INSPECTION REPORT **Report No.: MIL P09829-4** Issued on: Nov 25th, 2009 Inspection Time: Nov 23th-24th, 2009	**P.O. No.** **PX-PSTS-0934557** **PX-PSTS-0934528**

Inspection Subject:	**Seamless Heat Exchanger Tube for Ambarli Project, Turkey**				
Specification:	ASME SA213 T11/T22	Inspector:	Lin Gaojie		

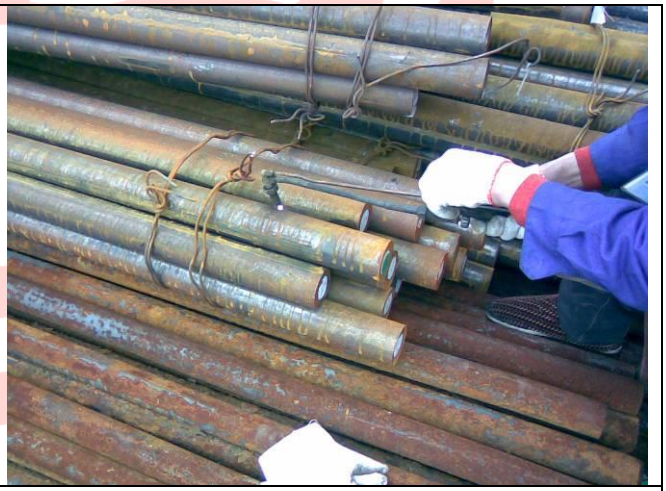
Visit Summary:

Scope of Inspection

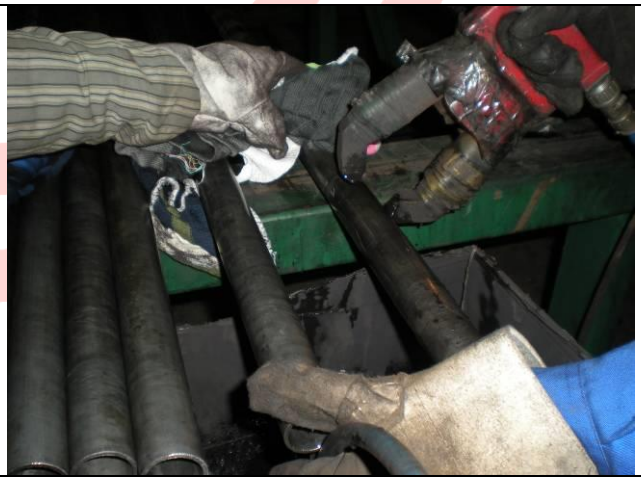
-100% process verification.
-100% Report review.
-Part photo service.

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.

	
Raw materials	Cutting sample for chemical analysis

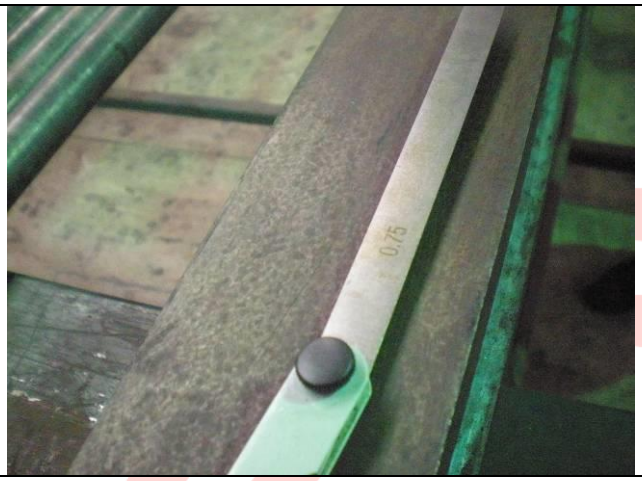
- **Process Verification**
  Except the process in the last Report MIL P09829-1, we had verified the rest. The details are as followed:
  1. Verifying the NDT
  The NDT includes Ultrasonic Test, Eddy Current Test and Magnetic Particle Examination.
  We had overseen the operation and checked the NDT Report. The notches for Ultrasonic Test and Eddy Current are qualified according to the norm.

	
Eddy Current Testing	Being cut off
	
Ultrasonic Test	Notch for Ultrasonic Test
	
PMI	Magnetic Particle Examination

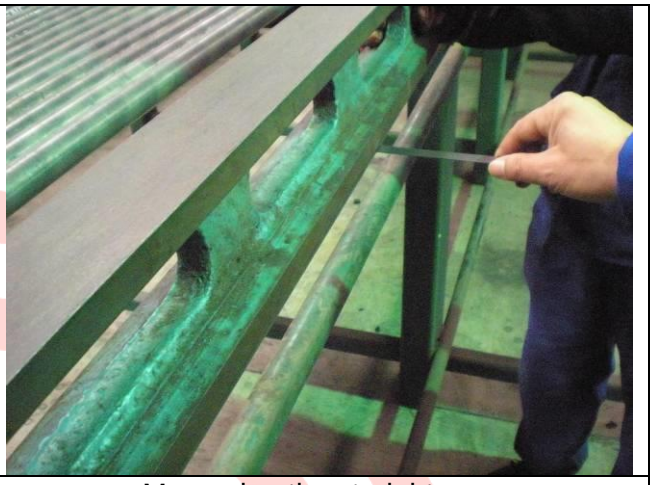
2. Verifying the straightness measuring

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.



Feeler gauge



Measuring the straightness

3. Verifying the preparation of ends

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

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. 20th, 2009.

Samples

Gauging

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.

Moody Inspection

Moody Inspection

7. Verifying the final packaging of tubes

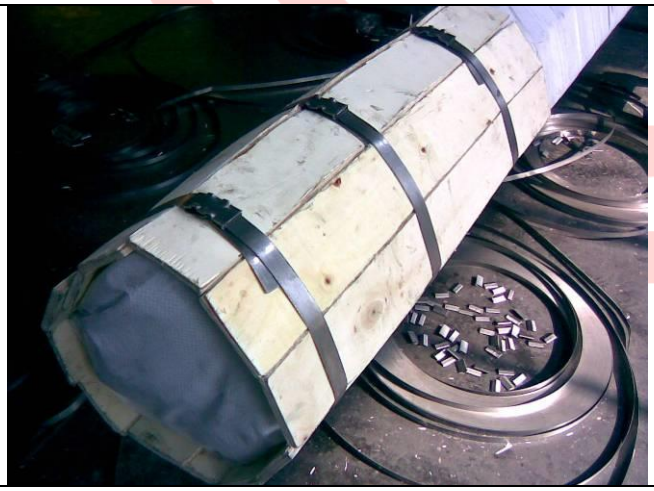
The final packaging of tubes is including plugs on tube ends and four different wrappings in order to avoid damp, damaged and bend in transit.

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

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 tubes


Being loaded into the truck


Loaded onto 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.


Discharging

Storage

- **Product inspection**

Results of Product Inspection

Visual Inspection

The tubes are in good condition.

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 × 3.2 × 19650mm ASME SA 213 T11 Heat No.: ×××× Lot No.: ××××
38 × 4.5 × 19650mm ASME SA 213 T22 Heat No.: ×××× Lot No.: ××××

Primary packaging

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

- **Review of Report**

Raw Material Certificate

Heat treatment Report.

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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 and Client's requirements.