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

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-010409
Date Inspected: 24-Nov-2009

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

OSM Arrival Time: 645
OSM Departure Time: 1845
Location: Shanghai, China

CWI Name: Liu Fawen

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder Components

Summary of Items Observed:

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

BAY 2

The following NDT inspection carried out as per the ZPMC submitted Notification No. 004719
Magnetic Particle Testing
This QA inspector performed MT of approximately 15% 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 OBG Component. The weld designations reviewed are as follows:
1. FB3098 – 001 – 014 – Green Tag # 11235

The following NDT inspection carried out as per the ZPMC submitted Notification No. 004720
Magnetic Particle Testing
This QA inspector performed MT of approximately 15% 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 OBG Component. The weld designations reviewed are as follows:
1. FB3095 – 001 – 031; 044; 048; 061 – Green Tag # 11232

The following NDT inspection carried out as per the ZPMC submitted Notification No. 004721

Magnetic Particle Testing

This QA inspector performed MT of approximately 15% 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 OBG Component. The weld designations reviewed are as follows:

1. FB3083 – 003 – 027; 041 – Green Tag # 11225
2. FB3013 – 003 – 027; 034
3. FB3082 – 003 – 020; 021; 033

This QA Inspector observed the following work in progress:

Flux Core Arc Welding:

This process welding of weld joint # 006 located on Longitudinal Diaphragm LD3014A – 001. Welder is identified as 045203. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

This process welding of weld joint # 006 located on Longitudinal Diaphragm LD3014A – 001. Welder is identified as 045203. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231– Tc – U4b – F.

This QA Inspector observed the following work not in compliance:

During random verification Visual Inspection Testing (VT) before performing Magnetic Particle Testing (MT) of the OBG Floor Beam located in Bay # 2 as per the “NDT Inspection Notification Sheet” # 004721 submitted by ZPMC, this Caltrans Quality Assurance Inspector (QA) observed One (1) Transverse Crack visually and later confirmed with MT. The crack length measured approximately 6mm in length. This is outside the 25% area previously tested and accepted by ZPMC MT technician. The Floor Beam is identified as FB3082-003-026.

Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

AWS D1.5 (02) Section 6.26.1.1 – “The Weld shall have no cracks.”

This QA notified ZPMC CWI identified as Mr.Zhu Tian Shu and ABF inspector identified as Mr. Luo Gui Lin of the above issue and that an incident report will be generated.

See attached photos:

BAY 3

This QA Inspector observed the following work in progress:

Submerged Arc Welding:

This process welding of weld joint # 019 located on Longitudinal Diaphragm LD3007 – 001. Welder is identified as 045203. ZPMC QC is identified as Guo Yuan Ting. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

This process welding of weld joint # 017 located on Longitudinal Diaphragm LD3012 – 001. Welder is identified as 044780. ZPMC QC is identified as Guo Yuan Ting. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2221 – B – L2c – S – 2.

Flux Core Arc Welding:
This process welding of weld joint # 020 located on Longitudinal Diaphragm LD3012 – 001. Welder is identified as 208035. ZPMC QC is identified as Guo Yuan Ting. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – U2 – F – 1.

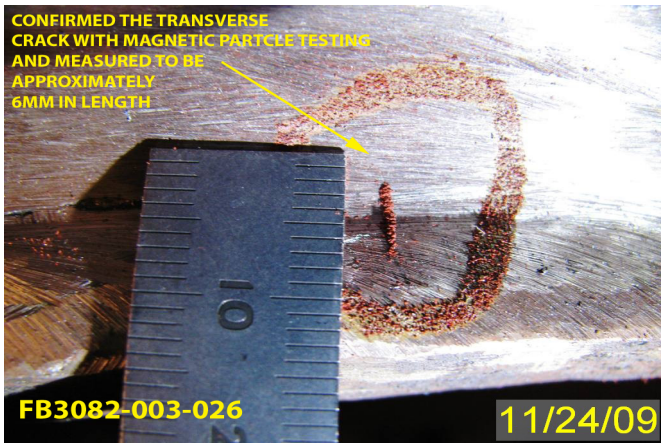
BAY 5

This QA Inspector observed the following work in progress:

Flux Core Arc Welding:
This process welding of weld joint # 012 located on Traveler Rail 10TR2 – 010. Welder is identified as 250353. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

This process welding of weld joint # 009 located on Traveler Rail 10TR1 – 030. Welder is identified as 215078. ZPMC QC is identified as Zhong Chong Biao. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132.

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



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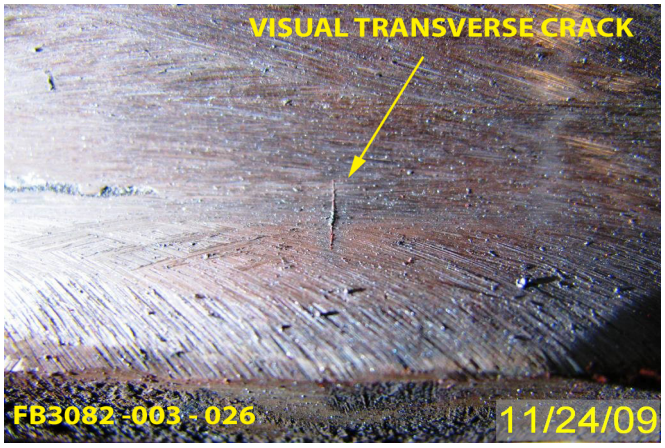

Summary of Conversations:

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 Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Hall,Steven	QA Reviewer