

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-001836**Date Inspected:** 18-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, Sun Wei**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:**

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 DP083-001 and DP272-001. DP083-001 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 DP272-001 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 observed that the amperages, voltage and travel speed of each of the 6 welding heads used for production and PMT welding were within the requirements of WPS-B-T-2342-U1 (U Rib)-3. The Ambient temperature in the shop was recorded at 13°C with the steel temperature at 14°C also. Deck panel DP083-001 was welded in two groups; group A included Rib numbers U40 and U38. Group B was rib numbers U29. While welding DP272-001 ZPMC experienced equipment malfunction and had to stop welding the SAW weldment. ZPMC informed this QA inspector that they would grind the start/stop area and perform MT to ensure weld soundness prior to re-starting the welding of the SAW process. ZPMC MT technician was observed performing the MT and informed this QA inspector that the weldments were without rejectable indications. ZPMC then proceeded with the SAW process. Deck panel DP272-001 was welded in two groups; group A included Rib numbers U42. Group B was rib numbers U35 and U41. Once the PMT's welding was completed including the SAW process ZPMC's QC/CWI Chen Xi performed a visual inspection and marked 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 on this date by ZPMC and Caltrans METS. It was noted that ZPMC had 1-CWI and 2- QC inspectors in bay 1 this date and ABF had 4 QC representatives present this day for bay 1. By the end of this QA inspectors shift ZPMC had not completed the

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SAW welding for DP083-001 and DP272-001 and would be continuing into the next shift for completion of the welding process. Also observed was ZPMC welding on Gantry-2 for DP216-001. ZPMC did run PMT-1 for this gantry and it was acceptable per the agreed upon criteria for visual and ultrasonic evaluation. During this time ZPMC welded the deck panel in two groups with group A consisting of ribs U59 and U67. Group B was U60, U64 and U67. The welding was completed by the end of this QA inspectors shift and met the tolerances of the above noted WPS.



Summary of Conversations:

As Noted in the 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 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
