



# Hebei Abter Steel Pipe Co.,Ltd

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<b>INSPECTION REPORT</b> <b>Report No.: MIL P09829-4</b> Issued on: Nov 25 <sup>th</sup> , 2014 Inspection Time: Nov 23 <sup>th</sup> -24 <sup>th</sup> , 2014	<b>P.O. No.</b> <b>PX-PSTS-</b> <b>0934557 PX-</b> <b>PSTS-0934528</b>
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Inspection Subject:	Boiler Tubes				
Specification:	ASME SA213 T11/T22	Inspector:	Lin Gaojie		

### Visit Summary:

#### Scope of Inspection

- 100% process verification.
- 100% Report review.
- Part photo service.

### Results of inspection to MILP09829&09829-02

#### ● Process Verification

We had verified all process on the production line, and the new status is as followed:

#### ● Process Verification

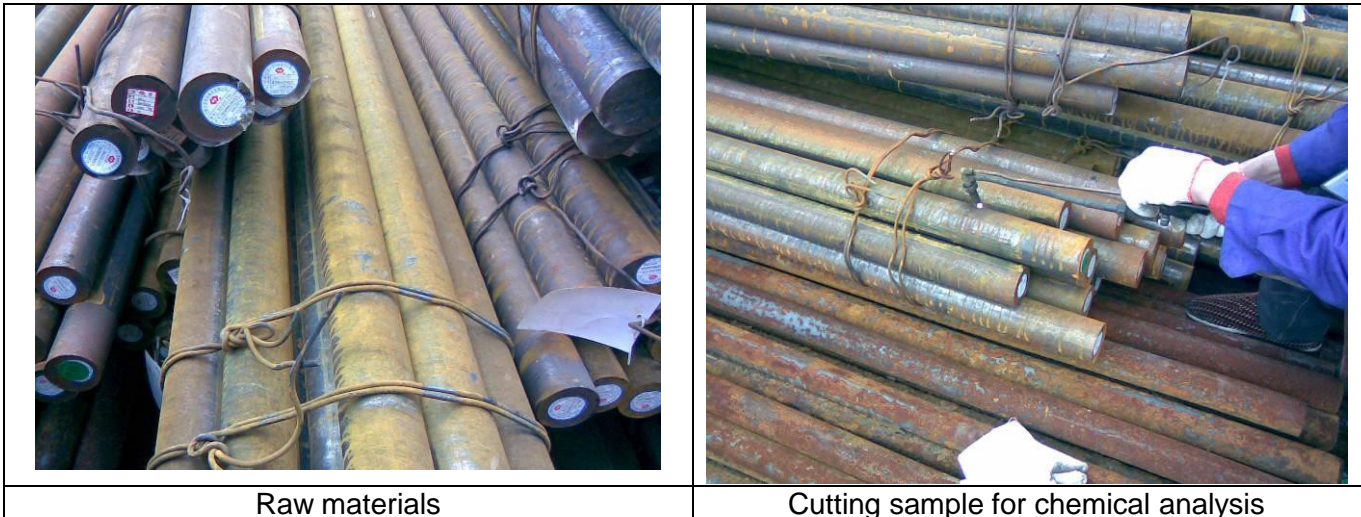
We had verified all process on the production line, and the new status is as followed:

##### 1. Checking the raw materials

We had checked the visual quality and chemical analysis of the new raw materials, the Heat No. of which are H10906353 and H10906354.

They are all up to snuff.

Photo attachment as below



#### ● Process Verification

Except the process in the last Report MIL P09829-1, we had verified the rest. The details are as followed:



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## 1. Verifying the NDT

The NDT includes Ultrasonic Test, Eddy Current Test and Magnetic Particle Examination.

We had overseen the operation and checked the NDT Report. The notches for Ultrasonic Test and Eddy Current are qualified according to the norm.

Photo attachment as below



Eddy Current Testing



Being cut off



Ultrasonic Test



Notch for Ultrasonic Test



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PMI



Magnetic Particle Examination

## 2. Verifying the straightness measuring

The mill uses feeler gauge to measure the straightness.

The spec of feeler leaf that we used is 0.75mm, while the maximum curvature is 0.89mm/m.

Photo attachment as below



Feeler gauge



Measuring the straightness

## 3. Verifying the preparation of ends

Tube ends have squared cut and are free from excessive burrs.

Photo attachment as below



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Wiping off the excessive burrs

#### 4. Verifying the samples for testing by the Third Party Inspection

There are about 10 samples having been taken, and we had verified them. The rest samples will be cut off on the witness of Moody Inspector according to the decision of our meeting on Nov. 20<sup>th</sup>, 2014.

Photo attachment as below



Samples

Measuring the dimension

#### 5. Verifying the label

We had verified content on the label ordered on our contract. There will be one label inside and two labels on the end of the package.

#### 6. Inspection by Moody

Moody Inspector chose three bundles of tubes randomly for inspecting. The mill provided Moody the report of production and inspection.

