



Inspection Order No. : IN-QD-PSI-09081  
Boss No.: 11991037  
Page No. : 1 of 6  
Date of Issue: July 10, 2009

**FIELD INSPECTION REPORT**  
(non-negotiable)

- **Description and Quantity of Commodity:** DI Pipes DN150 667pcs  
Rubber Gaskets 667pcs

- **Name & Address Of Buyer:** A\*\*\*\*\*

- **Name & Address Of Seller:** SHANXI SOLID INDUSTRIAL CO., LTD  
1501, Building B, Dingyuan Times Center, Yingzenanjie, Taiyuan,  
Shanxi, China

- **Inspection Date & Place:** July 06-09, 2009 Shanxi, China

- **L/C No.:** N/A

- **Invoice No.:** SANT-0907

- **Nature Of Inspection:**

1. Quantity check
2. Packing and marking check
3. Visual quality check
4. Dimension check
5. Witness testing in the factory
6. Document review

- **Inspector:** Mr. Davy ji

This is to report that we, SGS-CSTC Qingdao Branch on July 06-09, 2009 at the request of SHANXI SOLID INDUSTRIAL CO., LTD conducted the following inspection:

**Inspection Finding:**

1. Quantity Check:

Description	Order Qty. (Meter)	Order Qty. (PCS)	Weight-declared	Inspected Qty
DI Pipes, DN150, K9	4002M	667PCS	96048KGS	667pcs / 56 bundles
Rubber gaskets DN150	667pcs			667pcs / 9 packages

2. Packing Check:

- For DI pipes:

Found per 12pcs pipes packed as one bundle, each bundle secured and tightened by three iron belts at three places and each layers was separated by wooden battens.

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- For Gaskets

Found per 75pcs DN150 gaskets were packed in a plastic waved bags.

### 3. Marking Check:

#### 3.1 Painting Mark Check

Found the mark was painted on the pipe surface as follows:



(Painted on socket side)

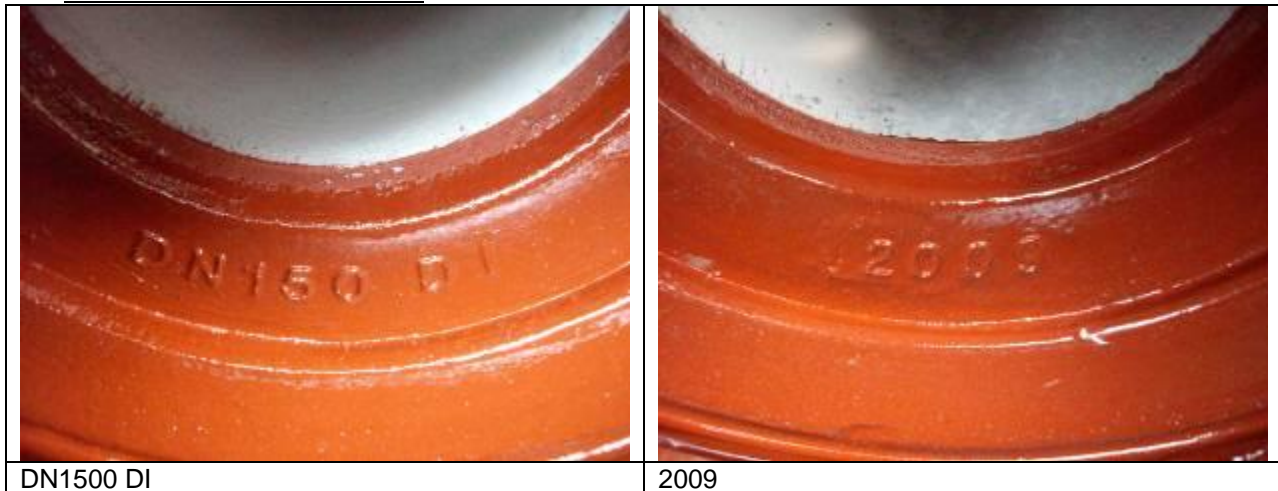
ANT  
DUCTILE IRON PIPE DN150MM  
ISO2531 K9 2009  
090707AA-143-41 (Pipe No.)



(Painted on spigot side)

(Cutting mark)

#### 3.2 Mold Mark inside of the socket



### 4. Visual Quality Inspection:

- According to the ANSI/ASQ Z1.4-2008 single planning for normal inspection Level II, total 80pcs pipes were selected randomly for visual quality inspection.
- Found inside of pipes were cement mortar lined and cement lining surface were even and smooth and without obvious crack, shedding; outside of pipes were bitumen coated uniformly and no obvious hole & pinhole was found.
- The 80pcs DI pipes inspected were new and visual quality was in sound condition.

