



Inspection Order No. : IN-SH-PSI-09338
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Date of issue: November 12, 2009

INSPECTION REPORT

- Description and Quantity of Commodity: OCTG SEAMLESS API 5-CT J 55 R2 EUE 3000M
3 1/2" x 9.3PPF
- Name & Address Of Client: Hebei Abter Steel Pipe Co., Ltd
- Name & Address Of Mill:
- Inspection Date & Place:
- P/I No.: BC09102006 DTD 2009.10.21
- L/C No.: N/A
- Nature Of Inspection:
 - Quantity check
 - Visual quality check (sample size: ANSI/ASQ Z1.4 - 2003-L-2)
 - Packing and Marking check
 - Dimension check(sample size: ANSI/ASQ Z1.4 - 2003-L-2)
 - Witness testing- chemical composition, mechanical properties, hardness testing, Hydro testing and etc. (sample size: according to the heat No.)
 - MTC review and endorsement
- Inspector: Xu Sheng

This is to report that we, SGS-CSTC Shanghai Branch on 10~11 November, 2009, at the request of Metals International Limited conducted the following inspection:

Inspection Finding:

1. Quantity check

At inspection site, total 17 bundles were found.
Each bundle was trussed into 19 tubes, total 323 tubes were found.

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2. Visual quality check (sample size: ANSI/ASQ Z1.4 - 2003-L-2)

As per the sample size, total 50 tubes were selected randomly for visual quality check, the findings as below:

- The tubes were straight, no deformation was found.
- No unacceptable defect (such as heavy rust, oxide skin, dent, crack and so on) was found.
- Outer surface of each pipe was brushed black paint.
- The pipe's end had been machined into screw, one end was female screw, another end was male thread, both female end and male end had been brushed butter and put on protection caps.

3. Packing & marking check

Packing:

Every 19 tubes were trussed into a bundle, total 17 bundles were found.
The details see related photo.

Marking:

Each tube was printed related marking, one of markings as below:

11-09 3 1/2" 9.3 JZS P6400 EU D 31.33 FT 292.92 LB Y909-100 9AJEAN01 10790

BC09-012006

4. Dimension check (sample size: ANSI/ASQ Z1.4 - 2003-L-2)

As per the sample size, total 50 tubes were selected randomly for visual quality check, the checked data as below:

Male end

| | | | | | |
|--------------|--------------------------|--|--------------------------------|----------------------------|--|
| Requirement | Stand Off 0±3.175 | Tape 60.5 ⁺⁵ ₋₂ | Pitch 25.4±0.05 | Thread Height 1.81±0.04 | L4 60.33 ^{+1.58} _{-3.0} |
| Checked data | -1.2~-0.5 | 62~63 | 25.37~25.39 | 1.81~1.82 | 59.6~60.3 |
| Requirement | Tube Length 9.15~9.75 | Wall Thickness ≥5.68 | Outside Diameter 88.9~89.69 | / | / |
| Checked data | 9.46~9.54 | 6.45~7.3 | 89.20~89.53 | / | / |

Female end

| | | | | | |
|--------------|-------------------------|--|--------------------|---|----------------|
| Requirement | Stand Off 6.35±3.175 | Tape 61.5 ⁺⁵ ₋₂ | Pitch 25.4±0.05 | Thread Height 1.81 ^{+0.04} _{-0.08} | W 114.3±1.6 |
| Checked data | 5.35~8.60 | 61~64 | 25.42~25.44 | 1.81~1.83 | 114.27~114.53 |
| Requirement | NL ≥146.05 | Q 96.85±0.79 | q 9.53±0.79 | J 80.93~90.53 | / |
| Checked data | 146.68~147.80 | 96.64~97.12 | 9.8~10.2 | 84.7~85.3 | / |

All checked data were acceptable.



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Under the supervision of SGS inspector, the mill performed the following test:

5.1 Chemical composition test

The checked data as below:

C: 0.26% Si: 0.21% Mn: 1.25% P: 0.014% S: 0.006% Cr: 0.02% Ni: 0.01% Cu: 0.02%

The test data were acceptable.

