

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-005395**Date Inspected:** 03-Feb-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**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 Fabrication**Summary of Items Observed:**

CWI: Mr. Sun Wei

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. The QA Inspector observed the following:

OBG Bay 9

The QA Inspector monitored welding of closed rib of deck plate DP219-001 using gantry #1. The QA Inspector observed four ZPMC welders using welding procedure specification WPS-B-T-2342-U1(Urib)-4 using the gas metal arc welding process for the root pass of six partial penetration groove welds on closed rib welds at the same time. ZPMC has multiple welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. ZPMC QC and ABF representatives were both monitoring this welding. The QA Inspector observed QC had documented a welding travel speed of 536 mm per minute for the root passes. As the welding commences, each of the welders is responsible for one of the welding heads. Welder Ms. Zhang Li Ping, stencil 201840 completed the root pass of weld #1 with a welding current of approximately 360 amps and 30.6 volts. Welder Mr. Zhao Cheng Shuang, stencil 59400 completed the root pass of weld #2 with a welding current of approximately 355 amps and 30.7 volts. Welder Ms. Wang Xiao Rong, stencil 59445 completed the root pass of weld #5 with a welding current of approximately 370 amps and 30.2 volts. Welder Mr. Xu Guo Yin, stencil 59443 completed the root pass of weld #6 with a welding current of approximately 365 amps and 31.3 volts. Welder Mr.

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Xhang Shao Hui stencil 59403 completed the root pass of weld #9 with a welding current of approximately 355 amps and 31.8 volts. Welder Mr. Chen Jie, stencil 59468 completed the root pass of weld #10 with a welding current of approximately 370 amps and 30.9 volts. Items observed by this QA Inspector appear to comply with project specifications.

The QA Inspector monitored welding of closed rib of deck plate DP140-001 using gantry #1. The QA Inspector observed four ZPMC welders using welding procedure specification WPS-B-T-2342-U1(Urib)-4 using the submerged arc welding process for the cover pass of partial penetration groove welds on four closed rib welds at the same time. ZPMC has multiple welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. ZPMC QC and ABF representatives were both monitoring this welding. The QA Inspector observed QC had documented a welding travel speed of 518 mm per minute for this welding. As the welding commences, each of the welders is responsible for one of the welding heads. Welder Ms. Zhang Li Ping, stencil 201840 completed the cover pass of weld #3 with a welding current of approximately 685 amps and 24.7 volts. Welder Mr. Zhao Cheng Shuang, stencil 59400 completed the cover pass of weld #4 with a welding current of approximately 690 amps and 25.2 volts. Welder Ms. Wang Xiao Rong, stencil 59445 completed the cover pass of weld #7 with a welding current of approximately 690 amps and 25.2 volts. Welder Mr. Xu Guo Yin, stencil 59443 completed the cover pass of weld #8 with a welding current of approximately 385 amps and 24.9 volts. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Dia Xicheng, stencil 066012 is using flux cored welding procedure WPS B-T-2232-TC-U5F to make stiffener to baseplate welds on OBG deck plate DP555-001-017. The QA Inspector observed the base material had previously been preheated using electrical heater elements. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

The QA Inspector observed ZPMC welder Mr. Hao Long, stencil 59446 is using welding procedure specification WPS-B-T-2342-U2 (U-rib) to make flux cored tack welds on OBG deck plate closed rib weld DP149-001. Prior to welding the QA Inspector observed the one worker was verifying zero gap in the weld groove between the closed rib and the baseplate prior to making each tack weld. Items observed by the QA Inspector appear to comply with project specifications.

OBG Bay 7

The QA Inspector observed ZPMC has performed flame cutting of stiffener plates that are labeled to be installed on Side Plates SP777-001 and the flame cut edge has a 6mm deep gouge where fillet welds are to be installed. The QA Inspector showed ZPMC CWI Inspector Mr. Xu Xianping this gouge and Mr. Xianping said this gouge will be weld repaired.

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.

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Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
