

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-004824**Date Inspected:** 30-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei**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:**

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

OBG Sub-Assembly Bay 1:

The QA Inspector randomly observed ZPMC welders ID Numbers 059361/062265 and 059443/059408, utilizing the Gas Metal Arc Welding (GMAW) Process in 2G Position on Gantry 2 with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U-1(U-Rib)-4, to weld the U-Ribs to Deck Plate 10AE-DP451-001 Weld Joint (WJ) Numbers 003/004 and 007/008. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 362/370 amps, 30.3/30.5 volts WJ's 003/004 and 371/359 amps, 30.8/30.0 volts WJ's 007/008 with a travel speed of 530 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 2:

The QA Inspector randomly observed 9 Magnetic Drill Operators drilling bolt holes in Skin Plate Stiffeners A709 HPS 485 piece mark A571 (E), A572 (E), A573 (E), A574 (E) and A709 Gr 345T2 p708 and p686.

OBG Sub-Assembly Bay 3:

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The QA Inspector randomly observed ZPMC welder Xin Meng ID 053742, utilizing the Flux Cored Arc Welding (FCAW) Process in 2F Position on Gantry 2 with ZPMC WPS WPS-B-T-2132-3, to weld the I-Ribs to Deck Plate DP664-001 WJ's 003/004. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 303/296 amps, 29.6/29.7 volts WJ's with a travel speed of 390 mm per minute. Weld parameters appeared to comply with contract requirements.

OBG Bay 4:

The QA Inspector randomly observed ZPMC NDT Technician Cai Xin Xin, utilizing the Magnetic Particle Testing (MT) Method to perform a final MT examination on the cover pass of the fillet welds on Edge Plates EP70A Yellow Tag 002141 (EP070-001) Location 7DW WJ's 005 through 008, EP87A Yellow Tag 002142 (EP087-001) Location 8CE WJ's 001 through 04, EP78B Yellow Tag 002145 (EP078-001) Location 7BE WJ's 017 through 020, Edge Plate EP73A Yellow Tag 002146 (EP073-001) Location 8AW WJ's 005 through 008, Edge Plate EP75A Yellow Tag 002147 (EP075-001) Location 8CW WJ's 001 through 004, Edge Plate EP63A Yellow Tag 002140 (EP063-001) Location 8BW WJ's 001 through 004, Edge Plate EP80A Yellow Tag 002144 (EP073-001) Location 7CE WJ's 001 through 004 and Edge Plate EP68A Yellow Tag 002143 (EP068-001) Location 7CW WJ's 001 through 004. There appeared to be no indications and ZPMC QC accepted all the above listed welds.

The QA Inspector performed a 100% final Visual Testing (VT) and 10% MT verification on the cover pass of the fillet welds on Edge Plates EP70A Yellow Tag 002141/Green Tag 002216 (EP070-001) Location 7DW WJ's 005 through 008, EP87A Yellow Tag 002142/Green Tag 002215 (EP087-001) Location 8CE WJ's 001 through 04, EP78B Yellow Tag 002145/Green Tag 002212 (EP078-001) Location 7BE WJ's 017 through 020, Edge Plate EP73A Yellow Tag 002146/Green Tag 002211 (EP073-001) Location 8AW WJ's 005 through 008, Edge Plate EP75A Yellow Tag 002147/Green Tag 002210 (EP075-001) Location 8CW WJ's 001 through 004, Edge Plate EP63A Yellow Tag 002140/Green Tag 002217 (EP063-001) Location 8BW WJ's 001 through 004, Edge Plate EP80A Yellow Tag 002144/Green Tag 002213 (EP073-001) Location 7CE WJ's 001 through 004 and Edge Plate EP68A Yellow Tag 002143/Green Tag 002214 (EP068-001) Location 7CW WJ's 001 through 004. There appeared to be no indications and the QA Inspector accepted all the above listed welds. The attached photographs provide additional detail.

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Summary of Conversations:

As noted in the above body of this report.

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 Peter Dautermann, 15002199593, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Wright,Mark

QA Reviewer