

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-005363**Date Inspected:** 24-Jan-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1745**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 Bo

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 DP220-001 using gantry #1. The QA Inspector observed six 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 partial penetration groove welds on closed rib welds at the same time. ZPMC has multiple flux cored welding manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. Prior to welding the QA Inspector observed two ZPMC personnel using gas torches to preheat the base material where this welding is to be performed. ZPMC QC and ABF representatives both used a laser temperature measuring device to verify the base material had been adequately preheated as required by the welding procedure specification. The QA Inspector observed a welding travel speed of approximately 533 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. Wang Xiao Rong, stencil 59445 completed the root pass of weld #1 with a welding current of

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approximately 375 amps and 31.6 volts. Welder Mr. Tiang Shuang Chen, stencil 201788 completed the root pass of weld #2 with a welding current of approximately 355 amps and 31.3 volts. Welder Mr. Zhao Cheng Shuang, stencil 59400 completed the root pass of weld #5 with a welding current of approximately 360 amps and 31.4 volts.

Welder Mr. Chen Jie, stencil 59468 completed the root pass of weld #6 with a welding current of approximately 360 amps and 30.9 volts and the cover pass welding current of approximately 680 amps and 25.3 volts. Welder Ms. Zhang Li Ping, stencil 201840 completed the root pass of weld #9 with a welding current of approximately 360 amps and 31.4. Welder Mr. Xhang Shao Hui 59403 completed the root pass of weld #10 with a welding current of approximately 370 amps and 31.7 volts. Items observed by this QA Inspector appear to comply with project specifications.

This QA Inspector observed ZPMC welder Mr. Zheng Mingye, stencil 066695 is using flux cored welding procedure WPS B-T-2232-TC-U5F to make stiffener to baseplate welds on OBG deck plate DP585-001-017. Prior to welding the QA Inspector observed the base material had previously been preheated using electrical heater elements. The QA Inspector observed a welding current of approximately 325 amps and 31.5 volts. Items observed by this QA Inspector appear to be progressing in compliance 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 DP585-001-013. Prior to welding the QA Inspector observed the base material had previously been preheated using electrical heater elements. The QA Inspector observed a welding current of approximately 295 amps and 32.0 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

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 |
