

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-002075**Date Inspected:** 06-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** Xu Le Feng**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**Summary of Items Observed:**

Tower shop

This QA inspector arrived at ZPMC for continued observation of the Self-Anchored Suspension Tower (SAS) and Orthotropic Bridge Girders (OBG). While performing periodic inspections it was observed in the new tower shop bay 3 that ZPMC was welding temporary attachments for the ease moving the deck panels with the overhead cranes. The deck panels receiving the temporary attachments were numbers DP086-001, DP300-001 and DP302-001. ZPMC Quality Control/Certified Welding Inspector (QC/CWI) Chen Xi was noted as being present on a periodic basis for welding progression. Bay 1 in the new tower shop ZPMC was observed welding plate numbers MUB-MA21 A/J - 68 and MUB-MA21 G/J -65 on the 89m mock-up. WPS-B-T-3212-B-U2a-2 was being applied at both locations by ZPMC welding personnel Dong You Feng and Tan Xiang Bo. ZPMC QC/CWI Xu Le Feng was observed as being present during the welding operations and monitoring the welding parameters and progression. This QA inspector verified the welding parameters and preheats being applied for these locations and observed that they were within the above noted WPS. Also observed in this bay was the welding of skin plate SSD1-SA159 D/J-4A/4B Complete Joint Penetration (CJP) splice using a double "V" groove weld under WPS-B-T-2221-B-U3c-S-1. ZPMC welding personnel Chen Hongxia was observed as being the Submerged Arc Welding (SAW) operator for this location. Welding parameters were verified by this QA inspector as the following; 508 amps, 30.3 volts and a travel speed of 462 mm/min which was within the requirements of the noted WPS. ZPMC QC personnel were observed as being present to monitor welding parameters and progression.

Later in the shift this QA inspector observed ZPMC performing Ultrasonic Testing in two locations; 1) bay1 for skin plate SSD1-SA16 F/G-6A by technician Ma Ji Long. ZPMC was observed using a 45° and 70° transducer to provide complete sound coverage of the weldment being tested. It was observed by this QA inspector that Mr. Long was using finger damping of the ultrasonic signal at the toe of the welds to determine reflective sound

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

indications on his equipment which was direct violation of the special provisions for no finger damping. A TL-15 was generated for this incident and location by this QA inspector. 2) Bay 4 plate ESD1-SA234-A/B-10A by technician Eshung Qin. ZPMC was observed using a 45° and 70° transducer to provide complete sound coverage of the weldment being tested. It was observed by this QA inspector that Mr. Long was using finger damping of the ultrasonic signal at the toe of the welds to determine reflective sound indications on his equipment which was direct violation of the special provisions for no finger damping. Also noted was the UT inspection being performed prior to the weldment being signed and accepted by ZPMC for visual Inspection (VT) A TL-15 was generated for this incident and location by this QA inspector.

Summary of Conversations:

As noted within contents 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 remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Riley, Ken	Quality Assurance Inspector
Reviewed By:	Hager, Craig	QA Reviewer