5.2. Mechanical properties test

The test results as below:

Tensile strength: 630 MPa

Yield strength: 455 MPa

Elongation: 29%

The test data were acceptable.

5.3 Hardness testing

The test results as below:

203 (HBW), 200(HBW), 197(HBW)

Average: 200(HBW)

The test data were acceptable.

5.4 Hydro testing

Test pressure: 44MPa

Duration: 10s

Results: No bulging or leakage was found.

The test results were acceptable.

5.5 Drift test

Test results: Passed.

6. MTC review and endorsement

The mill submitted MTC of these pipes to SGS inspector for review, the reviewed results were acceptable. MTC were stamped by SGS inspector.



Related photos



At inspection site, total 19 bundles (323pcs) were found.



Each tube was printed related marking.



Female end had been put on protection caps.

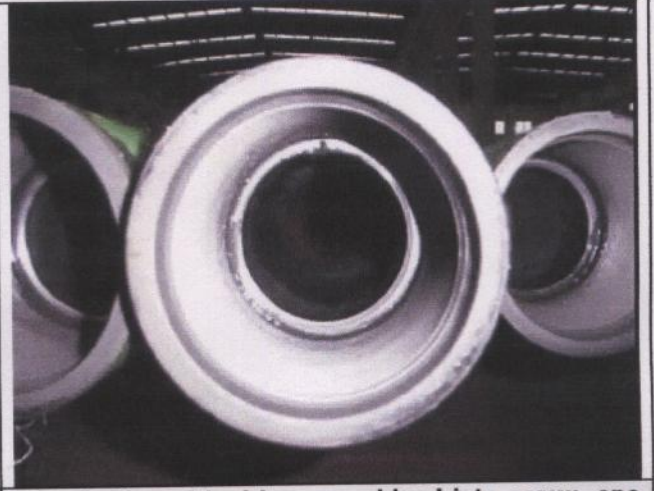


Male end had been put on protection caps.





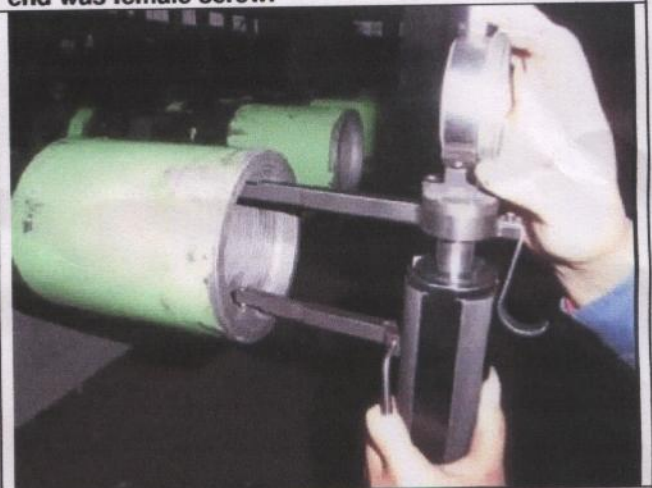
The pipe's end had been machined into screw, one end was male thread.



The pipe's end had been machined into screw, one end was female screw.



Dimension check.



Dimension check.





