

**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-008820**Date Inspected:** 01-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Chung Fu Kuan**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 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:**

NDT Operation in-process on Saddle: Tower Saddle Segment T1-3

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. R. Kumagai (#132) performing the magnetic particle test (MPT) inspection (dry method) on the partial-joint penetration (PJP) groove and fillet welds on the upper, middle, and lower stiffener plate prior to the final post weld heat treatment (PWHT) stress relief operation of tower saddle T1-3. The QA Inspector observed that the MPT inspection was in-process at the end of the QA Inspectors' shift.

Final Post Weld Heat Treatment Operation pending on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed that west deviation saddle segment W2-W3 is in preparation to have the final post weld heat treatment (PWHT) stress relief operation performed on the saddle segment.

Fillet Weld Operation in-process on Pipe Sleeves for the West Deviation and West Jacking Saddles

The QA Inspector observed the fillet weld operation being performed on the pipe sleeves- ASTM A709M Grade 345 steel flanges fit-up to each end of the ASTM A106 (2") schedule 80 pipe to the lengths of (1008.7), (1019.0), and (1020.7) mm (+ 0 / - 3) for the west deviation and the west jacking saddles. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the fillet weld operation that the minimum preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

---

personnel Mr. M. Yamashita (73-4195) were in compliance with WPS SJ-3177-5 per the SMAW process in the (2F and 3F) horizontal and vertical positions using (4.0) mm diameter LB52 electrode. The QA Inspector observed that the fillet weld operation was in-process on the pipe sleeves at the end of the QA Inspectors' shift.

Fillet Weld Operation in-process on Bearing Blocks to Rocker Bearing Plate Assembly: East Saddle E2-E1

The QA Inspector observed the fillet weld operation on the bearing blocks fit-up to the bearing plate on rocker bearing plate assembly for E2-E1. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the weld operation that the minimum preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. T. Sudo (03-3082) and Mr. T. Ohkama (03-3091) fillet welding the bearing block piece mark no. 21-4 to bearing plate piece mark no. 21-1 were in compliance with WPS SJ-3177-4 per the SMAW process in the (2F) horizontal position using (4.0) mm diameter LB52A electrode. The QA Inspector observed that the fillet weld operation was in-process at the end of the QA Inspectors' shift.

Foundry:

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

The QA Inspector observed Nikko Inspection Services (NIS) Non-Destructive Testing (NDT) Quality Control (QC) Inspector Mr. H. Kohama was in preparation to perform the magnetic particle test (MPT) inspection and ultrasonic test (UT) inspection on east saddle E2-E1 by performing the layout operation- marking (300 x 300) mm grid lines on the rib sections, stem section, and the interior and exterior of the trough for record purposes, identification, and guidance in scanning. The QA Inspector observed that the layout operation was in-process on east saddle E2-E1 by the end of the QA Inspectors' shift.

Excavation Maps in-process on Cast Saddle: West Jacking Saddle

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. N. Osawa (#340) preparing the major and minor repair excavation maps that will be submitted as an engineering communication sheet (ECS) to American Bridge Fluor (ABF) for approval by the Caltrans Engineer to perform the major repair excavations prior to the start of the repair weld operation. The excavated areas were previously inspected by NIS QC NDT Inspector Mr. K. Nishida (#311) and Mr. A. Seino (#82) by the liquid penetrant test (PT) method and the magnetic particle test (MPT) method to verify and ensure the complete removal of the rejectable cast indications. The QA Inspector observed that the preparation of the major and minor excavation maps for the west jacking saddle 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 at (510) 385-5910, who represents the Office of Structural Materials for your project.

---

---

# WELDING INSPECTION REPORT

*( Continued Page 3 of 3 )*

---

---

<b>Inspected By:</b>	Peterson, Art	Quality Assurance Inspector
----------------------	---------------	-----------------------------

<b>Reviewed By:</b>	Guest, Kittric	QA Reviewer
---------------------	----------------	-------------