DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-014381
Date Inspected: 15-May-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Li Yang and Wu Zhi Cheng	**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: OBG Trial Assembly

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 8AW (Side Panel T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for Side Panel T-Ribs (Total 19 Nos.) between Panel Point (PP) 62 to PP 62.5; PP 63 to PP 63.5 and PP 63.5 to PP 64 cross beam side for Segment 8AW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00339 Dated May 02, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220035 and final torque required was 433 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Note: The vertical offset measured as 4.8 mm at 11th T-Rib for Segment 8AW between PP 63.5 to 64. Reinforcing splice plate is been installed at this location as per ABF No. 2004 Dated Dec 17, 2009 (T-Ribs numbering reference taken from Longitudinal Diaphragm at W4 towards Side Panel.

Please refer the pictures attached below for more comprehensive details.

Segment 8AW (Side Panel T-Ribs)

This Quality Assurance (QA) Inspector measured the Vertical offset for all the T-Ribs located at Side Panel Cross Beam side between Panel Point (PP) 62 to PP 62.5, PP 63 to PP 63.5 and PP 63.5 to PP 64.
The measured and recorded readings were submitted to the Lead and Engineer for review.

Segment 8AW (Side Panel T-Ribs)

This Quality Assurance (QA) Inspector measured the Horizontal offset and T-Rib cope hole buckling at the Floor beam along with Caltrans QA Mr. Manikandan at PP 62, PP 63 and PP 64 for all the T-Ribs located at Side Panel Cross Beam side.

The measured and recorded readings were submitted to the Lead and Engineer for review.

Segment 8BE

This QA Inspector observed ZPMC welding personnel performing welding by Flux Cored Arc Welding (FCAW) for Longitudinal Diaphragm web to Bottom Panel at work point E4. The weld joints are identified as Seg046B-007 and Seg046B-008. The welder is identified as 220069. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132 and WPS-B-T-2231T. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 7BE

This QA Inspector observed ZPMC welding personnel performing welding by Flux Cored Arc Welding (FCAW) for Longitudinal Diaphragm web to Bottom Panel at work point E4. The weld joints are identified as LD-003-001-014, LD-003-013-015 and LD-003-016-017. The welder is identified as 220063. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2132-B-U2-F and WPS-B-T-2233-B-U2-F. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

Segment 8BW to 8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Flux Core Arc Welding (FCAW) welding was performed on weld joint OBW8C-002 counter weight side of segment. Welder is identified as 067876. ZPMC QC is identified as Wu Zhi Cheng. The welding variables monitored and recorded by the QC appeared to comply with WPS-B-T-2233T-1.

Segment 8BW to 8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Flux Core Arc Welding

(FCAW) welding was performed on weld joint OBW8C-002 counter weight side of segment. Welder is identified as 066471. ZPMC QC is identified as Wu Zhi Cheng. The welding variables monitored and recorded by the QC appeared to comply with WPS-B-T-2233T-1.

Segment 8BW to 8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Flux Core Arc Welding (FCAW) welding was performed on weld joint OBW8A-002 deck plate splice of segment. Welder is identified as 045280. ZPMC QC is identified as Li Yang. The welding variables monitored and recorded by the QC appeared to comply with WPS-B-T-223(2)1T-2.

Segment 8BW to 8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Flux Core Arc Welding (FCAW) welding was performed on weld joint OBW8A-002 deck plate splice of segment. Welder is identified as 066734. ZPMC QC is identified as Li Yang. The welding variables monitored and recorded by the QC appeared to comply with WPS-B-T-223(2)1T-2.

Segment 7DE to 7EE

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Shielded Metal Arc Welding process for weld OBE7C-009 located at Side panel splice weld between OBG segment 7DE and 7EE (Bike path side). Welder identified as 054467. ZPMC QC Mr. Wu Zhi Zhang monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-1G (1F)-FCM-Repair-1.

Segment 8BW-8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Shielded Metal Arc Welding process for weld OBW8C-002 located at Side panel splice weld between OBG segment 8BW and 8CW (Counter weight side). Welder identified as 068097. ZPMC QC Mr. Zhang Hai Tao monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-B-U2-FCM-1.

Segment 8BW-8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder performing Shielded Metal Arc Welding process for weld OBW8C-001 located at Side panel splice weld between OBG segment 8BW and 8CW (Counter weight side). Welder identified as 067942. ZPMC QC Mr. Zhang Hai Tao monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-B-U2-FCM-1.

Segment 8BW-8CW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067764 performing Shielded Metal Arc Welding process for weld OBW8C-004 located at Side panel splice weld between OBG segment 8BW and 8CW (Cross beam side). ZPMC QC Mr. Zhang Hai Tao monitoring this welding. The welding variables recorded by

QC appeared to comply with the WPS-B-P-2214-B-U2-FCM-1.

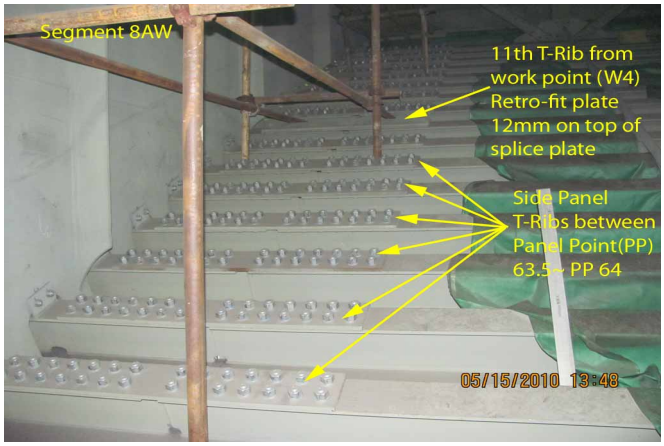
Segment 8BW-8CW

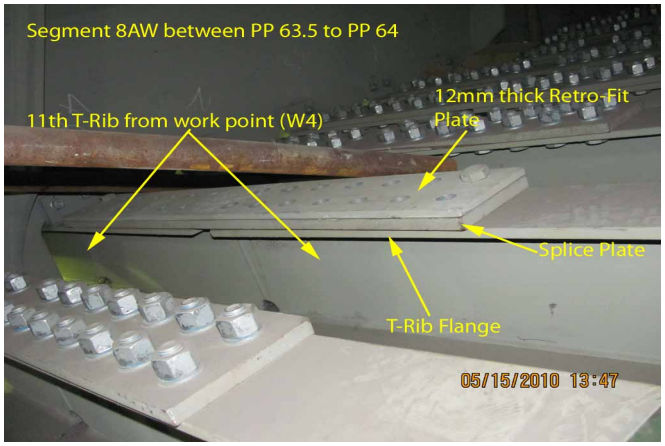
This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066261 performing Shielded Metal Arc Welding process for weld OBW8C-005 located at Side panel splice weld between OBG segment 8BW and 8CW (Cross beam side). ZPMC QC Mr. Zhang Hai Tao monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-B-U2-FCM-1.

Heat Straightening

This Quality Assurance (QA) Inspector observed ZPMC personnel performing Heat straightening was performed on the deck plate to cross beam plate for Segment 7DE located between panel points 56 & 58 per HSR-364.

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 Eric T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer