


Inspection Order No. : IN-TJ-5301-12116-01
BOSS No: 1126376
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Date of issue: Aug 19 2012

INSPECTION REPORT
 (non-negotiable)

- Description and Quantity of Commodity: Ductile pipe DN500
- Name & Address Of Buyer: L*****
- Name & Address Of Seller: SHANXI SOLID INDUSTRIAL CO.,LTD
- Inspection Date & Place: Aug 16~18 2012 Shanxi province, China.
- L/C No.:
- P/I No.: SFC-1205A
- Nature Of Inspection:

	Item	Comment
Visual quality check	Acceptable	
Marking and packing check	Acceptable	
Dimension check	Acceptable	
Take photo during the goods production	Subject to buyer's evaluation	
Sampling test at SGS lab	Acceptable	

- Inspector:  Steven Hui
- Reviewed by Anderson Liu

This is to report that we, SGS-CSTC (Tianjin) Co., Ltd. at the request of [SHANXI SOLID INDUSTRIAL CO.,LTD] conducted the following inspection:

Instrument checklist

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

No.	MEASURING INSTRUMENT DESCRIPTION	CALIBRATION STATUS	CERTIFICATE NO. (OPTIONAL)
1	Ultrasonic thickness gauge TT-100	N/a	N/a

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2	Coating thickness gauge TT210	N/a	N/a
3	Vernier caliper 0-1000mm	2012.01.11~2013.01.10	JC201220021
4	π ruler 300-600 (circumferential tape)	N/a	N/a
5	Taper mearsure (0~10M)	N/a	N/a

Inspection Finding:

1. Visual Quality Check:

- Sample size: [sample size: ANSI/ASQ Z1.4-2008, L-II 50pcs]

During inspection, the pipes were selected randomly for visual quality inspection. The pipes were found painted with black paint on external surface and lined with gray lining in internal surface, the socket of the pipe was found painted with red paint on internal surface. Except the 4pcs pipe coating scratched, no obvious defect on the visual quality of the pipes was found on site.

Remark:

- The manufacturer declares that they will re-coat scratch area.

2. Packing and marking check

- Sample size: [sample size: ANSI/ASQ Z1.4-2008, L-II 50pcs]

Packing check

The pipes were in bulk.

Marking check

Marking painted near the socket of pipe:

ISO2531-2009(pipe batch no.)-(pipe no.)
C30. ZINC 200 GR/M2
MANCOMUNIDAD CENTRO NORTE
MANABI-ECUADOR**

Marking cast on internal surface of socket:

**DN500 DI
SX 12**

- White printed marking was found near the spigot of pipe:

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3. Dimension Check:

- Sample size: [ANSI/ASQ Z1.4-2008, S-4 12pcs]
- Reference document: : ISO2531: 2009 for L,
GB/T 13295:2008 for D3, D5, DE, e, T1
ISO 4179:2005 for internal lining thickness

External coating thickness as client requirement]

Item	Unit	Required value	Actual value
D3	mm	534.5 +2.4/-1.0	533.7~536.8
D5	mm	562.6 +2.4/-1.0	562.0~564.73
DE(the outer diameter of spigot)	mm	532 +1.0/-3.8	528.7~531.1
E(Wall thickness)	mm	Min 7.5	7.6~12.9
L(working length)	mm	6000 +30/-70	5990~6008
T1(Socket depth)	mm	120	118~119
External coating thickness	µm	Min 70	92.7~222
Internal lining thickness	mm	Min 3	4.31~10.14

Remark:

- The above wall thickness and external coating thickness was determined at 4 different places in the length direction of each selected pipe.
- The above diameter (D3 and D5) was determined at 2 different places at end of each selected pipe.
- The above internal thickness was determined at 2 different places at the both end.

Remark: Except the no tolerance for T1, other dimension was in according with required value.

4. Take photos during the goods production:

During the inspection, due to the manufacturer busy production schedule, the manufacturer did not arrange production this pipe in product line, the SGS inspector only witness the process of casing, annealing, external zinc-spray coating and bitumen coating for DN500, and found the process in normal condition, the SGS take the photo for process. The photo was under.

5. Sampling for test at SGS lab including tensile test and HB Test according to ISO 2531-2009.

- sample size: according to the client requirement ,2 pcs totally;

The SGS inspector witness the manufacturer takes 2 samples, and the SGS lab testing as follow:

Sample Name : Ductile iron pipe
 Spec : DN 500mm
 Sample No./Product or Lot : 1#/120817AC-25
 No. : 2#/120817AC-26
 Quantity : 2
 SGS Ref No. : IN-TJ-5301-12116
 Date of Receipt : Aug.21, 2012
 Test Period : Aug.21, 2012 to Aug.24, 2012
 Test result(s) : For further details, please refer to the following page(s)

1. Test item: Tension test

Test method: EN 10002-1:2001

Test item	result				Requirement*	Conclusion
	1	2	-----	-----		
Yield strength, R _{p0.2} MPa	324	322	-----	-----	≥ 300	Pass
Tensile strength, MPa	476	463	-----	-----	≥ 420	Pass
Elongation after fracture, (A) %	10.5	11.5	-----	-----	≥ 10	Pass
Spec	DN500	DN500	-----	-----	-----	-----

