

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-004529**Date Inspected:** 04-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:** Tower & 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 Bay 1:

The QA Inspector randomly observed 4 ZPMC welders ID Numbers 059416/059378 and 059361/062265, utilizing the Gas Metal Arc Welding (GMAW) Process in 2G/2F Positions on Gantry 2 with ZPMC Weld Procedure Specification (WPS), to weld the U-Ribs to Deck Plate DP121-002 Location(8CW), at Weld Joint (WJ) Numbers 001/002 and 005/006. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 367/392 amps, 30.7/31.8 volts (001/002) and 363/361 amps, 30.6/30.5 volts with a travel speed of 527 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Dong Yiqun ID 059450 and Gong Zhi Wu ID 059405, utilizing the Flux Cored Arc Welding (FCAW) Process in 3F Position with ZPMC WPS WPS-B-T-2133, to weld 8mm diaphragms to the U-Ribs for Deck Plate DP175-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

OBG Bay 2:

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The QA Inspector randomly observed 1 Magnetic Drill Operator drilling bolt holes in “Gusset Plate Connections” Mk X77G, X74F and X74H.

OBG Bay 3:

The QA Inspector randomly observed ZPMC welder Hu Yan Ming ID 062092, utilizing the FCAW Process in the 1G Position with ZPMC WPS WPS-B-T-2231-B-U2-F, to fit up and tack weld the butt splice between Bottom Plate Sections BP177A/PL821A and BP177A/PL821B at WJ BP177-001-161. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Jiang Jing Teng ID 046830, utilizing the Submerged Arc Welding (SAW) Process in the 1G Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld the butt splice between Bottom Plate Sections BP148A/PL729A and BP148A/PL729B at WJ BP177-001-167. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

OBG Bay 4:

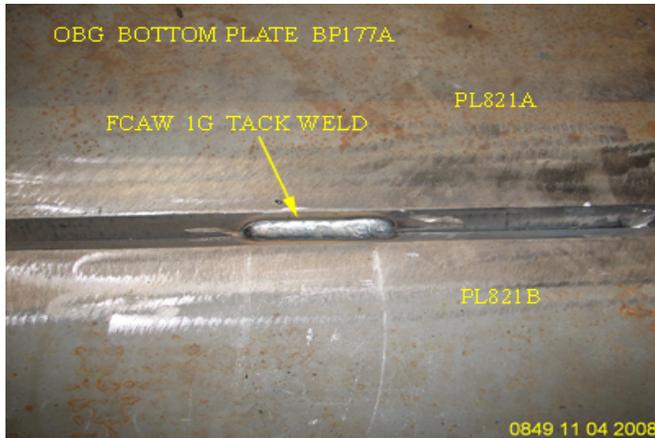
The QA Inspector randomly observed ZPMC welder Wang Zhong Hua ID 053753, utilizing the Shielded Metal Arc Welding (SMAW) Process (9018M Electrode) in 2G Position with ZPMC WPS WPS-B-T-3312-TC-U5b-1, to weld piece mark p1114 to p1115 of the 89M Tower Strut Assembly. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technicians Sun Gong Chang and Cai Xin Xin, utilizing the Magnetic Particle Testing (MT) Method to perform a final MT examination of the cover pass of the fillet welds on Side Plate Sub-Assembly SP370-001 WJ's 013 through 024, the fillet welds attaching the Flange Plate Assemblies to 71M Single Diaphragm SSD1-SA358-15 & 16 and 59M Single Diaphragm SSD1-SA409-1 & 2. There appeared to be no indications and ZPMC QC accepted all the above listed welds.

The QA Inspector performed a 10% final Visual (VT) and MT verification on the cover pass of the fillet welds on Side Plate Sub-Assembly SP370-001 WJ's 013 through 024 (Green Tag 001455), the fillet welds attaching the Flange Plate Assemblies to 71M Single Diaphragm SSD1-SA358-15 & 16 (Green Tag 000888), 59M Single Diaphragm SSD1-SA409-1 & 2 (Green Tag 000887) and 71M Single Diaphragm ESD1-SA419-1 & 2 (Green Tag 000889). There appeared to be no indications the QA Inspector accepted all of the above listed welds.

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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 Joshua Ishibashi, 13764710411, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Wright,Mark

QA Reviewer