

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-001925**Date Inspected:** 24-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**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:**

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 DP054-001 and DP079-001 at gantry-1. Upon completion of the Submerged Arc Welding (SAW) process for PMT-1 it was determined by ZPMC QC/CWI Chen Xi that the PMT did not meet the acceptance criteria and was rejected by the CWI. ZPMC then proceeded to weld another PMT numbered PMT-2 upon completion of the welding this PMT did meet the acceptance criteria for visual and ultrasonic testing. The macros were then laid out to be cut by ZPMC for acceptance. ZPMC then proceeded with the welding of production deck panel number DP079-001 and DP054-001 using the Gas Metal Arc Welding (GMAW) process for the root pass. 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 14°C with the steel temperature at 17°C also. Deck panel DP054-001 was welded in two groups group A included Rib numbers U229/U159, U32/U102 and U33/U328. Group B was rib numbers U230/U90 and U130/U328 this deck panel ribs were spliced together previously by a Complete Joint Penetration (CJP) weld. Deck panel DP079-001 was also welded in two groups; group A included Rib numbers U84 and U155. Group B was rib numbers U88, U154 and U137. It was noted that ZPMC had 1-CWI and 9- QC inspectors in bay 1 this date and ABF had 6 QC representatives present this day for bay 1. By the end of this QA inspectors shift ZPMC had not completed the SAW welding for DP054-001 or DP079-001 which was continuing into the next shift for completion of the welding process. Also noted was the welding at Gantry-2 for production deck panels number DP432 and DP055-001 which were both 5 rib panels. DP432-001 groups A welding was U71, U73 and U74. Group B welding was ribs U69 and U72. DP055-001 was also welded in two groups as follows U51/U9, U85/U23 and U100/U231

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Group B's welding was not performed during this QA inspectors shift and was continued into the next QA personnel's shift hours. The PMT for gantry -1 was witnessed by additional QA personnel during this shift. The welding parameters for the GMAW process were within the tolerances of the required WPS as stated above.

Summary of Conversations:

As Noted in 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
