

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-007017**Date Inspected:** 20-Jan-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:** Sun Wei / Sun Bo**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 Components**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).

ZPMC QC Office Outside of Bay 9:

The QA Inspector performed Visual Verification of macro specimens (15 ea) for Deck Plates DP193-001 and DP491-001. The QA Inspector recorded the data from the Visual Verification on the "U-Ribs PMT Inspection Sheet" for this date 01-20-2009. The macro specimens were accepted by ZPMC Quality Control.

OBG Sub-Assembly Bay 9:

The QA Inspector randomly observed ZPMC welder Jiang Mao Fang ID 201250, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3G (Vertical Groove) position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2233, to weld the splice between U-Rib sections U-96 and U-136 at Weld Joint (WJ) DP219-001-194. The QA Inspector randomly observed ZPMC QC verifying weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 1 helper utilizing an angle grinder to clean up an excavation in Complete Joint Penetration (CJP) WJ 017, attaching a 35 millimeter (mm) thick I-Rib to Deck Plate (1AE)-DP595-001 after Carbon Air Arc Gouging to remove rejects found during Ultrasonic Testing (UT) Examination.

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The QA Inspector randomly observed ZPMC magnetic drill operators drilling bolt holes in U-Ribs prior to forming.

The QA Inspector randomly observed 1 helper utilizing an angle grinder to clean up several excavations in Complete Joint Penetration (CJP) WJ 013, attaching 35 millimeter (mm) thick I-Ribs to Deck Plate DP590-001 after CAAG, to remove rejects found during Ultrasonic Testing (UT) Examination.

The QA Inspector randomly observed ZPMC welders Dai Xi Chen ID 066012 and Zheng Ming Ye ID 066695, utilizing the FCAW Process in the 2G (Horizontal Groove) position with ZPMC WPS WPS-B-T-2233, to weld the root passes in WJ's (1AE)-DP585-001-11 and 015 respectively. The QA Inspector randomly observed ZPMC QC verifying weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Jiang Shuang Chen ID 201788/Wang Xiao Yong ID 059445 and Zhao Chen Shuang ID 059400/Zhang Li Ping ID 201840, utilizing the Gas Metal Arc Welding (GMAW) Process in the 2G (Horizontal Groove) position with ZPMC WPS WPS-B-T-2342-U1 (U-Rib)-4, to weld the root passes in WJ's (6CE)-DP491-001-001/002 and 005/006 respectively. The QA Inspector randomly observed ZPMC QC verifying weld parameters. The QA Inspector also randomly verified weld parameters and recorded them as follows: 358/353 amps, 30.6/31.8 volts (WJ's 001/002) and 365/376 amps, 31.0/31.0 volts with a travel speed of 533 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Jiang Shuang Chen ID 201788/Wang Xiao Yong ID 059445 and Zhao Chen Shuang ID 059400/Zhang Li Ping ID 201840, utilizing the Submerged Arc Welding (SAW) Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) positions with ZPMC WPS WPS-B-T-2342-U1 (U-Rib)-4, to weld the fill and cover passes in WJ's (6BW)-DP193-001-007/008 and 003/004 respectively. The QA Inspector randomly observed ZPMC QC verifying weld parameters. The QA Inspector also randomly verified weld parameters and recorded them as follows: 680/678 amps, 24.8/24.7 volts (WJ's 003/004) and 686/685 amps, 24.7/24.6 volts with a travel speed of 515 mm per minute. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Jiang Shuang Chen ID 201788/Wang Xiao Yong ID 059445 and Zhao Chen Shuang ID 059400/Zhang Li Ping ID 201840, utilizing the SAW Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) positions with ZPMC WPS WPS-B-T-2342-U1 (U-Rib)-4, to weld the fill and cover passes in WJ's (6CE)-DP491-001-001/002 and 005/006 respectively. The QA Inspector randomly observed ZPMC QC verifying weld parameters. The QA Inspector also randomly verified weld parameters and recorded them as follows: 686/681 amps, 24.8/24.6 volts (WJ's 001/002) and 685/684 amps, 25.0/24.7 volts with a travel speed of 520 mm per minute. Weld parameters appeared to comply with contract requirements.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

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 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
