

**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-006767**Date Inspected:** 20-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**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 the Foundry shop and ultrasonic QA verification inspection in Machine Shop #4 at Japan Steel Works.

**Machine Shop #4:**

Ultrasonic Verification Inspection on Saddle: Tower Saddle Segment T1-1 (rib plate to base plate corner joint weld)

The QA Inspector performed UT verification inspection on complete-joint penetration groove corner weld joint no. 7Y-9L-2 after the final post weld stress relief heat treatment operation on the rib plate (steel section) to base plate (steel section) in accordance with AWS D1.5-2002 section 6.13 and to the UT acceptance-rejection criteria-compressive stress in Table 6.4. The QA Inspector was verifying recordable indication data submitted by JSW to Caltrans on UT examination record I.R. No. SF-3402 UT3 in which NIS (QC) NDT personnel Mr. K. Mukaiyama rated the recordable indication as Class "D" acceptable indication scanned from the "B" face. The QA Inspector performed the ultrasonic verification inspection of the same indication scanned from the "B" face and rated the indication also as a Class "D" acceptable indication. Afterwards, the QA Inspector performed the ultrasonic verification inspection scanned from the "A" face and rated the same indication previously detected from the "B" face as a Class "A" rejectable indication. The QA Inspector notified JSW Representative Mr. Kazunori Sato of the QA Inspectors' findings and Mr. Sato informed the QA Inspector that he would notify Nikko Inspection Services (NIS) QC NDT Inspection Personnel to re-evaluate the the Class "A" rejectable indication scanned from the "A" face to verify if the NIS QC NDT Inspection Personnel agree with the QA Inspectors' findings scanned from the "A" face. Mr. Sato informed the QA Inspector that NIS will carry out their ultrasonic inspection on May 21st 2009.

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See Ultrasonic Test Inspection Report TL-6027 dated May 20th 2009 for details of equipment used and detailed information regarding the Class "A" rejectable indication detected during the QA Inspectors' ultrasonic verification inspection on tower saddle segment T1-1 rib plate to base plate corner weld joint no. 7Y-9L-2.

### Foundry Shop:

Storage of Saddle: West Deviation Saddle Segment W2-W2 (cast section)

The QA Inspector observed that west deviation saddle segment W2-W2 (cast section) is located in the Foundry Shop for storage until west deviation saddle segment W2-W2 (steel section) is ready for the fit-up operation. On this date, the QA Inspector observed that no work was performed on west deviation saddle segment W2-W2 (cast section).

Storage of Saddle: West Deviation Saddle Segment W2-W3 (cast section)

The QA Inspector observed that west deviation saddle segment W2-W3 (cast section) is located in the Foundry Shop for storage until west deviation saddle segment W2-W3 (steel section) is ready for the fit-up operation. On this date, the QA Inspector observed that no work was performed on west deviation saddle segment W2-W3 (cast section).

NDT Operation pending on Saddle: East Saddle E2-E1 (cast saddle)

The QA Inspector observed that JSW were in process on moving east saddle E2-E1 (cast saddle) in the Foundry Shop to an area where the NDT inspection by the liquid penetrant test (PT) method, magnetic particle test (MPT) method and ultrasonic test (UT) method will be performed on the interior and exterior of the trough section and on the rib sections. The JSW personnel previously performed the scarfing operation by air-carbon-arc method to remove excess cast material on the rough casting of the saddle and subsequently the grinding operation to profile the areas to a smooth finish for NDT inspection. On this date, the QA Inspector observed that east saddle E2-E1 (cast saddle) was being re-located to an area so the NDT inspection can be performed.

NDT Operation pending on Saddle: East Saddle E2-W1 (cast saddle)

The QA Inspector observed that JSW personnel were performing the grinding operation of the excavated areas to ensure the complete removal of rejectable indications marked up by Nikko Inspection Services (NIS) QC NDT Inspector Mr. H. Kohama (#86) at locations on the outside of the trough section and rib sections of east saddle E2-W1 (cast saddle). The rejectable indications were detected by Mr. H. Kohama during the liquid penetrant test (PT) and the magnetic particle test (MPT) inspection of the excavated areas. Once the grinding operation is completed, the NIS QC NDT Inspection Personnel will perform a re-inspection by the liquid penetrant test (PT) method and magnetic particle test (MPT) method of the excavated areas to ensure that the rejectable indications are completely removed prior to the start of the repair weld operation. The QA Inspector observed that the grinding operation of the excavated areas were in process at the end of the QA Inspectors' shift.

NDT Operation on Saddle: West Jacking Saddle (cast saddle)

The QA Inspector was informed by JSW Representative Mr. Hideaki Kon that the staging is being set-up around the west jacking saddle to provide access for the Nikko Inspection Services (NIS) QC NDT personnel to perform the liquid penetrant test (PT), magnetic particle test (MPT), and the ultrasonic test (UT) inspection on the rough machined surfaces of the west jacking saddle. The QA Inspector observed that the staging was still being set-up around the west jacking saddle at the end of the QA Inspector's shift.

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

**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>	Lanz, Joe	QA Reviewer
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