

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-015381**Date Inspected:** 02-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**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**Summary of Items Observed:**

CWI Inspector: Mr. Li Yan Hua

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Bay 14

This QA Inspector observed ZPMC welder Mr. Wang Chang Ming, stencil 047864 was using shielded metal arc welding procedure specification WPS-B-P-2233-TC-U4b-F to complete OBG segment 12AW weld SEG3004H-225 between panel points PP110 and PP111. This QA Inspector observed a welding current of approximately 165 amps, the base material appeared to have been preheated with a torch prior to welding and Mr. Wang Chang Ming appeared to be certified to make this weld. This QA Inspector observed the welding electrodes were stored in a portable electrode storage oven that was warm to the touch and Mr. Wang Chang Ming appeared to be certified to perform this welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Ms. Hue Junrong, stencil 201215 was using flux cored welding procedure WPS-B-T-2232-TC-U4b-F to make OBG segment 12AW weld SEG3004J-225 near panel point PP111. This QA Inspector measured a welding current of approximately 270 amps and 30.0 volts and Ms. Hue Junrong

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appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Zipei, stencil 062406 was using submerged arc welding procedure WPS-B-T-2221-B-U3C-S-2 to make OBG segment 13AE weld BP3032-001-004 between plates PL3220C and PL3221C. This QA Inspector observed ZPMC QC Inspector Zhong Guo Hui was monitoring this welding and this QA Inspector measured a welding current of approximately 690 amps and 30 volts. Mr. Liu Zipei appeared to be certified to make this weld and the base material was preheated with electric heating elements. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Liu Yong Sheng, stencil 055483 has used shielded metal arc welding process to make tack welds on East Anchor Plate Bearing Stiffener Plates SA3354F and X4743F. This QA Inspector observed ZPMC QC Inspector Mr. Zhong Guo Hui has been monitoring this welding. This QA Inspector observed Mr. Liu Yong Sheng appeared to be certified to make these tack welds. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Segment Trial Assembly

Earlier today ZPMC presented QA personnel with “Notification of Witness Inspection” document number 6107 that states ZPMC was requesting Caltrans to perform visual and magnetic particle (MT) inspections of OBG segment 7W Retrofit plate welds on July 03, at 02:00 hours. At approximately 20:00 hours on July 02, this QA Inspector was informed by ZPMC personnel that the Retrofit welds between OBG segment panel points PP055/PP056 and PP058/PP059 have been accepted by ZPMC MT personnel and two other locations have not been accepted by ZPMC MT personnel. This QA Inspector performed random MT inspections of the following:

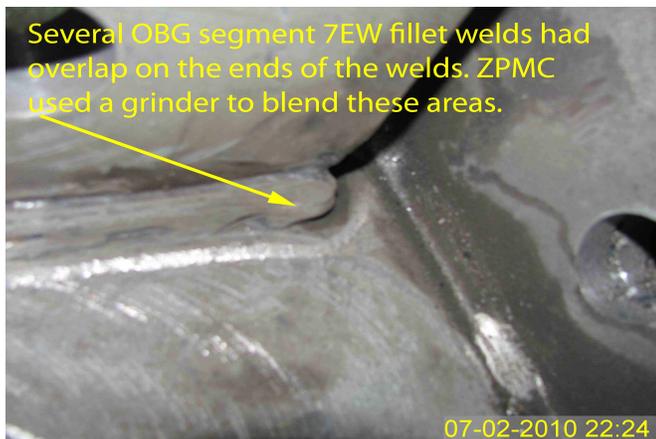
OBG Segment 7EW, PP058/059 welds: RETRO-G-01-7EW-A1-009, RETRO-G-01-7EW-A1-010, RETRO-G-01-7EW-A1-013, RETRO-G-01-7EW-A1-014, RETRO-G-01-7EW-A1-018, RETRO-G-01-7EW-A1-019, RETRO-G-01-7EW-A2-007, RETRO-G-01-7EW-A2-009 and RETRO-G-01-7EW-A2-010.

OBG Segment 7DW, PP055/056 welds: RETRO-G-01-7DW-A3-029, RETRO-G-01-7DW-A3-030, RETRO-G-01-7DW-A3-033, RETRO-G-01-7DW-A3-034, RETRO-G-01-7DW-A3-035, RETRO-G-01-7DW-A3-036, RETRO-G-01-7DCW-A4-026, RETRO-G-01-7DW-A4-027, RETRO-G-01-7DCW-A4-031, RETRO-G-01-7DW-A4-032, RETRO-G-01-7DW-A4-035, RETRO-G-01-7DW-A4-036, RETRO-G-01-7DW-A2-037 and RETRO-G-01-7DW-A2-038.

This QA Inspector performed random visual inspection of various RETRO welds and observed welds RETRO-G-01-7EW-A2-014, RETRO-G-01-7EW-A2-012, RETRO-G-01-7EW-A2-008 appear to have weld overlap on the bottom ends of these welds. This QA Inspector informed ZPMC personnel of the weld overlap and ZPMC had workers use grinders to remove the overlap conditions. Following grinding of the overlap, items observed appear to comply with AWS D1.5 MT requirements. For additional information on these inspections see this QA Inspector’s TL6028 Magnetic Particle Test Report.

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Summary of Conversations:

See Above.

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 phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
