

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018959**Date Inspected:** 13-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhao Chen Sun**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** TOWER Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

BAY#10

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 22A located on Lift-5 bracket SD1 – BRSA5 – 1. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified as Li Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – B – U4b.

Weld joint # 19A located on Lift-5 bracket ND1 – BRSA5 – 2. Welder is identified as 040724. ZPMC Quality Control (QC) Inspector is identified as Li Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – B – U4b.

Weld joint # 21A located on Lift-5 bracket SD1 – BRSA5 – 1. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified as Li Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – B – U4b.

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Weld joint # 20A located on Lift-5 bracket ND1 – BRSA5 – 2. Welder is identified as 040724. ZPMC Quality Control (QC) Inspector is identified as Li Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – B – U4b.

BAY#11

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 007770

Magnetic Particle Testing (MT)

This QA inspector performed MT of the area previously tested and accepted by ZPMC Quality Control personnel.

This QA Inspector generated an MT report for this date. The member is identified as TOWER Component. The weld designation reviewed as follows:

WEST TOWER – LIFT-4 SKIN ‘A’ STEP PLATE

WSD1 – FASA4 – 2A/E – 70

EAST TOWER – LIFT-4 FAÇADE CONNECTION PLATE

WSD1 – FASA4 – 2C/E – 5~10

WSD1 – FASA4 – 2B/E – 16; 30; 21~24

WSD1 – FASA4 – 2A/C – 82; 86; 87

WSD1 – FASA4 – 2C/D – 21; 22; 36

WSD1 – FASA4 – 2D/F – 08; 09

WSD1 – FASA4 – 2E/F – 01; 02

WSD1 – FASA4 – 2B/F – 17

WSD1 – FASA4 – 2C/F – 06

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the Caltrans Quality Assurance (QA) dimensional verification on Lift-5 tower grillage I-beams, this QA Inspector discovered the following issue:

-As per the reference 1384 R0 (Changxing daily dated 11-30-10), for 16 mm plate flanges: 14 mm minimum thickness is acceptable.

- Two (2) I-beam PL 16 mm flange thicknesses observed to be out of tolerance:

1. WD1-BPSA5-7-N1 – measured thickness is 12.78 mm.

2. WD1-BPSA5-7-N4 – measured thickness is 12.45 mm.

-The components are located at fabrication Bay#11.

Applicable reference:

1384 R0 (Changxing daily dated 11-30-10) – “PL 16 flanges: For PL16, thickness of 14mm minimum is acceptable”

For further information see attached pictures:

BLAST SHOP#1

This QA Inspector observed the following work in progress

During the External post-blast visual inspection on East tower Lift-4; these Quality Assurance Inspector’s (QA)

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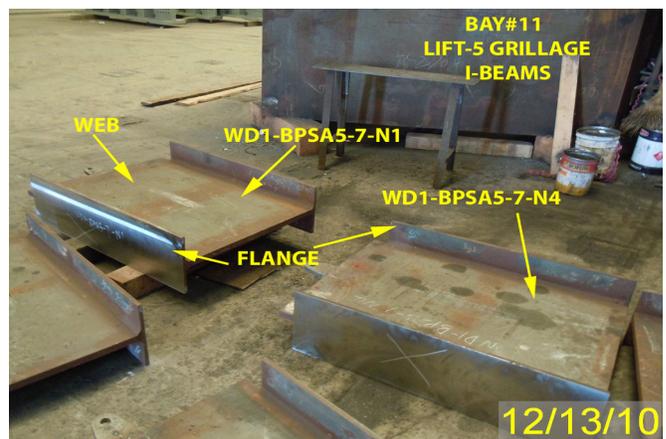
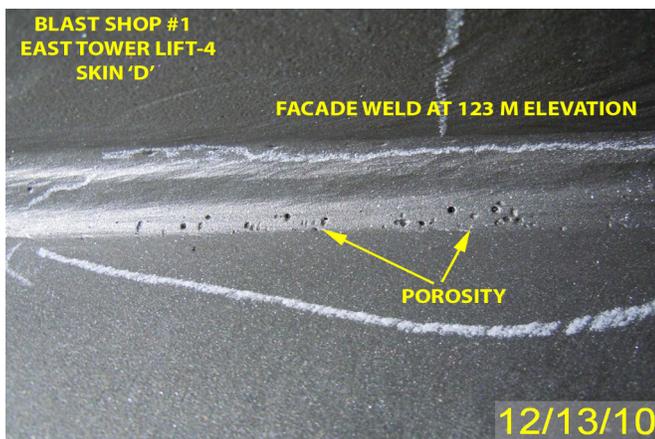
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discovered the defects required welding and Magnetic particle testing on weld and base material at the following locations:

1. Skin 'A' – Under-fill –Manhole weld at 129 M elevation.
2. Skin 'B' – Base material Arc gouge –Edge of skin 'B', close to skin 'C' at 140 M elevation.
3. Skin 'D' – Porosity –Facade weld (300 mm from bottom of the façade) at 123 M elevation.
4. Skin 'D' – Porosity –Facade weld (360 mm from top of the façade) at 123 M elevation.
5. Skin 'D' – Porosity –Facade weld (240 mm from top of the façade) at 139 M elevation.
6. Skin 'E' – Base material Arc gouge –85 mm from bottom and 80 mm from skin 'A' at 114 M elevation.
7. Skin 'E' – Base material Arc gouge –100 mm from top and 280 mm from skin 'D' at 146 M elevation.

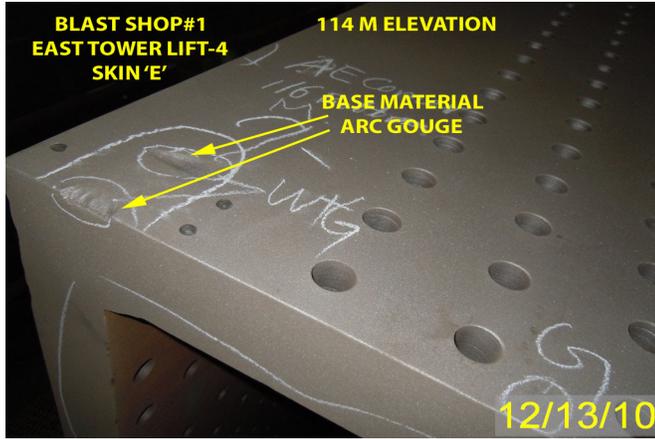
For further information, please see the attached pictures below.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho- 15002048250, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
