

**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 #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003382**Date Inspected:** 30-Jul-2008**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Japan Steel Works**OSM Arrival Time:****OSM Departure Time:****Location:** Muroan, Japan**CWI Name:** Kuan Chung**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, Jacking and Deviation Saddle**Summary of Items Observed:**

The following report is based on METS observations at Japan Steel Works (JSW) in Muroan Japan. Current work: Casting, machining and repair of Saddles.

At 1000 hours, the Caltrans Quality Assurance (QA) inspector arrived at JSW fabrication shop number 4 and observed a procedure qualification test designated GJ6-3402 SW-12-1,2, and 3 performed by JWS welding personnel Mr. K. Sadakawa, ID06-2929. The welding was performed utilizing the Shield Metal Arc Welding Process in the Flat (1F), Horizontal (2F) and Vertical up (3F) positions. The filler metal appeared to be Hoballoy, E-9018M AWS designation A5.5, 4.0mm and 4.8 mm diameter. The welding was performed per the AWS D1.5, 2002 Section 5.10.3 and Figure 5.8 requirements. The Intertek QC inspectors, Mr. Kuan Chung checked welding parameter and recorded the preheat and interpass temperatures, the average amperage, voltage and the travel speed for all weld passes. The QA inspector observed that the welder Mr. Sadakawa ground each weld pass to smooth bright finish prior to starting the next weld pass. The welding of these plates was completed on this date. The QA inspector noted that the welding appeared to meet the minimum requirements of AWS D1.5-2002 and the contract documents.

**NDT Inspection (Foundry Shop)**

On this date the QA representative Dong J, Shin traveled to JSW foundry shop, QA Inspector observed NISC NDT Technician Mr. M. Wada and Mr. Y. Osanai perform ultrasonic testing on Casting W2E1. Ultrasonic testing was performed after Post Weld Heat Treatment. QA Inspector Mr. Dong j. Shin has checked Ultrasonic testing machine calibrations, DAC, and scanning patterns. Results meet approved test procedures and ASTM 609M.

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NDT Inspection Fabrication Shop#4

The QA inspector periodically observed The Nikko Inspection Services (NIS) QC/NDT technicians Mr. Kazuya Kobayashi perform magnetic particle (MT) testing of West Deviation Saddle base W2E2. The MT testing on previous root pass and first root pass of multi root pass of stem plate to base plate root weld. The MT was performed in accordance with ASTM standard E709, using the yoke method. The yoke utilized appeared to be model VM3, serial numbers 97049. The yoke dead lift was verified with a 4.65kg test plate. The magnetic field was verified with a field indicating gauge (pie gauge) with red dry powder. All calibrations appear to meet the minimum requirements of ASTM E709. The testing was evaluated in accordance with the contract special provisions.

**Summary of Conversations:**

No specific conversations.

**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.

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