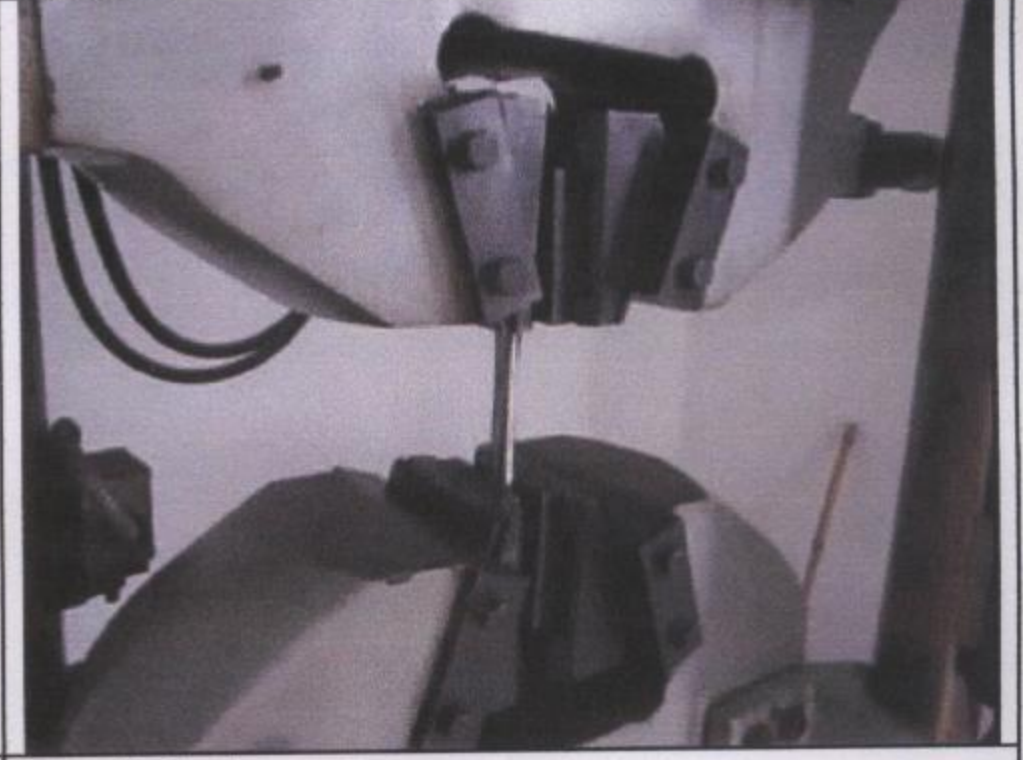
Wall thickness check.



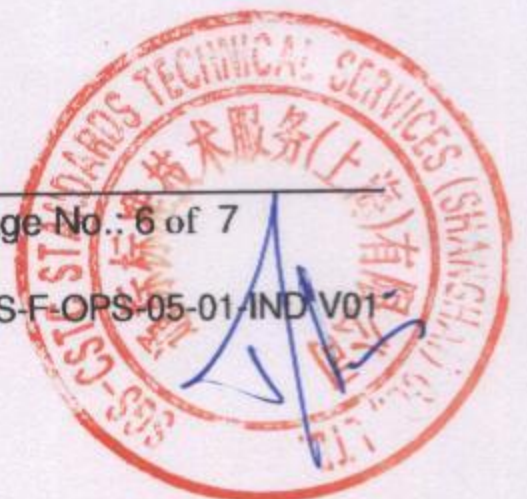
Drift test.

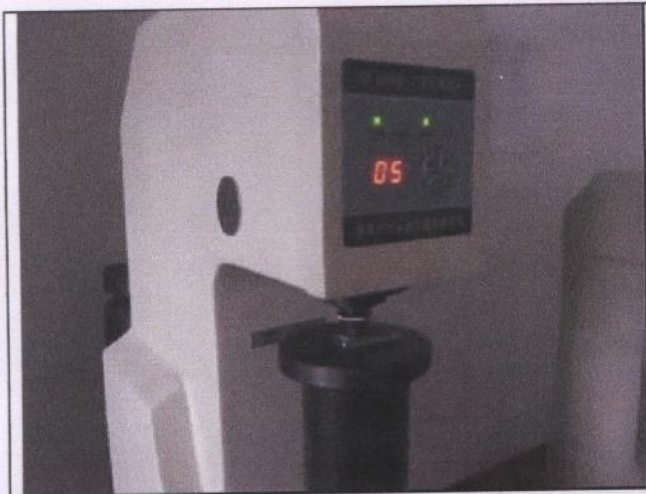


Hydraulic test.



Tensile test.





Hardness test.



Chemical composition analysis.

Time sheet:

| Date | Time | Description | Hours |
|-------------------|-------------------|-----------------------------------|--------|
| November 10, 2009 | AM 6:15 ~PM 18:15 | Working hours Travelling hours | + 12 |
| November 11, 2009 | AM 8:00 ~PM 20:30 | Working hours Travelling hours | + 12.5 |
| | PM 20:00~PM 22:00 | Reporting hours | 2 |
| Total | | | 26.5 |

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.

