

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-001982**Date Inspected:** 11-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhang Qaio**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 Diaphragm**Summary of Items Observed:**

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

Bay 8-Tower Diaphragm

The QA Inspector randomly observed ZPMC qualified welder Ms. Wang Lanying, ID #452565, performing groove welding of weld joint WSD1-SA370-10A(10B) filler passes. Ms. Wang was observed welding in the 1G (flat) position utilizing a Submerged Arc Welding (SAW) process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC Quality Control (QC) CWI Inspector Zhang Qaio verifying that the welding parameters and pre-heat were in accordance with the Welding Procedure Specification (WPS). The QA Inspector observed preheat and welding parameters measured by the QC CWI Inspector Zhang Qaio and found them to be a preheat temperature of 180°C and welding parameters amps of 670, volts of 31.3, and a travel speed of 479. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S-1.

The QA Inspector randomly observed ZPMC qualified welder Ms. Xu Pei Pei, ID #050323, performing groove welding of weld joint WSD1-SA277-1A(1B) filler passes. Ms. Xu was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC CWI Inspector Wei Sun verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Wei Sun and found them to be a preheat temperature of 180°C and welding parameters amps of 662, volts of 32.5, and a travel speed of 488. Welding parameters observed by the

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QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S-1.

The QA Inspector randomly observed ZPMC qualified welder Ms. Ma Ying, ID #045270, performing groove welding of weld joint WSD1-SA316-6A(6B) filler passes. Ms. Ma was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.8mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Wei Sun verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Wei Sun and found them to be a preheat temperature of 180°C and welding parameters amps of 675, volts of 32.3, and a travel speed of 479. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S-1.

The QA Inspector randomly observed ZPMC qualified welder Ms. Wang Lau Ying, ID #045265, performing groove welding of weld joint ESD1-SA32-10B filler passes. Ms. Wang was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process with a 4.0mm diameter electrode, filler metal brand LA-85, class MIL800-HPNI, machine. The QA Inspector observed the ZPMC QC Inspector Wei Sun verifying that the welding parameters and pre-heat were in accordance with the WPS. The QA Inspector observed preheat and welding parameters measured by the QC Inspector Wei Sun and found them to be a preheat temperature of 180°C and welding parameters amps of 664, volts of 31.9, and a travel speed of 489. Welding parameters observed by the QA Inspector appeared to be in general compliance with the approved WPS-B-T-3221-B-U3c-S-1.

Bay 7- Orthotropic Box Girder

The QA Inspector randomly observed ZPMC qualified welder Mrs. Wang Min, ID #048296, performing CJP groove welding of Floor Beam Center Web Panels. Mrs. Wang was observed welding in the 1G (flat) position utilizing a submerged arc welding SAW process. The QA Inspector performed a random visual inspection of the following in process welds. FB004-012-020, FB004-011-002, FB004-014-020, FB004-013-002, FB004-010-020, FB004-009-020, FB004-005-020, FB004-007-020, FB004-008-020.

Summary of Conversations:

While performing a random check of ZPMC welding personnel qualification records the QA Inspector observed that welder Wang Min presented the QA Inspector with an expired welder qualification card. The QA Inspector brought this to the attention of ZPMC CWI QC Inspector Hung Wen Peng and ABF representative David LaRue. Upon further discussion the QA Inspector was informed by Mr. Hung and Mr. LaRue that Ms. Wang was not performing welding functions on Seismic Performance Critical Members (SPCM) and was therefore qualified to perform the assigned welding functions. The QA Inspector then spoke with Lead QA Inspector Craig Hager to confirm this information.

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:	Clifford, William	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
