

Inspection Order No. : IN-WH-5302-15015
BOSS No. : N/A
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INSPECTION REPORT

(non-negotiable)

- Description and Quantity of Commodity: SMLS STEEL PIPE, 14MoV63, Φ153mm×25mm 10pcs
SMLS STEEL PIPE, 14MoV63, Φ194mm×25mm 9pcs

- Name & Address Of Buyer:

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

- Inspection Date & Place: Aug 26~27th, 2015 at Huangshi city, Hubei Province, China

- L/C No.:

- P/I No.: HNSCW15012DWF

- Nature Of Inspection:	Item	Comment
	Visual inspection (100%)	Acceptable
	Dimensional check (100%)	Subject to client's evaluation
	Witness test	Acceptable
	Packing check (100%)	Acceptable
	Document review	Acceptable

- Inspector: Fly Cai

- Reviewed by

This is to report that we, SGS-CSTC Wuhan Branch at the request of the client conducted the following inspection:

Instrument checklist

During the inspection, the following instrument calibration status has been checked for inspection:

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No.	Measuring instrument description (Including measuring range and equipment No.)	Period of validity
1	Outside micrometer (150~175)mm/0.01mm	Nov. 03 rd , 2015
2	Outside micrometer (175~200)mm/0.01mm	Oct. 06 th , 2015
3	Wall thickness micrometer gauge (25~50)mm/0.01mm	Dec. 14 th , 2015
4	Ultrasonic thickness gage	Mar. 11 th , 2016
5	Steel tape (0-20)m	Jun. 24 th , 2016
6	Electric-Hydraulic Servo Universal Testing Machine	Mar. 16 th , 2016
7	Spark Discharge Atomic Emission Spectrometer	Mar. 11 th , 2017
8	Electronic Universal Testing Machine	Mar. 16 th , 2016
9	Impact Testing Machine	Mar. 16 th , 2016

Inspection Finding:

When SGS inspector arrived at the inspection location on Aug.26th, 2015, all products were stored in the workshop. SGS inspector performed visual quality check, dimensional check, witness test, Packing check and document review. The details of inspection were as following:

1. Visual Quality Check:

- ♦ Reference documents:
→ [PI order No.: HNSCW15012DWF and EN 10216-2]

During this inspection, the visual quality check had been performed to all the pipes by SGS inspector. All pipes were straight, no bend or deformation was found. There was no crack, heavy scratch, dent or other visible defect was found on inside and outside surface of pipes. The result of the visual quality check was acceptable.

2. Dimensional Check:

- ♦ Reference documents:
→ [PI order No.: HNSCW15012DWF and EN 10216-2]

Dimensional check was performed for all pipes by SGS inspector. The details were as follows:

For $\Phi 153\text{mm} \times 25\text{mm}$, L=6000mm

Pipe No.	OD(mm)	Wall thickness(mm)	Length(mm)
	153±1.53	25±3.125	6000(0~10)
1	153.10/153.21/153.07	26.38/26.10/26.90/26.01	5829
2	153.23/153.10/153.17	26.15/26.71/26.04/26.16	6034
3	152.98/153.42/153.15	25.71/25.78/26.72/26.48	6035
4	153.21/153.10/152.70	26.22/25.53/26.24/26.46	6034
5	153.30/153.18/152.74	25.54/25.93/25.97/26.87	6032
6	153.27/153.20/153.49	25.82/25.97/25.87/26.42	6034
7	153.10/153.35/153.46	25.52/27.04/26.28/26.89	6034
8	153.20/153.10/153.22	26.48/26.01/25.90/26.78	6034
9	153.38/153.30/153.33	26.19/26.28/26.83/26.77	6033
10	153.28/153.03/153.14	26.12/26.22/26.15/25.96	6030

