

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-015603**Date Inspected:** 06-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 Inspectors: Mr. Wu Shi Gao, Mr. An Qing Xiang

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 process to complete OBG segment 12AW drip plate tack welds on the counterweight side near panel point PP110. This QA Inspector asked ZPMC QC Inspector Mr. Li Ping what is the weld number for these drip plate welds and which welding procedure is being used to make these tack welds. Mr. Li Ping informed this QA Inspector that he does not know the weld numbers and he does not know the welding procedure specification that is being used. This QA Inspector observed Mr. Wang Chang Ming is welding in the 4F position and he has a welding current of approximately 155 amps. This QA Inspector observed the base material adjacent to the tack weld appears to be at an ambient temperature instead of being preheated prior to welding. This QA Inspector informed ZPMC QC Inspector Mr. Li Ping that the base material where the last tack weld was made did not appear to have been preheated and Mr. Li Ping informed Mr. Wang Chang Ming to preheat the base material prior to making any additional tack welds. Approximately ten minutes later this QA Inspector again observed the base material where Mr. Wang Chang Ming was making another tack weld appears to be at an ambient temperature.

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This QA Inspector asked QC Inspector Mr. Li Ping to request ZPMC CWI Mr. Wu Shi Gao to come to OBG segment 12AW. When Mr. Wu Shi Gao arrived in OBG bay 14 this QA Inspector informed him that ZPMC welder Mr. Wang Chang Ming did not appear to have been preheating the base material prior to making tack welds on OBG segment drip plate tack welds. Mr. Wu Shi Gao informed this QA Inspector that he will have the tack welds removed and new tack welds will be installed. This QA Inspector informed Mr. Wu Shi Gao that QC Inspector Mr. Li Ping did not know the weld numbers or the WPS for these tack welds. Mr. Wu Shi Gao informed this QA Inspector that he will inform this QA Inspector once he determines the weld numbers and the WPS. Items observed on this date do not appear to fully comply with applicable contract documents. See the photograph below for additional information. CWI Mr. Wu Shi Gao later informed this QA Inspector that the drip plate weld numbers are OBW11B-002 and OBW11B-003.

This QA Inspector observed ZPMC welder Mr. Li Jun, stencil 051348 was using shielded metal arc procedure WPS-B-P-2214-TC-U4b-FCM-1 to make weld SEG3004AA-014. This weld joins the side plate and edge plate on the counterweight side of OBG segment 12AW near panel point PP112. This QA Inspector measured a welding current of approximately 150 amps and Mr. Li Jun appeared to be certified to make this 4G position weld. This QA Inspector observed the base material appeared to have been preheated with a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Segment Trial Assembly

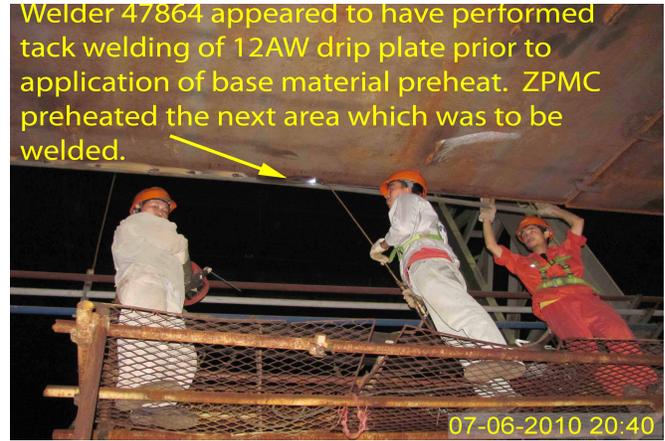
This QA Inspector observed ZPMC welder Mr. Chen Zheng Hua, stencil 220067 was using flux cored welding procedure WPS-345-FCAW-3G(3F)-Repair to make weld BP1179-001-020. This weld repair was located on OBG segment 9CE between panel points PP76 and PP77. This work was performed as directed by weld repair document B-WR13914 to correct misalignment between the bottom plate and the side plate. This QA Inspector measured a welding current of approximately 210 amps, 26 volts, the base material was preheated with a torch prior to welding and Mr. Chen Zheng Hua 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. Peng Jian Cheng, stencil 222396 has used flux cored welding procedure WPS-B-T-2132 to make weld SSD27-PP075-067 and -068. This QA Inspector observed QC has recorded a welding current of 310 amps and 30.0 volts. This QA Inspector observed that Mr. Peng Jian Cheng appeared to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

ABF issued "Inspection Notification Sheet" number 07062010-1 item #2 informing QA that on 07-06-2010 at 19:30 hours ABF Inspectors will perform ultrasonic (UT) inspections of hold back repair welds SEG049A-011, SEG051A-044. These weld repairs are located between the side plate and the bottom plate on the counterweight side of OBG segments 9AW and 9BW, weld #3 in the trial assembly area. ABF/Sense UT Inspectors informed this QA Inspector that the two weld repair areas are acceptable. This QA Inspector performed random visual and ultrasonic inspections utilizing scanning patterns A, B, C and D (AWS D1.5 Fig 6.7) and the areas appear to have comply with project specifications. Note: These inspections were documented and tracked on "Verification Witness Request" documents. See the TL-6027 UT report for additional information concerning this inspection.

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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