

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-008782**Date Inspected:** 24-Aug-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:

Weld Operation in-process on Lower and Upper Stiffener plates of Saddle: Tower Saddle Segment T1-3

The QA Inspector observed the fillet and partial-joint penetration (PJP) tee-joint groove (fill pass) weld operation on the 2nd side of the lower and upper stiffener plates to the rib (cast section) and the trough (cast section) and the rib plate (built-up section) to stem plate (built-up 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 for the upper stiffener plates and 110 degrees Celsius for the lower stiffener plates and the welding parameters of JSW welding personnel Mr. T. Kawakami (08-5079) on lower stiffener plate no. 9ST-30, Mr. M. Kashiwada (08-2008) on lower stiffener plate no. 9ST-29, Mr. M. Kubota (74-3666) on lower stiffener plate no. 9ST-26, and Mr. R. Iizuka (06-2643) on upper stiffener plate no. 9ST-13 were in compliance with WPS SJ-3012-2, WPS SJ-3012-3, and WPS SJ-3012-8-2 per the FCAW-G and SMAW process in the (2F) horizontal position using (1.6) mm diameter TM55 electrode and (4.0) mm diameter LB52 electrode. The QA Inspector observed that the fillet and PJP tee-joint groove (fill pass) weld operation on the 2nd side of the lower and upper 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

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operation on the edge of the base plate where the excess material was fabricated into the plate to weld the temporary attachments 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 excess material was in process on west deviation saddle segment W2-W3 at the end of the QA Inspectors' shift.

Fit-up and Tack-Weld Operation in-process on Pipe Sleeves for the West Deviation and West Jacking Saddles

The QA Inspector observed the fit-up and tack-weld operation of the ASTM A709M Grade 345 steel flange to ASTM A106 (2") schedule 80 pipe to a length of (998.5) mm (+ 0 / - 3) for the pipe sleeves on 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 tack-weld operation that the minimum preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. K. Koyanagi (08-5144) and Mr. Y. Ohta (08-2017) were in compliance with WPS SJ-3012-5 per the SMAW process in the (2F) horizontal position using (4.0) mm diameter LB52 electrode.

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. K. Nakasato (91-2247) installing the preheat tubes under east saddle rocker bearing plate E2-W1 in preparation to perform the fillet weld operation per the SMAW process in the (2F) horizontal position at (8) locations where the (70) mm radius was cut into the bottom flange of the modified Miscellaneous Channel (MC) shape (13 * 31.8). See ABF-RFI-001811R00 for the purpose of the modification on the MC shape. On this date, the QA Inspector observed that the total time spent in installing the preheat tubes under the rocker bearing plate in preparation for the fillet weld operation on the bottom flange of the modified MC shape was (8) hours for (1) JSW welding personnel.

Foundry:

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

The QA Inspector observed (2) JSW personnel were in process 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 still in-process at the end of the QA Inspectors' shift.

Defect Removal Operation completed on Cast Saddle: West Jacking Saddle

The QA Inspector observed that the JSW personnel completed the air-carbon-arc gouging operation on 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 next operation to be performed is the grinding operation to prepare the excavated areas for the visual, PT, and MT inspection to ensure the rejectable indications were completely removed.

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

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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.

Inspected By:	Peterson, Art	Quality Assurance Inspector
Reviewed By:	Guest, Kittric	QA Reviewer
