

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-017512**Date Inspected:** 04-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:	Mr. Yu Dong Ping/ Mr. Zhao Chao			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		

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, Baskar Govindarajan, was present during the times noted above for observations relative to the work being performed.

Bay #11

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 12A, located on Lift-5 Bracket SD1 – BRSA5 – 1. Welder is identified as 046769. ZPMC Quality Control Inspector (QC) is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – Tc – U4b.

Weld joint # 8A, located on Lift-5 Bracket SD1 – BRSA5 – 1. Welder is identified as 041271. ZPMC Quality Control Inspector (QC) is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3213 – Tc – U4b.

Fluxcored Arc Welding (FCAW):**ORTHOTROPIC BOX GIRDER (OBG)**

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Weld joint # 29, 30 located on Bike Path BK005B– 004. Welder is identified as 054460/ 040723. ZPMC Quality Control Inspector (QC) is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

Bay #10

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 13, 14 located on Pad eye of Façade plate, SD1-SFSA3-24. Welder is identified as 053829. ZPMC Quality Control Inspector (QC) is identified as Wang Hao. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2112-Padeye.

Heavy Dock #Tower Trial assembly

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 15, 16 located on 109 mtr. elevation, Skin A, West shaft, Façade plate WSD1-FASA3-2B/E. Welder is identified as 040690. ZPMC Quality Control Inspector (QC) is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113 -2.

Weld joint # 17, 18 located on 109 mtr. elevation, Skin A, West shaft, Façade plate WSD1-FASA3-2B/E. Welder is identified as 040690. ZPMC Quality Control Inspector (QC) is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113 -2.

Weld joint # 15, 16 located on 109 mtr. elevation, Skin A, East shaft, Façade plate ESD1-FASA3-2B/E. Welder is identified as 040614. ZPMC Quality Control Inspector (QC) is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113-2.

Weld joint # 17, 18 located on 109 mtr. elevation, Skin A, East shaft, Façade plate ESD1-FASA3-2B/E. Welder is identified as 040614. ZPMC Quality Control Inspector (QC) is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113-2.

Repair welding of weld joint # 16, 17, located on South tower, Lift-3Façade plate, SSD1- FESA3-1 D/D. Welder is identified as 040365. ZPMC Quality Control (QC) Inspector is identified as Zhao Chen Sun. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 3G (3F) - Repair.

This QA Inspector observed the following work not in compliance:

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Description of Incident:

During the Quality Assurance Inspection of Dimension measurements at Heavy Dock, Tower trial assembly area, this Quality Assurance Inspector (QA) discovered the following issue:

- Approx. 50 mm length, Weld metal Removal observed in Skin E, Fit lug weld, without Engineer's approval.
- The Fit lug found in West Tower, Lift 3- 109 mtr. top diaphragm.
- The Weld joint no. of the fit lug weld found to be WSTL3-1 I / K-128.

- Approx. 55 mm length, Weld metal Removal observed in Skin E, Fit lug weld, Without Engineer's approval.
- The Fit lug found in South Tower, Lift 4- 119 mtr. top diaphragm.
- The Weld joint no. of the fit lug weld found to be SSTL4-1 C/L-98.

Applicable reference:

AWS D1.5 Section 3.7.5- " The Engineer shall be notified before improperly fitted and welded members are cut apart."

This QA notified ZPMC QC identified as Mr. Zhu Feng and ABF inspector identified as Mr. Kim, of the above issue and that an incident report will be generated.

This QA Inspector observed the following work not in compliance:

Description of Incident:

During the Quality Assurance Inspection of Dimension measurements at Heavy Dock, Tower trial assembly area, this Quality Assurance Inspector (QA) discovered the following issue:

- Approx. 55 mm length, 25 mm width, Weld metal and Base Removal observed in Skin E, Fit lug weld Without Engineer's approval.
- The Fit lug found in East Tower, Lift 4- 119 mtr. top diaphragm.
- The Weld joint no. of the fit lug weld found to be ESTL4-2 C/L-115.

- Approx. 50 mm length, 35 mm width, Weld metal and Base Removal observed in Skin E, Fit lug weld Without Engineer's approval.
- The Fit lug found in North Tower, Lift 4- 119 mtr. top diaphragm.
- The Weld joint no. of the fit lug weld found to be NSTL4-1 C/L-98.

Applicable reference:

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AWS D 1.5 Section 3.7.4 – “Prior approval of the Engineer shall be obtained for repairs to base metal (other than those required by 3.2), repair of major or delayed cracks, repairs to ESW and EGW welds with internal defects, or for a revised design to compensate for deficiencies.”

AWS D1.5 Section 3.7.5- “The Engineer shall be notified before improperly fitted and welded members are cut apart.”

This QA notified ZPMC QC identified as Mr. Zhu Feng and ABF inspector identified as Mr. Kim, of the above issue and that an incident report will be generated.

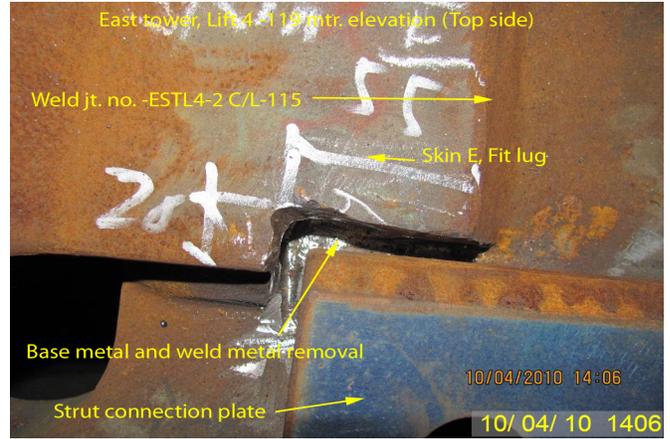
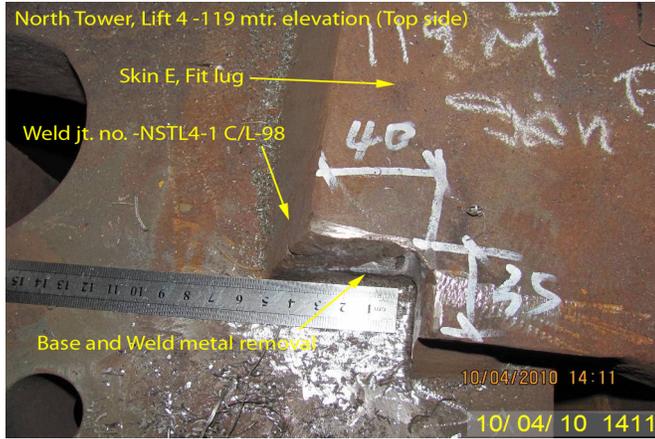
For further information see below pictures:-

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the 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 Micheal Ng (15921845703), who represents the Office of Structural Materials for your project.

Inspected By: Baskar, Govindarajan

Quality Assurance Inspector

Reviewed By: Clifford, William

QA Reviewer