DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-008631
Date Inspected: 19-Aug-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Muroran, Japan

CWI Name: Chung Fu Kuan

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ 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 Middle Stiffeners of Saddle: Tower Saddle Segment T1-3

The QA Inspector observed the partial-joint penetration (PJP) tee-joint groove weld operation on 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. T. Watanabe (08-5169) on stiffener plate no. 9ST-20, Mr. M. Kato (08-5018) on stiffener plate no. 9ST-24 and Mr. J. Yaegashi (07-2941) on stiffener plate no. 9ST-21 were in compliance with WPS SJ-3012-8-2 per the FCAW-G process in the (2F) horizontal position using (1.6) mm diameter TM55 electrode. The QA Inspector observed that the PJP groove weld operation was in-process at the end of the QA Inspectors' shift.

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

The QA Inspector observed JSW personnel performing the grinding operation on the cover passes of the partial-joint penetration (PJP) groove welds on the stem plate (built-up section) to stem (cast section) of west deviation saddle segment W2-W3. The JSW personnel were grinding on the cover passes of the PJP groove welds to a visual acceptable profile prior to Quality Control (QC) Inspector Mr. Chung Fu Kuan performing a visual

inspection for acceptance in accordance with the approved shop drawings and AWS D1.5-2002 Section 3.6. The QA Inspector observed that the grinding operation was in process on west deviation saddle segment W2-W3 at the end of the QA Inspectors' shift.

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

1) The QA Inspector observed (1) JSW personnel Mr. K. Koyanagi (08-5144) completing the grinding operation around the (8) each 70 mm radius copes to remove the sharp edges from the cutting operation on the upper and lower flanges of the modified Miscellaneous Channel (MC) shape (13 * 31.8) for east saddle rocker bearing plate E2-E1. The MC shape was modified as per ABF-RFI-001811R00. The QA Inspector observed that the total time spent completing the grinding operation on the MC shape for east saddle rocker bearing plate E2-E1 was (4) hours.

2) The QA Inspector observed the fit-up and tack-weld operation of the (8) each JIS channel 3350 (150 * 75* 75) to the MC shape (13 * 31.8). The QA Inspector observed (2) JSW personnel Mr. K. Koyanagi (08-5144) and Mr. Y. Ohta (08-2017) performing and completing the tack-weld operation per the SMAW process in the (3F) vertical position on the (8) each JIS channel 3350 (150 * 75 * 75) fit-up to the MC shape (13 * 31.8) for east saddle rocker bearing plate E2-W1. The QA Inspector observed that the total time spent completing the fit-up and tack-weld operation was (4) hours each for the (2) JSW personnel. The QA Inspector also observed that Certified Weld Inspector (CWI) Mr. Chung Fu Kuan was present during the fit-up and tack-weld operation for a total time of (4) hours.

3) The QA Inspector observed (1) JSW personnel Mr. Y. Ohta (08-2017) performing the fillet weld operation after east saddle rocker bearing plate E2-W1 was clamped down onto the fixture using the dog plate and wedge technique and the fillet weld operation was performed on the dog plates fit-up to the fixture around the perimeter of the (100) mm thick rocker bearing plate. The QA Inspector observed the total time spent on the fillet weld operation was (4) hours until the end of the QA Inspectors' shift. The QA Inspector also observed that CWI Mr. Chung Fu Kuan was present during the fillet weld operation of the dog plates fit-up to the fixture for a total time of (4) hours until the end of the QA Inspectors' shift.

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 started the the air-carbon-arc gouging operation on one 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.

WELDING INSPECTION REPORT

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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.

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