

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-003874**Date Inspected:** 08-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**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, Guo Yan Fei**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 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 ZPMC welders Xu Guo Yin ID Number 059443, Xiang Huan Feng ID Number 059416, Chen Jie ID Number 059468 and Xiang Jie ID Number 059378, utilizing Gantry 2 mounted welding apparatus with the Gas Metal Arc Welding (GMAW) Process in the 2G (Horizontal Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U1(U-Rib)-4, to weld the root pass of the U-Ribs to 4-Rib Deck Plate Sub-Assembly 7EE-DP388-001 at Weld Joint (WJ) Numbers DP388-001-003/004 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: 378/372 amps, 30.4/30.6 volts (WJ's 003/004) for Mr. Xu/Mr. Xiang; and 368/374 amps, 30.7/30.5 volts (WJ's 007/008) for Mr. Chen/Mr. Xiang with a travel speed of 525 millimeters (mm) per minute for all welders. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

New Tower Shop Bay 1:

The QA Inspector randomly observed ZPMC welders Zha Yong Song ID Number 056134, Su Yonghui ID Number 053680, Wei Jun ID Number 067707 and Yang Gengcheng ID Number 066418, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2G Position (Horizontal Groove) Position with ZPMC WPS

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

WPS-B-P-2312-TC-U5b (CJP) and WPS-B-P-2312-TC-P5 (PJP) to tack weld during fit up, longitudinal stiffeners to Tower Skin Plate E(S). The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Guo Yan Fei monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 2 ZPMC welders utilizing the SMAW Process with ZPMC WPS WPS-B-P-2214-TC-U5b in the 4G(4F) Position to weld lifting lugs on to Tower Skin Plate E(S).

The QA Inspector randomly observed that CJP WJ SSD1-SA159E/J-22A of Tower Skin Plate A Sub-Assembly SSD1-SA159, did not have the root pass welded prior to flipping to B side for back gouging per approved ZPMC Procedure Sheet RP-03 - Welding the CJP Joint of Longitudinal Stiffeners. The attached photograph provides additional detail. The QA Inspector generated an Incident Report for this item for 08-08-08.

New Tower Shop Bay 3:

The QA Inspector randomly observed 3 ZPMC helpers blending the welds on 5-Rib Deck Plate DP379-001 Yellow Tag 000331, after completed weld repairs.

The QA Inspector randomly observed 3 ZPMC helpers blending and grinding the welds on 5-Rib Deck Plate DP406-001 Yellow Tag 000340, prior to weld repairs.

The QA Inspector performed an initial Visual Inspection (VT) on the welds attaching the 5 U-Ribs to Deck Plate DP352-001 at the request of ZPMC QC and in conjunction with ZPMC CWI Chen Xi and ABF CWI Kevin Chen. Areas to be corrected were marked and Yellow Tag 000343 was signed by Mr. Chen, Mr. Kevin Chen and the QA Inspector.

The QA Inspector performed an initial VT on the welds attaching the 4 U-Ribs to Deck Plate DP109-002 at the request of ZPMC QC and in conjunction with ZPMC CWI Chen Xi and ABF CWI Kevin Chen. Areas to be corrected were marked and Yellow Tag 000344 was signed by Mr. Chen, Mr. Kevin Chen and the QA Inspector.

The QA Inspector performed an initial VT on the welds attaching the 3 U-Ribs to Deck Plate DP271-001 at the request of ZPMC QC and in conjunction with ZPMC CWI Chen Xi and ABF CWI Kevin Chen. Areas to be corrected were marked and Yellow Tag 000345 was signed by Mr. Chen, Mr. Kevin Chen and the QA Inspector.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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 Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Carreon,Albert

QA Reviewer