

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-007035**Date Inspected:** 12-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 1AW-DP555-001 at Complete Joint Penetration (CJP) Weld Joint (WJ) Numbers 013, 015, 017, 019 and 021. 1AW-DP555-001 is placed upside down with heat being applied to the underside of the base plate on Deck Plate 1AW-DP555-001. The QA Inspector randomly observed that jacks (passive) were in place between the I-Ribs, but no counter weights. This work was being performed in accordance with ZPMC Heat Straightening Request (HSR), HSR (B)-260 Rev. 0.

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-DP580-001 at CJP WJ's 009, 011 and 013. 1AE-DP580-001 is placed upside down with heat being applied to the underside of the base plate on Deck Plate 1AE-DP580-001. The QA Inspector randomly observed that jacks (passive) were in place between the I-Ribs, but no counter weights. This work was being performed in accordance with ZPMC HSR, HSR (B)-259 Rev. 0.

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The QA Inspector randomly observed 4 ZPMC helpers utilizing angle grinders to blend the welds attaching the T=35 mm I-Ribs to the base plate on Deck Plate 1AW-DP575-001, after repairs.

The QA Inspector randomly observed ZPMC welder Song Yin Shu ID 059421, 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 WJ 009 attaching a T=35 mm I-Rib to the base plate of Deck Plate 1AW-DP565-001. 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 Lu Liang ID 059373, utilizing the Gas Metal Arc Welding (GMAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS WPS-B-T-2342-U5 (U-Rib) to tack weld the U-Rib Extensions to the base plate of Deck Plate 1AE-DP590-001. 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 Hu Yong Cang ID 062259, 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 welds attaching the U-Ribs to Deck Plate 1AW-DP545-002. 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 Lu Liang ID 059373, utilizing the FCAW Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-B-U2a, to weld the U-Rib Extensions to U-Rib U-81 and U-22 on Deck Plate 1AE-DP550-001. 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 Base Plate on Deck Plate 1AW-DP565-001.

The QA Inspector randomly observed 3 ZPMC helpers utilizing angle grinders, to blend the cover pass on the welds attaching the T=35 mm I-Ribs to the Base Plate on Deck Plate 1AW-DP545-001.

The QA Inspector randomly observed production personnel utilizing angle grinders to remove 4 tack welds attaching the U-Rib Extension to the base plate on Deck Plate 1AW-DP560-001 at U-Rib U-76. ZPMC informed the QA Inspector that the I-Rib under the U-Rib Extension was out of plumb and would not allow for the proper fit up of the U-Rib Extension. ZPMC QC also informed the QA Inspector that Heat Straightening would have to be performed to correct the out of plumb condition.

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

Summary of Conversations:

As noted above.

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

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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
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Reviewed By:	Clifford,William	QA Reviewer
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