

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-017715**Date Inspected:** 16-Oct-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

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 44 located on Bike Path, top cover plate to side plate BK004A1 – 026. Welder is identified as 052075. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – U2 – F.

Weld joint # 67 located on Bike Path, BK004A6 – 028. Welder is identified as 057258. ZPMC Quality Control (QC) Inspector is identified as Li Jun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2233 – Tc – U4c – F.

Weld joint # 43 located on Bike Path, top cover plate to side plate BK004A1 – 026. Welder is identified as 053869. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4c – F.

Weld joint # 43 located on Bike Path, top cover plate to side plate BK004A1 – 026. Welder is identified as

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040302. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4c – F.

Weld joint # 44 located on Bike Path, top cover plate to side plate BK004A1 – 026. Welder is identified as 057180. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – U2 – F.

Weld joint # 114 located on Bike Path, BK004A6 – 028. Welder is identified as 057258. ZPMC Quality Control (QC) Inspector is identified as Li Jun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2233 – Tc – U4c – F.

Shielded Metal Arc Welding (SMAW):

Weld joint # 44 located on Bike Path, top cover plate to side plate BK004A1 – 026. Welder is identified as 052493. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2214 – B – U2.

Weld joint # 44 located on Bike Path, top cover plate to side plate BK004A1 – 026. Welder is identified as 500363. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2214 – B – U2.

BAY#11

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 17 located on Bike Path BK004A5 – 023. Welder is identified as 049220. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Weld joint # 43 located on Bike Path BK004A1 – 023. Welder is identified as 040759. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – B – U2 – F.

Weld joint # 22 located on Bike Path BK004A5 – 023. Welder is identified as 042218. ZPMC Quality Control (QC) Inspector is identified as Shang Hai Lang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Witness of Magnetic Particle Testing (MT)

This QA inspector Witnessed 100% MT performed by ZPMC Quality Control personnel. The member is identified as OBG Component. The component designation is identified as follows:

BIKE PATH : BK004A8 – 020 – 029; 030

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the Caltrans Quality Assurance (QA) in-process observation on West tower lift-5 grillage; this QA

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Inspector discovered the following issue:

- ZPMC personnel performing repair welding by removing a portion of the backing bar without Engineers approval.
- AWS D1.5 specifies steel backing shall be continuous for the full length of the each weld made with backing.
- This weld is a T-joint complete joint penetration (CJP) weld, joining the transverse grillage stiffener to longitudinal stiffener.
- The component and weld designations are identified as WSD1-TL5-4B/F; Weld#03

Applicable reference:

AWD 1.5 2002, Section 3.13.2: "Groove welds made with the use of steel backing shall have the weld metal thoroughly fused with the backing. Steel backing shall be continuous for the full length of each weld made with backing."

This QA notified ZPMC QC identified as Mr. Xu Jie and ABF inspector identified as Mr. Peter Ferguson of the above issue and that an incident report will be generated.

For further information see below pictures:-

BAY#12

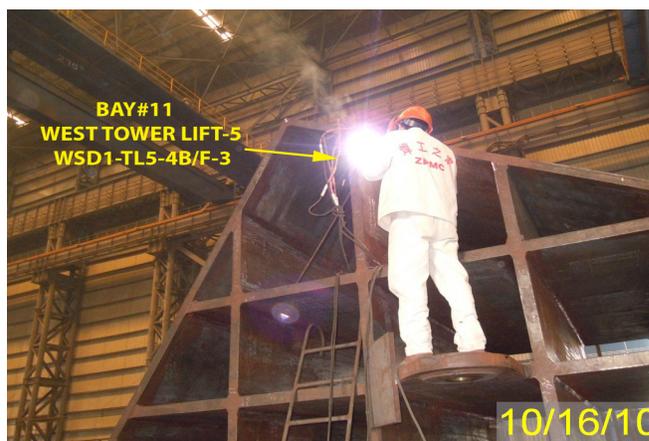
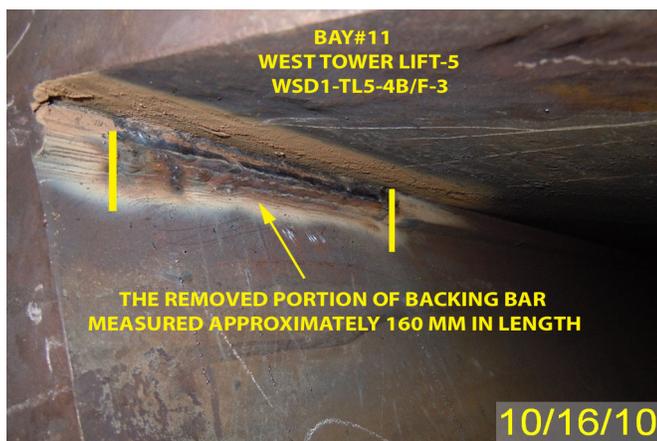
ORTHOTROPIC BOX GIRDER (OBG) AT BAY#12

This QA Inspector observed the following work in progress

Fluxcored Arc Welding (FCAW):

Weld joint # 04 located on U-rib splice plate SA3111B – 035. Welder is identified as 059443. ZPMC Quality Control (QC) Inspector is identified as Zhao Jian Hang. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

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



Summary of Conversations:

No Relevant Conversations.

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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
