

**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-008148**Date Inspected:** 03-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:**

Tack-Weld Operation of Middle Stiffener Plates in-process on Saddle: Tower Saddle Segment T1-3

The QA Inspector observed the tack-weld operation on the middle stiffener plates fit-up 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 tack-weld operation that the minimum preheat temperature of 150 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. Y. Ohta (08-2017) on middle stiffener plate no. 9ST-19, 9ST-20, and 9ST-21 were in compliance with WPS SJ-3012-8-1 per the SMAW process in the (3G) vertical position using (4.0) mm diameter LB-52A electrode. The QA Inspector observed that the tack-weld operation was in-process at the end of the QA Inspectors' shift.

Post Weld Heat Treatment Operation completed on Saddle: West Deviation Saddle Segment W2-W2

The QA Inspector observed that the post weld heat treatment (PWHT) stress relief operation was completed on west deviation saddle W2-W2. The JSW Representative Mr. Hideaki Kon informed the QA Inspector that the next operation to be performed will be the blast cleaning operation.

Weld Operation in-process on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed the partial-joint penetration (PJP) groove (fill pass) 2nd side weld operation on the rib

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plate (built-up section) to rib (cast section) of west deviation saddle segment W2-W3. 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 160 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. S. Watanabe (08-5159) on weld joint no. W3Y-15U and Mr. T. Watanabe (08-5153) on weld joint no. W3Y-16U were in compliance with WPS SJ-3011-6 per the FCAW process in the (1G) flat position using (1.6) mm diameter TM95 electrode. The QA Inspector observed that the PJP groove (fill pass) 2nd side weld operation was in-process at the end of the QA Inspectors' shift.

### Foundry:

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

The QA Inspector observed the grinding operation on the major excavation and minor excavation repair welds on east saddle E2-E1. The JSW personnel will perform the grinding operation to profile the repair welds to an acceptable profile in accordance with ASTM A802 surface quality category (J) - (metal removal marks- welds) quality level (3). The JSW Representative Mr. Hideaki Kon informed the QA Inspector that the blast cleaning operation will be performed after the grinding operation has been completed.

NDT Operation in-process on Saddle: West Jacking Saddle (cast saddle)

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Personnel Mr. N. Osawa (#340) performing the ultrasonic test (UT) inspection on the rib section and trough section on the exterior of the west jacking saddle. The UT inspection was performed in accordance with ASTM A609M to the acceptance criteria outlined in Table 2 of ASTM A609M. The UT acceptance quality level (1) is applied to within (30) mm of thickness on the exterior and interior surface for the full length of the trough as shown on the plans and UT acceptance quality level (3) is applied to the areas outside of (30) mm of thickness on the exterior and interior surface for the full length of the trough and also on the full thickness of the rib sections as shown on the plans. The areas inspected were marked with (300 x 300) mm grid lines on the exterior of the trough and rib sections for record purposes, identification, and guidance in scanning. The QA Inspector observed that the UT inspection was in-process 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
<b>Reviewed By:</b>	Guest, Kittric	QA Reviewer

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