

**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-001914**Date Inspected:** 26-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:** Sun Wei, 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 DP191-001 and DP434-001 at gantry-1. Upon completion of the Submerged Arc Welding (SAW) process for PMT-1 met 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 DP191-001 and DP434-001 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 15°C with the steel temperature at 14°C also. Deck panel DP191-001 was welded in two groups group A U96 and U110 group B was U103, U97 and U109. Deck panel DP434-001 was also welded in two groups; group A included Rib numbers U119, U112 and U101. Group B was rib numbers U121 and U114. Upon completion of the GMAW welding process ZPMC proceeded with the Submerged Arc Welding (SAW) process and the welding parameters were also verified to be within the above stated WPS. It was noted that ZPMC had 1-CWI and 4- QC inspectors in bay 1 this date and ABF had 5 QC representatives present this day for bay 1. By the end of this QA inspectors shift ZPMC had not completed the SAW welding for DP434-001 welds 3, 4 and 7, 8 due to ZPMC had an equipment malfunction during the start up of these welds and had stop the process. ZPMC then ground the SAW weldments for 70mm (see digital photos below) and perform MT verification at these locations to ensure weld soundness the welding would continue into the next shift for completion.

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# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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## Summary of Conversations:

As noted in content of report.

## 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.

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| <b>Inspected By:</b> | Riley, Ken   | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Hager, Craig | QA Reviewer                 |

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