

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-006078**Date Inspected:** 19-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. Wuzhi Feng, 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

This QA Inspector observed ZPMC welder Mr. Wang Hongbo, stencil 203206 is using shielded metal arc welding procedure WPS-B-P-2112-FCM to tack weld OBG Side Plate SP694-001-010 stiffener to baseplate welds. Prior to welding the QA Inspector observed the base material was preheated using a torch and Mr. Hongbo was verifying the stiffener plate was in contact with the baseplate where the tack welds were to be made. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Chen Dingding, stencil 048923 is using shielded metal arc welding procedure WPS-B-P-2112-FCM to tack weld OBG Side Plate SP660-001-001 stiffener to baseplate welds. Prior to welding the QA Inspector observed the base material was preheated using a torch. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

This QA Inspector observed ZPMC welder Mr. Wang Fei, stencil 051786 is using shielded metal arc welding

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procedure WPS-B-P-2112-FCM to tack weld OBG Side Plate SP660-001-002 stiffener to baseplate welds. Prior to welding the QA Inspector observed the base material was preheated using a torch. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

OBG Bay 7

The QA Inspector monitored welding of closed rib of deck plate DP236-001 using gantry #1. The QA Inspector observed four ZPMC welders preparing to use 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. The QA Inspector observed ZPMC personnel using torches to preheat the base material where the welds are going to be made. The QA Inspector observed several of the "C" clamps are not attached to the sides of the deck plate and the weld grooves appear to have a light layer of rust and the QA Inspector asked ABF representative Ms. Lu Yun if she has observed the missing "C" clamps and light rust and Ms. Lu Yun had ZPMC install additional "C" clamps and wire brush the entire weld joint prior to commencement of welding. See the photograph below for additional information. 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. Wang Xiao Rong, stencil 59445 completed the root pass of weld #1 with a welding current of approximately 365 amps and 30.7 volts. Welder Mr. Tiang Shuang Chen, stencil 201788 completed the root pass of weld #2 with a welding current of approximately 375 amps and 31.1 volts. Welder Xhang Shao Hui stencil 59403 completed the root pass of weld #5 with a welding current of approximately 370 amps and 30.8 volts. Welder Mr. Chen Jie, stencil 59468 completed the root pass of weld #6 with a welding current of approximately 360 amps and 31.5 volts. Welder Ms. Zhang Li Ping, stencil 201840 completed the root pass of weld #9 with a welding current of approximately 370 amps and 31.2 volts. Welder Mr. Zhao Cheng Shuang, stencil 59400 completed the root pass of weld #10 with a welding current of approximately 370 amps and 31.0 volts. Items observed by this QA Inspector appear to comply with project specifications.



Summary of Conversations:

See above.

Comments

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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:	Clifford,William	QA Reviewer
