

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 #: 04-0120F4Cty: 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-002081**Date Inspected:** 31-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**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 and Tower**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

New OBG:

The QA Inspector randomly observed ZPMC welder Gao Dongjiang ID Number 048714, utilizing the Flux Cored Arc Welding (FCAW) Process in the 1G (Flat Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-223(2)1T, on Weld Joint (WJ) Number SEG013A-018 on Side Plate Sub-Assembly SP046-01A/SP058-01A. The QA Inspector randomly observed ZPMC CWI Chen Chih-Ming monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 289 amps, 29.6 volts. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Gao Dongjiang ID Number 048714, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-223(2)1T, on WJ SEG013A-018 on Side Plate Sub-Assembly SP046-01B/SP058-01B. The QA Inspector randomly observed ZPMC CWI Chen Chih-Ming monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

Bay 1 OBG:

The QA Inspector performed Visual Testing (VT) Inspection on closed rib WJ 010 on Deck Plate Sub-Assembly

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DP163-001. The QA Inspector also assisted QA Inspector Paul Dawson in recording the results of his VT on Deck Plate Sub-Assembly DP162-001 closed rib WJ's 001 through 010.

Bay 3 OBG:

The QA Inspector randomly observed ZPMC welder operators Li Zhaoqian ID Number 048810, Xin Meng ID Number 053742 and Sun Ti Yu ID Number 054459 utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with gantry mounted welding apparatus and ZPMC WPS WPS-B-T-2132-3, on Bottom Plate BP137-001 WJ Numbers 007/008, 011/012 and 015/016 respectively. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 310 amps, 29.5 volts (WJ 007); 318 amps, 30 volts (WJ 008); 311 amps, 29.8 volts (WJ 011); 305 amps, 30 volts (WJ 012); 310 amps, 30.2 volts (WJ 015) and 305 amps, 30.1 volts (WJ016). Travel speed for all welds was randomly observed at 440 mm per minute. The weld parameters appeared to comply with contract requirements.

Bay 7 OBG:

The QA Inspector randomly observed ZPMC Welder Wang Li ID Number 044772, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to tack weld Flange X7H to the web of Floor Beam Sub-Assembly FB017-02. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing, monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Zhang Qing Quan ID Number 044774, utilizing the FCAW Process in the 3F (Vertical Fillet) Position with ZPMC WPS WPS-B-T-2133, on WJ's 082, 094, 095, 102, 103 and Flange X7G to Flange X7M WJ 147 on Floor Beam Sub-Assembly FB021-01. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 200 amps, 24.4 volts with a travel speed of 111 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides a additional detail.

The QA Inspector randomly observed ZPMC Non-Destructive Technician Xue Hai Yong, utilizing the Ultrasonic Testing (UT) Method, to examine Complete Joint Penetration WJ 148 on the split flange on Floor Beam Sub-Assemblies FB017-01. There appeared to be no indications and ZPMC QC accepted the UT Inspection of the above weld. This work was being performed in accordance with ZPMC CWR B-CWR146.

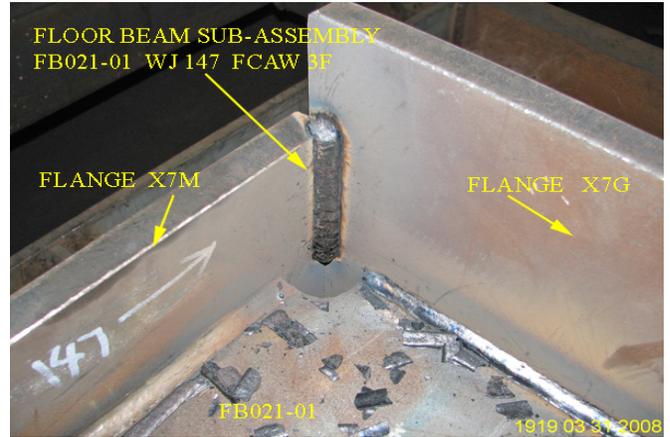
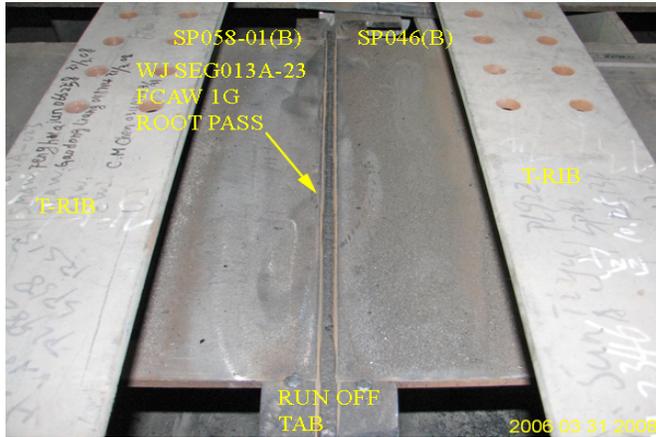
Bay 8 Tower:

The QA Inspector randomly observed ZPMC welder Xu Pei Pei ID Number 050323, utilizing the Submerged Arc Welding (SAW) Process in the 1G Position (Flat Groove) with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the fill pass in WJ SSD1-SA203-1A/2A on 38M BTM Tower Diaphragm Sub-Assembly SA293(S) to p559(S). The QA Inspector randomly observed ZPMC CWI Ye Yongjun monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 610 amps, 30.7 volts with a travel speed of 500 mm per minute. The weld parameters appeared to comply with contract requirements. The attached

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photograph provides additional detail.



Summary of Conversations:

There were 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Hager,Craig

QA Reviewer