

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-009214**Date Inspected:** 14-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		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	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:

Repair Weld Operation in-process on West Deviation Saddle Segment W2-E3

The QA Inspector observed the repair weld operation being performed on an excavated area- (215 mm in length x 24.5 mm in width x 10.5 mm in depth) on the stem (cast section) to stem plate (built-up section) of weld joint no. E3S-2U. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the repair weld operation that the minimum preheat temperature of 170 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. Y. Watanabe (73-3873) were in compliance with WPS SJ-3011-9 per the SMAW process in the (2G) horizontal position using (4.0) mm diameter E9018 electrode. The QA Inspector observed that the repair weld operation was in-process on the excavated area at the end of the QA Inspectors' shift.

Final 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 final magnetic particle test (MPT) inspection (dry method) on the partial-joint penetration (PJP) and complete-joint penetration (CJP) butt and tee joint groove welds after the final post weld heat treatment stress relief operation on the rib (cast section) to rib plate (built-up section), stem (cast section) to stem (built-up section), rib plate (built-up section) to base plate, and stem plate (built-up

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section) to base plate on tower saddle segment T1-3. The MPT inspection was in accordance with Section 6.7.6.1 and to the acceptance-rejection criteria in Section 6.26.2.2. The QA Inspector observed that the MPT inspection was in-process at the end of the QA Inspectors' shift.

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

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. M. Sato (#81) performing the final magnetic particle test (MPT) inspection (dry method) on the partial-joint penetration (PJP) butt and tee joint groove welds after the final post weld heat treatment stress relief operation on the rib (cast section) to rib plate (built-up section), stem (cast section) to stem (built-up section), rib plate (built-up section) to base plate, and stem plate (built-up section) to base plate on west deviation saddle segment W2-W3. The MPT inspection was in accordance with Section 6.7.6.1 and to the acceptance-rejection criteria in Section 6.26.2.2. The QA Inspector observed that the MPT inspection was in-process at the end of the QA Inspectors' shift.

VT and MT Inspection completed on Rocker Bearing Plate Assembly: East Saddle E2-E1

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. R. Kumagai (#132) completed the final visual test (VT) inspection and magnetic particle test (MPT) inspection of the fillet welds on the bearing blocks and the miscellaneous channel (MC) shapes welded to the rocker bearing plate for east saddle E2-E1.

QA NDT Verification of Saddle: Tower Saddle Segment T1-3 (cast section to steel section)

The QA Inspector performed ultrasonic test (UT) verification inspection on complete-joint penetration (CJP) butt-groove weld joint no. 9Y-5U-1 after the final post weld heat treatment (PWHT) stress relief operation was completed on the rib (cast section) to rib plate (built-up section) in accordance with AWS D1.5-2002 section 6.13 and to the UT acceptance-rejection criteria for compressive stress in Table 6.4. The QA Inspector verified that the UT inspection results were in compliance with Table 6.4. See Ultrasonic Test Inspection Report TL-6027 dated September 14th 2009 for details of equipment used and location of inspection on weld joint no. 9Y-5U-1 of tower saddle segment T1-3.

Foundry:

In-process NDT Operation completed on Saddle: East Saddle E2-E1 (cast saddle)

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) personnel Mr. H. Kohama (#86) completed the magnetic particle test (MPT) inspection (wet method) on east saddle E2-E1 of the as finished surface on the base plate- level (3) area as shown on the plans of east saddle E2-E1.

Engineering Communication Sheet (ECS) completed on Cast Saddle: West Jacking Saddle

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. N. Osawa (#340) completed the minor repair excavation map on the west jacking saddle. The JSW Representative Mr. Hideaki Kon informed the QA Inspector that the NIS QC Inspection personnel completed the engineering communication sheet (ECS) for the minor repair excavations prior to the start of the minor repair weld operation. The major and minor repair weld operation is tentatively scheduled to start on September 23rd, 2009.

Unless otherwise noted in this report, all observations reported on this date appeared to be in general compliance

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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.

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