Photo attachment as below



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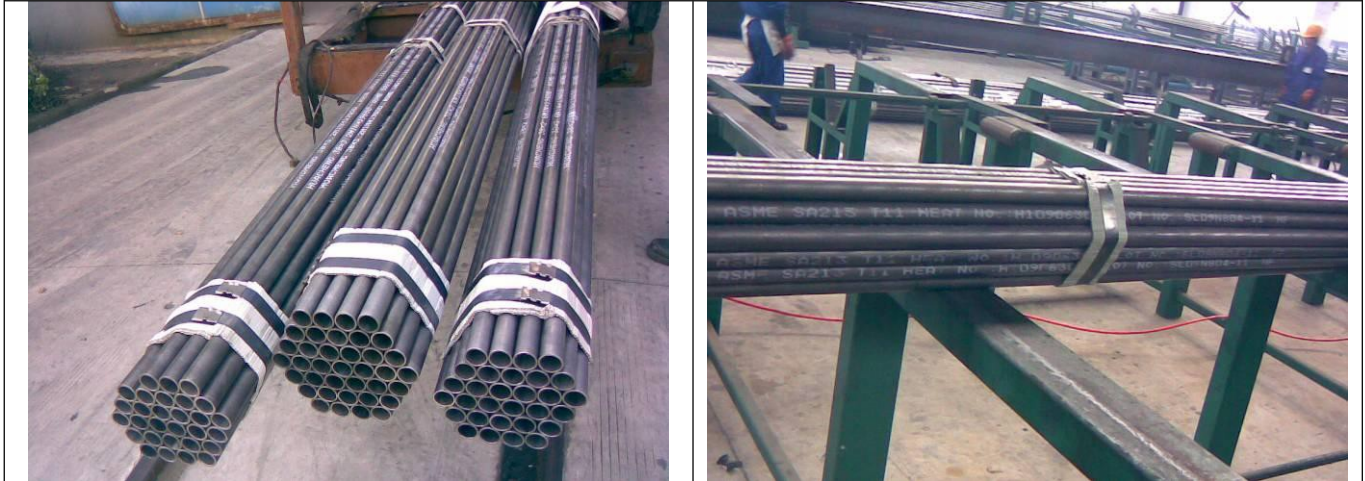
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For inspecting



Inspecting

## 7. Verifying the final packaging of tubes

The final packaging of tubes is including plugs on tube ends and four different wrappings in order to avoid damp, damaged and bend in transit.

Photo attachment as below



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Plugs on tube ends



The first wrapping: Moistureproof paper



The second wrapping: Ploy bag



The third wrapping: Polypropylene knitted bag



The last wrapping: Batten and metal band



The final packaging

## 8. Verifying the truck loading



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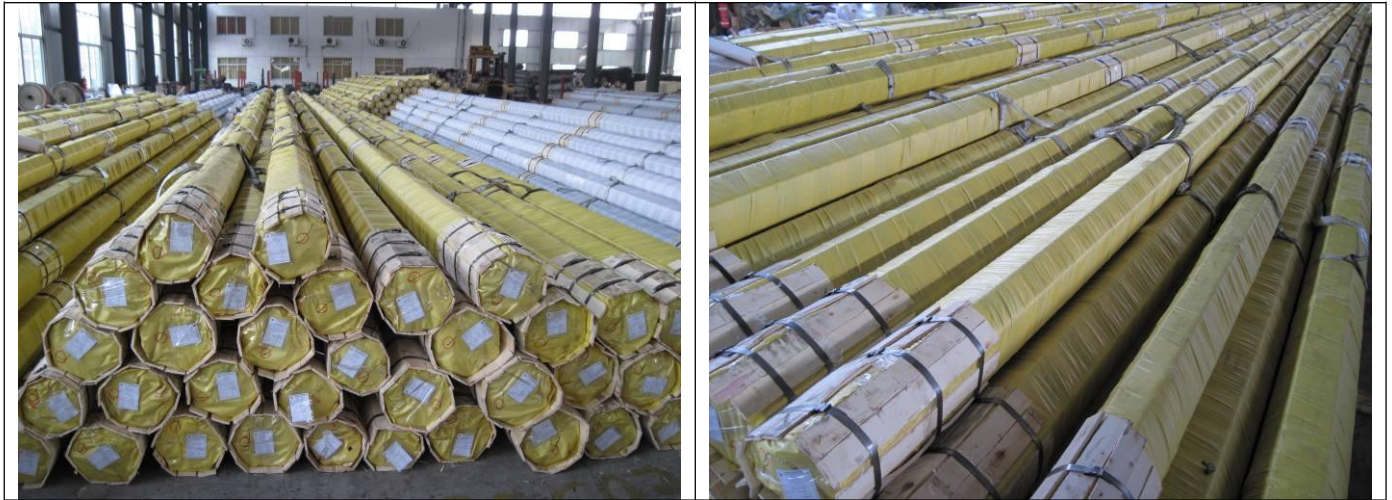
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The first batch of cargo had been carried by truck to the storage where the tubes will be baled into big bundle. We had overseen the operation and the tubes are good after being loaded into the truck. There are two trucks to carry the tubes, the Modul of which is HP EVAP-MODUL 3. The light broken package had been repaired.

Photo attachment as below



The tubes



Being loaded into the truck



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Truck

Truck 2

## 1. Verifying the discharging and baling in the storage

The first batch of cargo had been discharged and baled into big bundle. We had overseen the operation.

The tubes had been covered by tarp before shipping.

Photo attachment as below



Discharging





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Storage

## ● Product inspection

### Results of Product Inspection

#### Visual Inspection

The tubes are good.

#### Check straightness

Most of the straightness of accepted tubes can be considered to be good after measuring the tubes.

#### Check both tube ends

Tube ends have squared cut and deburred.

#### Visual inspection of inside / outside surface

The inside surface of tubes have dirt to various degree which have been cleaned up by the air pump.

#### Marking / Identification

Inspected tubes were completely legibly marked as follows

38 x 3.2 x 19650mm ASME SA 213 T11 Heat No.: xxxx Lot No.: xxxx

38 x 4.5 x 19650mm ASME SA 213 T22 Heat No.: xxxx Lot No.: xxxx

#### Primary packaging



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Tubes are bundled by metal band firstly avoiding bend in transit.

- **Review of Report**

Heat treatment Report.

NDT Report and Inspection Report of Finished product.

Physical and Chemical Inspection Report.

**Conclusion:**

The inspection results show the tube are in full compliance with ASME SA213 T11/T22.