### 5. Dimension check:

Total 13pcs pipes (S-3) were randomly selected for dimension check according to ISO2531:1998, ISO4179:2005 and ISO8179:2004, the actual finding is as follows: (unit: mm)

Check point	DE	D3	P	L	e	Tc	t (um)
Standard	170	172.5	94	6000	6.0	≥3.0	≥70um
Tolerance	+1/-2.9	+/-1	+/-5	+/-30	-1.3	/	/
1	169.5	172.3	93.5	6030	8.0	4.5	91
2	169.8	172.1	93.0	6010	6.7	3.8	104
3	169.6	172.3	94.0	5985	7.1	4.2	99
4	169.3	172.9	93.0	6030	7.2	5.3	114
5	169.9	173.3	94.0	6030	7.5	5.1	106
6	169.2	172.6	94.0	6026	6.4	4.6	108
7	169.4	172.9	94.2	6028	8.3	3.2	110
8	169.6	172.7	93.5	6030	7.2	3.3	120
9	169.8	172.9	94.0	5995	6.9	4.2	114
10	169.6	172.6	94.5	5995	6.5	3.6	97
11	168.3	172.7	94.0	5986	7.0	5.2	102
12	169.6	172.6	94.0	6000	6.5	3.8	108
13	169.8	173.0	94.0	6025	6.4	3.5	116

DE: External diameter of pipe  
 L: Total length  
 e: Wall thickness  
 Tc Thickness of cement lining

D3: Smallest diameter of socket end  
 P: Socket depth  
 t: External coating thickness

Result: Passed.

#### 6. Witnessed test:

##### 6.1 Mechanical properties test:

Total 4pcs (1pc per batch) pipes were selected randomly for mechanical properties test according to ISO 2531:1998 and the samples were remained by manufacturer. The test was conducted by manufacturer and witnessed by SGS inspector, actual finding is as following:

Pipe No.	Actual tested data		
	Tensile strength (Mpa) ≥420	Elongation (%) ≥10	Hardness (HB) ≤230
090702CA-328-31	460	14	169
090702AA-187-33	473	14	170
090703BA-45-35	451	15	169
090703BA-259-37	446	15	171

Result: Passed.

#### Notice below:

In accordance with Client's instructions, the Company's involvement has been limited to witnessing/observing a third party's intervention(s) at the third party's laboratory/test house or other facilities and installations used for the intervention(s). The Company's sole responsibility was to be present at the time of the third party's intervention(s) to forward the results, or confirm the occurrence, of the intervention(s). The Company is not responsible for the condition or calibration of apparatus, instruments and measuring devices used, the analysis methods applied the qualifications, actions or omissions of the third party's personnel or the analysis results.

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#### 7. Documentation Review:

The following inspection records during fabrication were submitted to SGS for review and it shows they were conforming to the requirement of ISO2531:1998.

- Mechanical properties test report
- Hydrostatic test record
- Cement lining check record
- Zinc coating check record
- Bitumen check record

We quote the data as following:

---Quoted---

- Performed standard: ISO2531:1998
- Hydrostatic test: 5.0Mpa x 10 Sec. (ISO2531 Standard: 5.0Mpa x 10 Sec.)
- Mechanical properties testing:
  - Tensile Str.: 434-463Mpa (ISO2531 standard:  $\geq 420$ Mpa)
  - Elongation: 10-14% (ISO2531 standard:  $\geq 10\%$ )
  - Hardness: 168-172HB (ISO2531 standard:  $\leq 230$  HB)
- Thickness of Zinc:  $\geq 130$  g/m<sup>2</sup> (ISO2531 standard:  $\geq 130$  g/m<sup>2</sup>)
- Thickness of Bitumen:  $\geq 70$ um (ISO2531 standard:  $\geq 70$ um)
- Internal cement thickness:  $\geq 3.0$ mm (ISO2531 standard: Min.3.0mm)

---Unquoted---

**8. Conclusion:**

According to requirement, the cargos were inspected for quantity, packing, marking, visual quality, dimension check, witness test & document review , and found the cargo we inspected were met to requirement of ISO2531:1998, ISO4179:2005 and ISO8179:2004 except for the packing and marking subject to client's evaluation.

**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.**

\*\*\*\*\*THE END\*\*\*\*\*




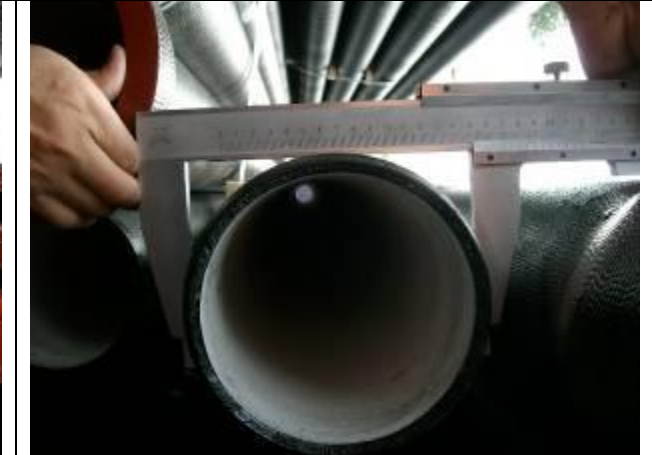
**Attachment:**



**Pipes storied in the open air**



**Rubber gaskets storied in warehouse**

	
<p>Visual from socket</p>	<p>Visual from spigot end</p>
	
<p>cement mortar check</p>	<p>Coated Bitumen check</p>
	
<p>Dimension check for "D3"</p>	<p>Dimension check for "DE"</p>



Dimension check for "L"



Dimension check for "P"



Bitumen coating checking



Wall thickness checked



Mechanical properties test



Hardness check