspection Date & Place: Jan.10-11, 2012, Cangzhou, Hebei

- Invoice No.: HNSC11081-CI

- Nature Of Inspection:

Item	Result
Visual quality inspection	Subject to buyer's evaluation
Packing and marking check	Subject to buyer's evaluation
Quantity check	Acceptable
Dimension check randomly	Subject to buyer's evaluation
Witness Lab Testing	Acceptable
Document review	Subject to buyer's evaluation

- Inspector: Harry Ren

This is to report that we, SGS-CSTC (Tianjin) Co., Ltd, at the request of buyer conducted the following inspection:

**Inspection Finding:**

1. Visual quality inspection:

Total 93pcs of pipes were selected for visual quality check.

1.1 The pipes were coating with black paint and stacked on the ground.

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1.2 During the inspection, SGS inspector found there was corrosion inside of each pipe because of the remaining water of hydrostatic pressure testing, SGS inspector made reminded.

1.3 The paint outside of 13 Pipes was scratched, and the scratched part was corrosive, SGS inspector made reminded, the manufacture declared that the scratched part would be repainted before transport.

1.4 According to EN10224, for a distance of at least 100 mm (4.0 in) from each pipe end, the inside weld bead shall be removed by grinding such that it does not extend above the adjacent pipe surface by more than 0,5 mm (0.020 in), but the manufacture had not removed the weld bead, SGS inspector made reminded, the manufacture declared that they would remove the weld bead before delivery.

1.5 There was no other defect found.

## 2. Packing and Marking check:

2.1 Packing check: There were 2 metallic protectors on each side of pipe.

2.2 Marking check of bare pipe:

2.2.1 On one end outside of each 12" pipe, the information marked as follow:

S/N	Item	Marked information	Remark
1	Specification number	EN 10224 S275	
2	Grade	S275	
3	Type	SSAW	
4	Size	508mm*7mm	
5	Length	Length:11800mm	
6	Heat No.	HEAT NO.11-11891-6	Different for each batch
7	Date	12/2011	
8	Manufacture	Changsha Hunan Steel Co.,LTD.	
9	Contract No.	1306BG112067	

2.2.2 On one end outside of each 20" pipe, the information marked as follow:

S/N	Item	Marked information	Remark
1	Specification number	EN 10224 S275	
2	Grade	S275	
3	Type	SSAW	
4	Size	508mm*8mm	
5	Length	Length:11800mm	
6	Heat No.	HEAT NO.55528	Pipe No. followed Heat No., SGS inspector made reminded
7	Date	12/2011	
8	Manufacture	Changsha Hunan Steel Co.,LTD.	
9	Contract No.	1306BG112067	

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2.2.3 On one ends inside of each pipe, the information marked as follow:

S/N	Item	Marked information	Remark
1	Pipe No.	21684	Different for each pipe

2.3 SGS inspector found the marking "Heat No:XXXXXX" on 20" Pipe were painted with pipe No., SGS inspector made reminded, the manufacture declared that the "Heat No." would be repainted before transport.

2.4 There was no other defect found.

3. Quantity check:

3.1 Total 85pcs of 20" pipes and 625pcs of 20" pipes were found in the factory during the inspection, the quantity was found to meet the contract.

4. Dimension check

During the inspection, 25pcs of pipes were selected for dimension check.

4.1 Equipment:

Name	Equipment No.	Model/specification	Calibrated effectively period
Long steel tape measure	IND-TJ-20m-11	0-20m	2011-12-05~2012-12-04
Vernier caliper	097978	0-600mm	2011-10-25~2012-04-24
Micrometer	IND-TJ-WJ-02	0-25mm	2011-12-05~2012-12-04
Welding inspection feet	IN-TJ-HJ-03	KH45B	2011-08-29~2012-08-28

4.2 Dimension check details as follow.

4.2.1 For 12" pipes:

S/N	Item	Measure data	Acceptance criterion	Result	Remark
1	length	11800 -10~+10mm	Not specified	ACC	
2	OD*	508 -1.5~-0.2mm	508 +/-1.6mm	ACC	
3	Bevel angle	32-35°	30-35°	ACC	
4	Root face	0.8-4.2mm	0.8-2.4mm	DISACC	
5	Thickness	9.47-9.90mm	8.58-10.48mm	ACC	
6	Weld bead height	1.6-2.0mm	≤3.5mm	ACC	
7	Weld bead width	13-15mm	Not specified		

\*The Acceptance criterion is based on EN 10224

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4.2.1 For 20" pipes:

S/N	Item	Measure data	Acceptance criterion	Result	Remark
1	length	11800 -0~+0mm	Not specified	ACC	
2	OD*	508 -0.7~+1.5mm	508 +/-1.6mm	ACC	
3	Bevel angle	34-35°	30-35°	ACC	
4	Root face	0.8-4.5mm	0.8-2.4mm	DISACC	
5	Thickness	11.00-11.55mm	10.01-12.24mm	ACC	
6	Weld bead height	2.0mm	≤3.5mm	ACC	
7	Weld bead width	15-16mm	Not specified		

\*The Acceptance criterion is based on EN 10224

Remark: The value of OD was checked from ends of pipes due to equipment limit of manufacturer.