Note: * Specified in ISO2531-2009(E) (Table 8)

2. Test item: Brinell hardness

Test standard: ISO 6506-: 2005

Sample No.	Scale	Result			Average	Requirement*	Conclusion
1#	HBW10/300 0	177	178	178	178	Centrifugally cast pipes : Max. 230; Non-centrifugally cast pipes : Max.250	Pass
2#		178	178	178	178		Pass

Note:*Refer to ISO 2531-2009

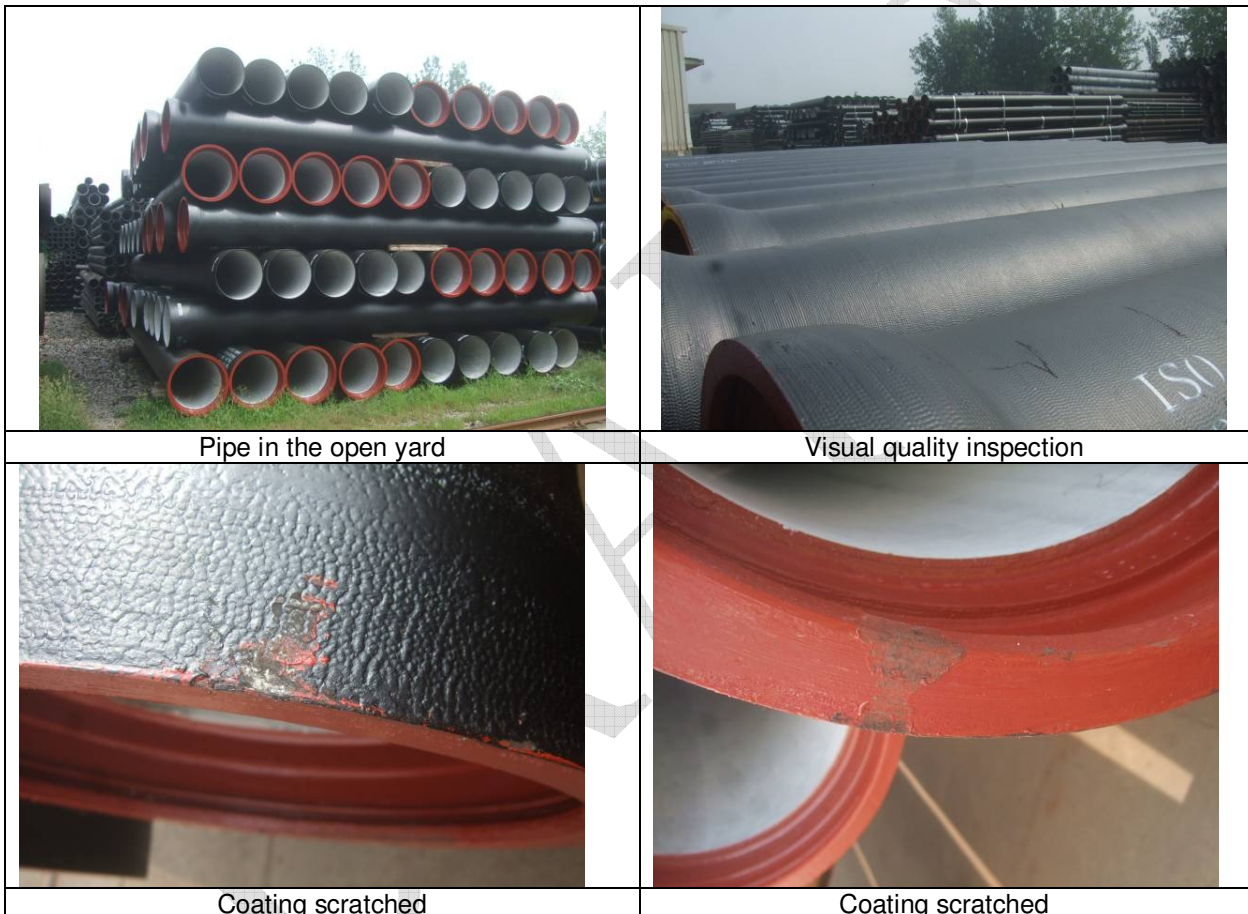
Result: The result was acceptable.

Time sheet:

Date	Time	Description	Hours
Aug 16 2012	09:30~16:00	Traveling	6.5
	16:00~18:00	Working	2
	18:00~18:30	Traveling	0.5
Aug 17 2012	08:00~08:30	Traveling	0.5
	08:30~12:00	Working	3.5
	14:00~18:00	Working	4
	18:00~20:00	Traveling	2
Aug 18 2012	08:00~14:00	Traveling	6
	17:00~19:00	Reporting	2
Total			27

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>Visual quality inspection</p>	<p>Visual quality inspection</p>
	
<p>Marking inspection</p>	<p>Marking inspection</p>
	
<p>Marking inspection</p>	<p>Marking inspection</p>



Wall thickness



Bitumen coating thickness



Inner diameter



Inner diameter



Cement lining thickness



Socket depth

	
Length	Casing
	
Annealing	Zinc coating
	
Zinc coating	Bitumen coating



sampling



sampling

End of report

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

AUTHORIZED SIGNATURE