

**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-002119**Date Inspected:** 18-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2200**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Lay Tao**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:** Orthotropic Box Girder**Summary of Items Observed:**

On this date, Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) Inspector Edward Leach was present to randomly observe and document the welding and Quality Control (QC) functions performed by ZPMC personnel relative to the fabrication of SAS Superstructure project. While on site, the QA Inspector noted the following work.

**Heat Straightening Shop**

The QA Inspector met with ZPMC dayshift QC personnel Lay Tao to observe and witness cold bending of one (1ea) piece of A709M, Gr. 345T-2, 20 mm thick diaphragm flange plate. The QA Inspector noted approximately 30 minutes of down time as ZPMC was performing maintenance on the template for the hydraulic press. Once the maintenance was complete, the QA Inspector witnessed cold bending of the 20mm thick plate (see digital picture below). Once the cold bending was completed the inside radius was verified by ZPMC personnel with a wooden template (see digital picture below). The QA Inspector was informed by QC personnel Lay Tao that the plate will be transported to bay 7 for welding.

**Bay 1**

The QA Inspector spent the majority of the shift in bay 1 receiving training from QA Inspector Kenneth Riley on the production monitoring and the inspection procedures of the deck plate U-rib welding. The QA Inspector assisted Mr. Riley on visual inspection documentation for DP275-001, weld joint (WJ) 5 and weld joint 6. The QA Inspector later witnessed sub-merged arc welding (SAW) performed on welding gantry machine 1 for DP300-001, WJ-1, WJ-2, WJ-5, WJ-6. The QA Inspector noted the start time at 2030 hrs and the completion time at 2109 hrs. This was the final weld pass for these weld joints. The weld parameters for all four welding heads

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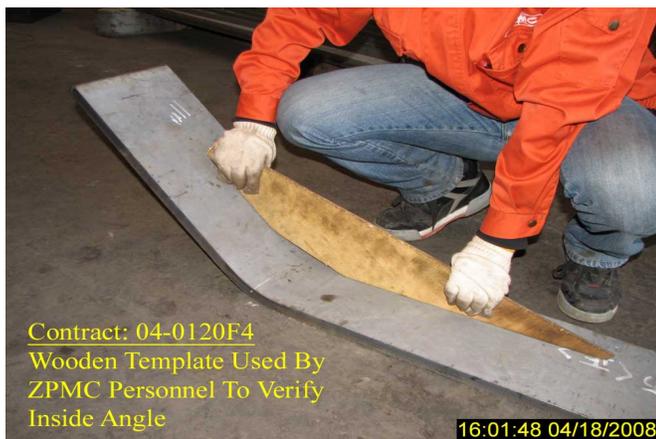
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were documented between 680 and 690 amperes, 24.5 to 25.5 volts with a travel speed of 518 mm per minute. The QA Inspector noted U-rib number designations 52 and 113 for WJ-1 and WJ-2. The QA Inspector also noted U-rib designations 138 and 49 for WJ-5 and WJ-6. The material at this location is designated as A709M, Gr. 345T2-X. The welding and workmanship observed at this location appeared to comply with the contract specifications and the general requirements of welding procedure specification (WPS)-B-T-2342-U1(U-rib)-3.



### Summary of Conversations:

As noted above in contents 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Leach,Ed	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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