

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003317**Date Inspected:** 29-Jul-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Makhmud Ashadi**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:** Tower, Deviation and Jacking Saddles**Summary of Items Observed:**

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes was present during the welding of the structural steel components for the West Deviation Saddles relative to this project. The following was observed:

**Fabrication Shop # 4**

At the start of the shift the QA inspector traveled to the Fabrication Shop # 4 to observe the work scheduled on this shift for the West Deviation Saddle Identified as W2E2. Upon the arrival at the fabrication shop the QA inspector observed Japan Steel Works, Ltd. (JSW) welding personnel Sotoru-Watanabe ID 08-5159 and Yuichi-Arai ID 5157 perform the Partial Joint Penetration (PJP) groove welding utilizing the Welding Procedure Specification (WPS) identified as SJ-3011-1 and the Distortion Control Plan Document Number SJ-3109 Rev. 1. The WPS and the JSW Distortion Control Plan was also used by the Intertek Testing Service (ITS) Quality Control (QC) Inspector Makhmud Ashadi as a reference during verification of the welding parameters. The Shielded Metal Arc Welding (SMAW) of the structural steel stem plate to base plate connection identified as E2S-2L appeared to comply with the AWS D1.5-2002 joint designation TC-P5 which was performed in the Horizontal Position (2G) with the work in the vertical plane and with the axis of the weld horizontal. The PJP welding was performed as per Step 1, Attachment 6 of the JSW Distortion Control Plan Revision 1.

The consumable used appeared to be a product of Hobart Brothers and was identified as a Hoballoy 9018-M, with a diameter size of 4.8 mm which appeared to comply with the AWS Specification A5.5 and AWS Classification E9018-M H4R.

The QA inspector observed the QC inspector, Makhmud Ashadi verify the preheat temperatures which appeared to be 185 Celsius and the welding parameters which were observed as follows, 250 AC amps and 24 AC volts with a travel speed measured at 140 millimeters per minute (mm/m).

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

The welding parameters were verified by the QC inspector utilizing a Hioki 3109 Clamp Meter, Model RMS during the verification process. The calibration dates of the measuring instruments utilized by the QC inspector, the clamp amp/volt meter and the digital surface thermometer, were previously verified by this QA inspector.

Later in the shift, at random intervals, the QA inspector observed QC inspector, Makhmud Ashadi perform the following QC activities, verification of the preheat temperatures, the welding parameters and performing visual weld inspection.

The QA inspector's observations were performed at random intervals during the shift. The QA inspector noted that it appeared the approved and latest revised WPS's were posted at the welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding parameters, preheat and interpass temperatures were verified by the QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators for the surface temperatures. The filler metal utilized by the JSW welding personnel was also verified. The QC inspector ITS personnel, Mukhmud Ashadi appeared to perform the visual weld examinations, monitoring of the welding and the verification of the welding parameters in accordance with the contract documents.

### Summary of Conversations:

There were no pertinent conversations relative to the project on this date.

### 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 Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Reyes,Danny	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

---