4.3 The dimension values of root face was not found to meet required value, SGS inspector made reminded.

4.4 The other dimension values were found to meet required value.

5. Witness Lab Testing:

5.1 The chemical composition analysis and mechanical properties test had been performed by factory lab under the witness of SGS inspector for the pipes. The testing equipments are in good status and calibration is valid. The coupons are machined and tested as per the applied code EN10224. The testing results were acceptable. And the result was satisfactory with EN10224 S275

5.2 The details as follow:

5.2.1 For Chemical composition:

Type		C%	Si%	Mn%	P%	S%	V%	Nb%	Ti%	REMARK
S275	Required value*	≤0.18	≤0.45	≤1.40	≤0.025	≤0.015	≤0.05	≤0.05	≤0.04	
S275	Actual value	0.08	0.20	1.15	0.010	0.005	0.002	0.003	0.018	
S275	Required value*	≤0.18	≤0.45	≤1.70	≤0.025	≤0.015	V+Nb+Ti≤0.15			
S275	Actual value	0.06	0.28	1.11	0.014	0.008	0.025	0.036	0.014	

\*The required value is based on EN 10224

The result of Chemical composition is acceptable.

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5.2.2 For Mechanical properties:

Type		R <sub>t,0.5</sub> MPa	R <sub>m</sub> MPa	A%	REMARK
S275	Required value*	290-495	415-760		
S275	Actual value	360	460	37	
S275	Required value*	415-565	520-760		
S275	Actual value	460	555	34	
*The required value is based on EN10224					

The results of Mechanical properties are acceptable.

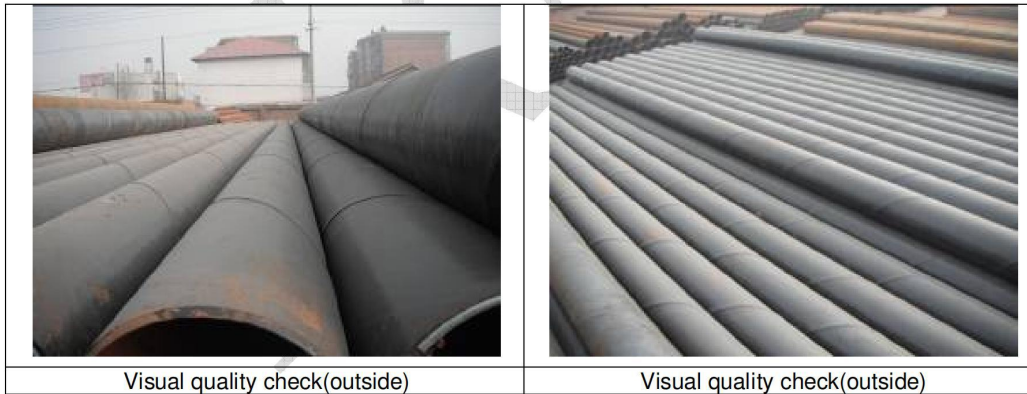
6. Document review:

During this inspection, manufacturer supplied below documents for SGS inspector to review:

- Charpy impact test report

All these documents were acceptable, no abnormal items could be found during this inspection.

7. Referred photos:



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Visual quality check(outside)	Visual quality check(outside)
	
Visual quality check(inside)	Visual quality check(inside)
	
The paint was scratched	The paint was scratched

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<p>Weld bead inside the pipe</p>	<p>Weld bead inside the pipe</p>
	
<p>Protectors on the pipe ends</p>	<p>Protectors on the pipe ends</p>
	
<p>Marking on the 12" pipe</p>	<p>Marking on the 20" pipe</p>

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**THIS REPORT ONLY REFLECTED OUR ACTUAL FINDINGS. THE INSPECTION WAS DONE TO THE BEST OF OUR KNOWLEDGE AND ABILITY AND WITH DUE CARE. THE FINDINGS ARE VALID AS FOR TIME AND PLACE OF INSPECTION.**

FOR AND ON BEHALF OF  
SGS-CSTC STANDARDS  
TECHNICAL SERVICES CO., LTD.

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AUTHORIZED SIGNATURE

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