

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-001094**Date Inspected:** 24-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Zhi Jing, Wu Ming Kat**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 and Tower Mockup**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Joe Lanz arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions during second shift. While on site the QA Inspector observed and/or discovered the following.

Bay 7

OBG Beams

The QA Inspector randomly observed ZPMC welding personnel Huang Xian Lan, ID # 044780 welding floor beam plate complete joint penetration weld FB025-01-078. The welding was submerged arc welding (SAW) and the approved welding procedure specification WPS-B-T-2221-U3c-S-1 in the 1G (flat) position. The filler metal and flux combination was JW-3C, 4mm diameter and JFB flux. The QA Inspector periodically observed the ZPMC QC Certified Welding Inspector Li Zhi Jing monitoring the welding and the ZPMC QC Inspector Cui Yi Ru verifying that the welding parameters and the minimum pre-heat were in accordance with the Welding Procedure Specification WPS-B-T-2221-U3c-S-1. The QA Inspector observed that the preheat and welding parameters of measured by the QC Inspector (535 amps, 30.5 volts and 435mm per minute travel speed) appeared to be within the WPS ranges. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents with the following exception. When the QA inspector asked the ZPMC QC Certified Welding Inspector Li Zhi Jing what welding procedure specification was being used, he reported that WPS-B-T-2221-Tc-U5-S-1 was being used. This WPS is for T or corner joints, but the welding parameters are the same as the required welding procedure specification noted above.

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The QA Inspector randomly observed ZPMC welding personnel ZPMC welding personnel Wang Chang Fa, ID #058102 tack welding floor beam FB007-06 stiffeners. The welding was performed in the 2F (horizontal) shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal appeared to be E7018, brand name TL-508. The QA Inspector periodically observed the ZPMC QC Lead Certified Welding Inspector Wu Ming Kat monitoring the welding and the ZPMC QC Certified Welding Inspector Li Peng Fei verifying that the welding parameters and the minimum pre-heat of 20° Centigrade were in accordance with the Welding Procedure Specification WPS-B-P-2112-FCM. The QA Inspector observed that the preheat and welding parameters measured by the QC Inspector appeared to be within the WPS ranges. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents.

The QA Inspector randomly observed ZPMC welding personnel ZPMC welding personnel Ren Jin Zhu, ID #044837 tack welding floor beam FB007-05 stiffeners. The welding was performed in the 2F (horizontal) shielded metal arc welding (SMAW) process with a 4.0mm diameter electrode, filler metal appeared to be E7018, brand name TL-508. The QA Inspector periodically observed the ZPMC QC Lead Certified Welding Inspector Wu Ming Kat monitoring the welding and the ZPMC QC Certified Welding Inspector Li Peng Fei verifying that the welding parameters and the minimum pre-heat of 20° Centigrade were in accordance with the Welding Procedure Specification WPS-B-P-2112-FCM. The QA Inspector observed that the preheat and welding parameters measured by the QC Inspector appeared to be within the WPS ranges. The welding parameters and work observed by QA Inspector appear to meet the minimum requirements in accordance with the WPS and contract documents.

The following digital photograph below illustrates observation of the activities being performed.



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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By:	Lanz,Joe	Quality Assurance Inspector
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Reviewed By:	Cochran,Jim	QA Reviewer
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