

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016364**Date Inspected:** 11-Aug-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:** Qiu Wen**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 & OBG 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 # 53 located on South tower Lift-5 Grillage Assembly SSD1 – TL5 – 1B/F. Welder is identified as 057258. ZPMC Quality Control (QC) Inspector is identified as Deng Zhi Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U4c.

Weld joint # 6A located on South tower Lift-5 Grillage Assembly SSD1 – TL5 – 1B/F. Welder is identified as 044515. ZPMC Quality Control (QC) Inspector is identified as Deng Zhi Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC – U5b.

Weld build-up by shielded Metal Arc Welding (SMAW):

Weld build-up being performed using backing bar located on Lift-4 Facade ND1 – SFSA4 – 326 as per the Weld Repair report # T-WR3477. Welder is identified as 057180. ZPMC Quality Control (QC) Inspector is identified as Liu Fang. The welding variables recorded by QC appeared to comply with the WPS – 345 – FCAW – 2G (2F) – Repair – 1.

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### ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 085 located on Bike Path panel Assembly BK004A6-029. Welder is identified as 057180. ZPMC Quality Control (QC) Inspector is identified as Yang Ming Ming. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2131.

Weld joint # 094 located on Bike Path panel Assembly BK004A6-030. Welder is identified as 057180. ZPMC Quality Control (QC) Inspector is identified as Yang Ming Ming. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2131.

### BAY#11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 22 located on East tower Lift-5 Grillage Assembly ESD1 – TL5 – 2B/F. Welder is identified as 040610. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC –U4c.

Weld joint # 22A located on West tower Lift-5 Grillage Assembly WSD1 – TL5 – 4B/F. Welder is identified as 066002. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC –U5b.

Weld joint # 7A located on East tower Lift-5 Grillage Assembly ESD1 – TL5 – 2B/F. Welder is identified as 046769. ZPMC Quality Control (QC) Inspector is identified as Ma Qian Li. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – TC –U5b.

### ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 94 located on Bike Path panel Assembly BK004A6-022. Welder is identified as 053316. ZPMC Quality Control (QC) Inspector is identified as Wang Chuang Xin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2131.

Weld joint # 17 located on Bike Path panel Assembly BK004A6-023. Welder is identified as 205649. ZPMC Quality Control (QC) Inspector is identified as Wang Chuang Xin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2133.

### BLAST SHOP

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 00451

This QA Inspector witnessed final Bolt tension verification approximately 10% for the Lift 2 Tower cross bracings

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of 65 meter elevation. Final tension verification found to be in general compliance.

Details of bolt size, RC Set # and final torque value are as follows:

Bolt sizes used were 3/4x3 3/4 inch, RC Set# DHGM 60625 and final torque value was 487 N-m.

Manual Torque wrench used with serial number noted as XO2-349.

(See attached photos)

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



## 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 Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

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**Inspected By:** Kumar,Sandeep

Quality Assurance Inspector

**Reviewed By:** Clifford,William

QA Reviewer

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