

**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-008633**Date Inspected:** 21-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Japan Steel Works**Location:** Muroran, Japan

<b>CWI Name:</b>	Chung Fu Kuan		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** Tower, Jacking, and Deviation Saddles**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. Art Peterson was present during the times noted above for observations relative to the work being performed in Fabrication shop #4 and the Foundry at Japan Steel Works.

**Fabrication Shop #4:**

**Weld Operation in-process on Middle Stiffeners of Saddle: Tower Saddle Segment T1-3**

The QA Inspector observed the partial-joint penetration (PJP) tee-joint groove (fill pass) weld operation on the 2nd side of the middle stiffener plates to the rib (cast section) and the trough (cast section) of tower saddle T1-3. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the PJP groove weld operation that the minimum preheat temperature of 150 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. K. Kobayashi (08-5023) on stiffener plate no. 9ST-21, Mr. J. Yaegashi (07-2941) on stiffener plate no. 9ST-24, and Mr. M. Kato (08-5018) on stiffener plate no. 9ST-22 were in compliance with WPS SJ-3012-8-2 per the FCAW process in the (2G) horizontal position using (1.6) mm diameter TM55 electrode. The QA Inspector observed that the PJP tee-joint groove (fill pass) weld operation on the 2nd side of the middle stiffener plates were in-process at the end of the QA Inspectors' shift.

**Gouging / Grinding Operation in-process on Saddle: West Deviation Saddle Segment W2-W3**

The QA Inspector observed JSW personnel performing the air-carbon-arc gouge operation and the grinding operation on the edge of the ribs to remove the (stay bar) that was attached as a temporary attachment during the weld operation for dimensional and distortion control. The QA Inspector observed that the air-carbon-arc gouge and grinding operation to remove the stay bar was in process on west deviation saddle segment W2-W3 at the end of the QA Inspectors' shift.

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ABF-RFI-001811R00: Modified MC Shapes for East Saddle Rocker Bearing Plates E2-E1 and E2-W1

1) The QA Inspector observed (1) JSW welding personnel Mr. Y. Watanabe (73-3873) performing the fillet weld operation per the SMAW process in the (2F and 3F) horizontal and vertical positions on the (8) each JIS channel 3350 (150 \* 75 \* 75) fit-up to the modified Miscellaneous Channel (MC) shape (13 \* 31.8) for east saddle rocker bearing plate E2-W1. See ABF-RFI-001811R00 for the purpose of the modification on the MC shape. The fillet weld operation was performed on the JIS channel to the top flange of the modified MC shape after the east saddle rocker bearing plate was re-positioned. On this date, the QA Inspector observed that the total time spent to re-position the rocker bearing for the weld operation was (2) hours each for (3) JSW crane personnel, and (4) hours each for (2) JSW welding personnel to set-up the staging and secure the rocker bearing plate in its position prior to the start of the fillet weld operation. The QA Inspector also observed that the total time spent performing the fillet weld operation on the JIS channel to the MC shape for east saddle rocker bearing plate E2-W1 was (4) hours for (1) JSW welding personnel and (1) ABF/JV Representative Certified Weld Inspector (CWI) was present during the fillet weld operation for a total time of (4) hours.

## Foundry:

Grinding Operation in-process on Saddle: East Saddle E2-E1 (cast saddle)

The QA Inspector observed (2) JSW personnel performing the grinding operation on the major excavation and minor excavation repair welds previously performed on east saddle E2-E1. The purpose of the JSW personnel performing the grinding operation is to grind the repair welds to an acceptable profile in accordance with ASTM A802 surface quality category (J) - (metal removal marks- welds) to a visual quality level (3). The QA Inspector observed that the grinding operation was in-process at the end of the QA Inspectors' shift.

Defect Removal Operation in-process on Cast Saddle: West Jacking Saddle

The QA Inspector observed that JSW personnel were in-process on the air-carbon-arc gouging operation on the 2nd side of the west jacking saddle to remove NDT rejectable indications located on the exterior of the trough section, stem section, rib sections, and base plate at various locations along its length. The rejectable indications were previously marked up by the Nikko Inspection Services (NIS) QC NDT Personnel from the liquid penetrant test (PT), magnetic particle test (MPT), and the ultrasonic test (UT) inspection performed on the exterior of the trough section, stem section, rib sections, and base plate of the west jacking saddle. The QA Inspector observed that the air-carbon-arc gouging operation was in-process on one side of the west jacking saddle at the end of the QA Inspectors' shift.

Unless otherwise noted, all observations reported on this date appeared to be in general compliance with the applicable contract specifications.

## Summary of Conversations:

No significant conversations were reported 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 Nina Choy, 510 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Peterson, Art	Quality Assurance Inspector
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<b>Reviewed By:</b>	Guest, Kittric	QA Reviewer
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