For $\Phi 194\text{mm} \times 25\text{mm}$, L=6000mm

Pipe No.	OD(mm)	Wall thickness(mm)	Length(mm)
	194 \pm 1.94	25 \pm 3.125	6000(0~10)
1	194.03/194.04/193.60	26.29/26.45/27.62/26.83	6030
2	194.01/194.22/193.85	27.26/27.60/27.82/27.84	5850
3	194.61/194.26/194.27	27.55/26.95/27.67/27.79	6027
4	194.10/194.14/194.11	27.70/27.40/27.19/27.04	6034
5	194.68/194.65/194.34	26.64/26.38/27.80/27.77	6041
6	194.68/194.62/194.55	27.92/27.70/27.60/27.19	6035
7	194.20/194.50/194.53	27.92/27.68/26.94/27.04	6036
8	193.95/194.25/194.03	27.05/27.08/26.95/26.63	6037
9	194.50/194.53/194.51	26.90/26.65/27.97/27.00	6035

Remark: The length wasn't acceptable according to EN 10216-2. The manufacturer said they would explain to the client.

The result of the dimensional check was subject to client's evaluation.

3. Witness test:

- Reference documents:

→ [PI order No.: HNSCW15012DWF and EN 10216-2]

SGS inspector randomly selected 1pc pipe to take sample from each batch pipe. The details were as follows:

Sample No.	Pipe Specification	Heat No.
012	$\Phi 194\text{mm} \times 25\text{mm}$	50518060
013	$\Phi 153\text{mm} \times 25\text{mm}$	50518060

Then SGS inspector witnessed chemical analysis and mechanical test at manufacturer's lab, the details were as below:

For chemical component analysis:

Samples No.	C%	Mn%	Si%	P%	S%	Cr%	Ni%	Cu%	Mo%	V%	Al%
012	0.12	0.5	0.22	0.009	0.0040	0.41	0.08	0.03	0.61	0.233	0.010
013	0.12	0.5	0.22	0.009	0.0050	0.41	0.08	0.03	0.61	0.235	0.010

For mechanical test:

Sample No.	Flattening Test	Yield strength	Tensile strength	Elongation	Energy of impact [J]				
		R _p (MPa)	R _m (MPa)	A L ₀ (%)	Values Σ / n ≥ 27J				
		≥320	460~610	≥20	1	2	3	Σ / n	Remarks
012	No crack Pass	387	523	28.5	191	193	192	192	1. Impact test temperature was 20°C.
013	No crack Pass	381	514	30.5	184	210	187	194	

The result of the witness test was acceptable according to EN10216-2.

4. Packing check:

- Reference documents:
→ [PI order No.: HNSCW15012DWF]

The packing inspection was performed; details please refer to following description.

- The end of pipes was protected by plastic cap.
- The pipes were fastened with steel belt.

The result of packing check was acceptable.

5. Document review:

- Reference documents:
→ [PI order No.: HNSCW15012DWF and EN 10216-2]

Time sheet:

Date	Time	Description	Hours
26.Aug, 2015	7:30~10:30	Traveling	3
	10:30~12:00	Working	1.5
	12:00-13:00	Lunch	1
	13:00-17:00	Working	4
	17:00~17:30	Traveling	0.5
27.Aug, 2015	8:00~8:30	Traveling	0.5
	8:30~12:00	Working	3.5
	12:00-13:30	Lunch	1.5
	13:30-17:30	Working	4
	17:30-20:30	Traveling	3
	20:30-22:30	Reporting	2
Total			22 hours







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.


Attachment: Photos during inspection





<p>The samples</p> 	<p>Chemical component analysis</p> 
<p>Flattening Test</p>	<p>Flattening Test</p>
<p>GALDABINI</p> 	
<p>Tensile test</p>	<p>Tensile test</p>
	

<p>Tensile test</p> 	<p>Impact test</p> 
<p>Impact test</p> 	<p>Used instrument</p> 
<p>Calibration Certificate</p> 	<p>Packing Check</p> 

Packing Check	Packing Check
	
Document review	

End of report

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

AUTHORIZED SIGNATURE