

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-001787**Date Inspected:** 16-Mar-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:** Chen Xi**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**Summary of Items Observed:**

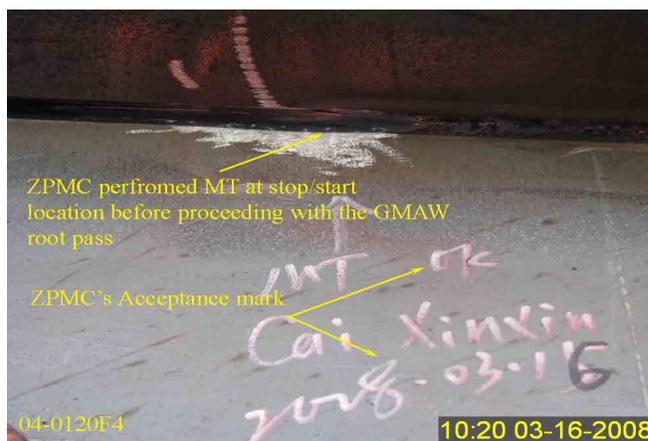
DP405-001 & DP243-001 Production Panels

This Quality Assurance (QA) inspector arrived at ZPMC for observation of the SAS super structure fabrication. This QA inspector observed ZPMC weld a Production Monitoring Test (PMT) for deck plate DP405-001 and DP243-001. DP405-001 was welded first using the Gas Metal Arc Welding (GMAW) process for the root pass. ZPMC elected to proceed with the root pass on deck panel DP243-001 which is outside the agreed upon welding procedure and in direct violation of ABF's stop work letter submitted to ZPMC. This QA inspector observed ZPMC welding personnel using gantry # 1 for the welding process and recorded the amperages, voltage and travel speed of each of the 6 welding heads used for production and PMT welding. DP405-001 the average amps and volts were; GMAW 354.1 amps, 30.6 volts and a travel speed of 521 mm/min and for SAW 680.1 amps, 24.9 volts and a travel speed of 478 mm/min. For DP243-001 the average welding parameters were; GMAW 360.6 amps, 30.65 volts and travel speed of 536 mm/min. For SAW 680.6 amps, 24.86 volts and travel speed of 510.4 mm/min. The Ambient temperature in the shop was recorded at 12°C with the steel temperature at 14°C also. Deck panel DP405-001 was welded in two groups; group A included Rib numbers U15, U13 and U4. Group B was rib numbers U12 and U5. Deck panel DP243-001 was welded in two groups; group A included Rib numbers U22, U20 and U61. Group B was rib numbers U21 and U65. During the GMAW root pass on DP405-001 ZPMC personnel had placed a transfer trailer next to gantry-1 which did not allow for the root pass to be welded in one continuous weld. The welding was stopped approximately 525mm from the end of the plate. ZPMC QC/CWI Chen Xi relayed to this QA inspector that ZPMC would grind the Stop/start locations and perform a Magnetic Particle inspection (MT). The following weld numbers are the locations where occurrence happened 1&2, 5&6 and 9&10 and was relayed to this QA inspector that no rejectable indications were found. Once the PMT's welding was completed that included the SAW process ZPMC's QC/CWI Chen Xi performed a visual inspection and marked

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

the required 500mm area to be utilized as the inspection criteria area once ZPMC completed their visual inspection this QA inspector performed his QA verification and found the weldments to be within the inspection criteria for the PMT. The Ultrasonic Testing and macros shall be performed later this date by ZPMC and Caltrans METS. It was noted that ZPMC had 1-CWI and 1- QC inspectors in bay 1 this date and ABF had 2 QC representatives present this day for bay 1. This QA inspector also witnessed ZPMC personnel performing ultrasonic Testing on U rib splice connections for the Complete Joint Penetration (CJP) welds. The following welds were tested and found as having no rejectable indications; DP056-001 welds 12, 13, 14, and 15. The following welds were R1 re-examinations and was relayed to have no rejectable indications; DP050-001-014, DP008-001-009 and DP002-001-011. The following re-examination was found to have a rejectable indication found by ZPMC DP056-001-016. All the above information was relayed to this QA inspector on this date.



Summary of Conversations:

As noted in content 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 Pat Lowry, (858)344-2712, who represents the Office of Structural Materials for your project.

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