

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.9/14.3,0.0/1.6File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000850**Date Inspected:** 12-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Lefeng & Li Zhijiang**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 - Closed Rib Trials & Mock Up**Summary of Items Observed:**

Orthotropic Box Girder (OBG):

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the OBG.

Bay 3:

The QA Inspector randomly observed a ZPMC Torch Cutter utilizing a track mounted semiautomatic torch cutting apparatus to cut W21 X 57 I-Beams into OBG T-Ribs.

Bay 7:

The QA Inspector randomly observed ZPMC welder Liu Longxian ID Number 044786, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved Weld Procedure Specification (WPS) WPS-B-T-2231-B-U2-F-1, on Weld Joint (WJ) number FB003-E022-006 and WJ number FB003-E023-001, to weld diaphragms for the OBG. The QA Inspector observed ZPMC CWI Li Zhijiang monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 269 amps, welding voltage 29.4 volts with a travel speed of 501 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

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Elevation 77M:

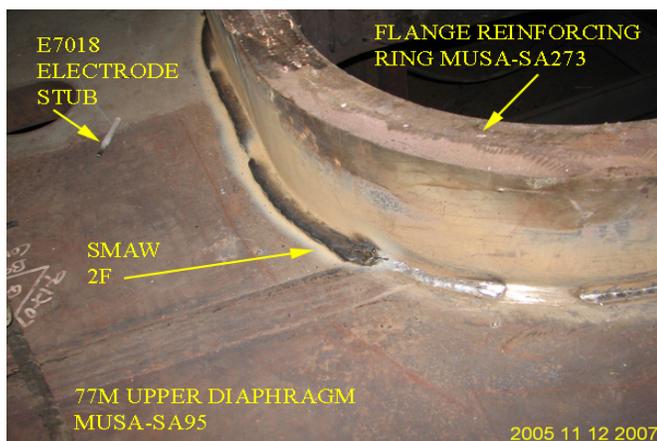
Bay 2:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Tower Mock Up.

The QA Inspector randomly observed ZPMC welder Liu Wei ID Number 058026, utilizing the Shielded Metal Arc Welding (SMAW) process with approved ZPMC WPS WPS-B-T-4112-3, to weld the fillet weld attaching Flange Reinforcing Ring MUSA-SA274 to the Upper Diaphragm MUSA-SA95 at WJ MUSA-SA95B/B-4. The QA Inspector observed ZPMC CWI Xu Lefeng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 215 amps, welding voltage 22.4 volts with a travel speed of 134 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

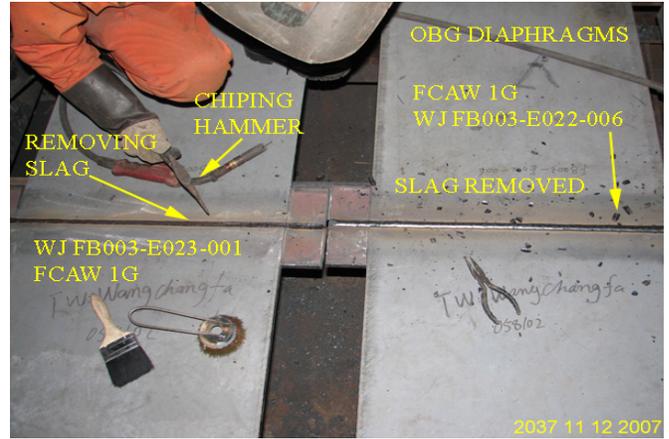
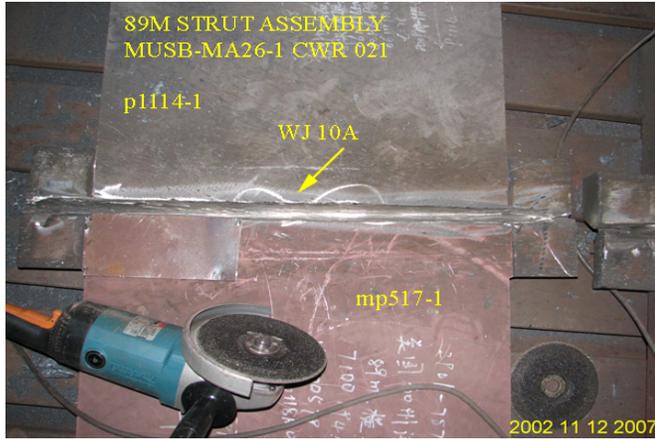
The QA Inspector randomly observed ZPMC welder Li Shuqiang ID Number 053609, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC approved WPS WPS-B-T-2231-TC-U5-F on Complete Joint Penetration (CJP) WJ MUSB-MA21-11, and WPS-B-T-2331-TC-U5-F on Partial Joint Penetration WJ's MUSB-MA21-5 and 17. The PJP WJ's were on the ends of longitudinal stiffener piece mark mp504-2 and the CJP WJ was in the center of longitudinal stiffener piece mark mp504-2. The QA Inspector observed ZPMC CWI Xu Lefeng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 300 amps, welding voltage 32 volts with a travel speed of 342 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

The QA Inspector randomly observed a ZPMC helper utilizing a grinder to clean out the welds after back gouging in Strut Assemblies MUSB-MA25-1 (CWR023), MUSB-MA25-2 (CWR024) and MUSB-MA26-1 (CWR021). The attached photograph provides additional detail.



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Summary of Conversations:

There were no relevant conversations.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer