

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-007032**Date Inspected:** 08-Feb-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).

OBG Sub-Assembly Bay 12:

The QA Inspector randomly observed ZPMC welding personnel performing heat straightening operations to reduce weld induced distortion from welding the T=35 mm thick I-Ribs to Deck Plate 1AE-DP595-001 at Complete Joint Penetration (CJP) Weld Joint (WJ) Numbers 013, 015, 017, 019 and 021. 1AE-DP595-001 is placed upside down with heat being applied directly to the welds attaching the T=35 millimeter (mm) I-Ribs to Deck Plate 1AE-DP595-001. The QA Inspector randomly observed that jacks (passive) were in place, but no counter weights. This work was being performed in accordance with ZPMC Heat Straightening Request (HSR) HSR (B)-246 Rev. 0.

The QA Inspector randomly observed 1 ZPMC welder utilizing the Carbon Air Arc Gouging (CAAG) Process, to remove the temporary fit up brackets from the tops of the U-Rib Extensions after fit up to the U-Ribs on Deck Plate 1AE-DP615-001.

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technician Wang Wei, utilizing the Magnetic Particle Testing (MT) Method, to examine excavations in WJ's 013 and 019 attaching the T=35mm I-Ribs to the base plate on Deck Plate 1AW-DP615-001. There appeared to be no indications and Mr. Wang

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accepted the excavated areas in WJ's 013 and 019.

The QA Inspector randomly observed ZPMC NDT Technician Wang Wei, utilizing the MT Method, to examine weld repairs to WJ's 013, 015, 017, 019 and 021 attaching the T=35 mm I-Ribs to the base plate and WJ 141 attaching the T=35mm I-Rib to the U-Rib closure diaphragm on Deck Plate 1AW-DP550-001. The QA Inspector and Mr. Wang observed transverse cracks at Y=600 in WJ 017, Y=1395 and at Y=2040 in WJ 019.

The QA Inspector randomly observed ZPMC welder Xu Guo Yin ID 059443, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions with ZPMC Weld Procedure Specification (WPS) WPS-345-FCAW-2G (2F)-Repair-1 to weld a repair to the 200 mm CJP WJ 180 the attaching the inside of the tapered end of the U-Rib Extension to the base plate on Deck Plate 1AE-DP605-001.

The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Song Yin Shu ID 059421 and Jiang Jing Guang ID 062265, utilizing the FCAW Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions with ZPMC WPS WPS-345-FCAW-2G (2F)-Repair-1 to weld repairs to the CJP WJ's 011 and 013 respectively, attaching T=35 mm I-Ribs to Deck Plate 1AW-DP585-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Song Yin Shu ID 059421, utilizing the FCAW Process in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions with ZPMC WPS) WPS-345-FCAW-2G (2F)-Repair-1, to weld repairs to the CJP WJ's 015 and 017 attaching T=35 mm I-Ribs to Deck Plate 1AW-DP560-001. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed 1 ZPMC helper utilizing an angle grinder, to blend the cover pass on the welds attaching the T=35 mm I-Ribs to the U-Rib closure diaphragm on Deck Plate 1AW-DP615-001.

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

Summary of Conversations:

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 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
