

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-006226**Date Inspected:** 09-Apr-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

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 Foundry at Japan Steel Works.

Fabrication Shop #4

NDT operation of Saddle: Tower Saddle Segment T1-1 (cast and steel section)

The QA Inspector observed NIS NDT personnel Mr. M. Sato (#81) performing the ultrasonic test (UT) inspection on the rib to base plate complete-joint penetration double groove skewed T joint welds of tower saddle segment T1-1. The UT inspection was performed on rib plate- (130) mm thick weld no. 7-9 (-1). The QA Inspector observed that the UT inspection was in process at the end of the QA Inspectors' shift.

Machining of Saddle: West Deviation Saddle Segment W2-E2 (cast and steel section)

The QA Inspector observed that west deviation saddle segment W2-E2 is located in Machine Shop #2 to have the final machining performed. The QA Inspector observed that the machining was in-process on this date.

Storage of Saddle: West Deviation Saddle Segment W2-E1 (cast and steel section)

The QA Inspector observed that west deviation saddle segment W2-E1 is located in fabrication shop #4. The QA Inspector observed that no work was performed on this date.

Storage of Saddle: Tower Saddle Segment T1-3 (steel section)

The QA Inspector observed that tower saddle segment T1-3 (steel section) is located in fabrication shop #4 for

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storage until tower saddle segment T1-3 (cast section) is ready for the fit-up operation. The QA Inspector observed that no work was performed on this date.

Grinding Operation of Saddle: West Deviation Saddle Segment W2-E3 (steel section)

The QA Inspector observed that JSW personnel completed the grinding operation on the rib plate's and stem plate's prepared edges (faces of double bevel grooves) of west deviation saddle W2-E3 (steel section). The QA Inspector observed that no work was performed on this date.

Grinding Operation of Saddle: West Deviation Saddle Segment W2-W1 (steel section)

The QA Inspector observed that JSW personnel were performing the grinding operation on west deviation saddle segment W2-W1 (steel section). The JSW personnel were grinding on the lands of the double bevel groove areas where the machining of the lands for the mill to bear surface requirement was not accessible. The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Re-positioning locations of welding on Saddle: Tower Saddle Segment T1-2 (cast and steel section)

The QA Inspector observed that JSW personnel were re-positioning the equipment and changing the location of the welding operation to a more suitable position prior to the start of the partial-joint penetration (PJP) and complete-joint penetration (CJP) groove weld operation on rib (steel section) to rib (cast section) of tower saddle segment T1-2. The QA Inspector observed that the re-positioning of equipment was in process at the end of the QA Inspectors' shift.

Temporary attachments on Saddle: West Deviation Saddle Segment W2-W2 (steel section)

The QA Inspector observed JSW welding personnel Mr. R. Iizaka (06-2643) welding temporary attachments per the FCAW process in the (3G) vertical position to the edge of the base plate to minimize the distortion to the base plate prior to the start of the rib to base plate welding operation. The Quality Control Inspector Mr. Chung Fu Kuan informed the QA Inspector that JSW uses their in-house weld procedure specifications to perform the welding of the temporary attachments to the edge of the base plate. The QA Inspector observed that the welding of the temporary attachments to the base plate was in process at the end of the QA Inspectors' shift.

Buttering operation on Saddle: Tower Saddle Segment T1-3 (cast section)

The QA Inspector observed the buttering weld operation on the square edge of the ribs (cast section) on tower saddle T1-3. The QA Inspector observed QC Inspector Mr. Chung Fu Kuan verify prior to the start of the welding operation that the preheat temperature of 150 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. T. Mitsui (07-4828) on rib (cast section) 9Y-10U was in compliance with WPS SJ-3012-1-1 per the SMAW process in the horizontal position. The QA Inspector observed that the buttering weld operation was completed at the end of the QA Inspectors' shift.

Foundry Shop:

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

The QA Inspector observed NIS NDT personnel Mr. H. Kohama performing the magnetic particle test (MPT) inspection (wet method) on west deviation saddle W2-W2 (cast section) on the as finished surface of level 1 areas on the inside of the trough section of the saddle. The NIS NDT Inspector verified the lifting force and the sensitivity of the yoke prior to the start of the MPT inspection. The QA Inspector observed that the MPT inspection was in process at the end of the QA Inspectors' shift.

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Shaping operation of Saddle: East Saddle E2-E1

The QA Inspector observed that the shaping (scarfing) operation- (removal of cast material on the rough casting) outside of the trough section and on the rib sections of east saddle E2-E1 was completed on this date. The shaping operation has been completed on both sides of east saddle E2-E1 and JSW were in-process on moving the east saddle to an area to start the grinding operation of the shaped areas.

Grinding operation of Saddle: East Saddle E2-W1 (cast section)

The QA Inspector observed that JSW personnel completed the grinding operation of the shaped areas on the outside of the east saddle E2-W1 (cast section). The JSW personnel performed the grinding operation to profile the shaped areas on the trough section and stem section of the saddle to a smooth finish prior to the NDT operation. The QA Inspector observed that no work was performed on this date.

Storage of Saddle: West Deviation Saddle Segment W2-W1 (cast section)

The QA Inspector observed that west deviation saddle W2-W1 (cast section) is located in the storage yard prior to being moved into fabrication shop #4. The QA Inspector observed that no work was performed on west deviation saddle segment W2-W1 (cast section) on this date.

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

The QA Inspector observed JSW personnel performing the grinding operation on the areas that had both major and minor weld repairs performed on the trough, stem and rib sections of west deviation saddle W2-W3 (cast section). The QA Inspector observed that the grinding operation was in process on west deviation saddle W2-W3 (cast section) at the end of the QA Inspectors' shift.

Rough Machining operation: West Jacking Saddle (cast section)

The QA Inspector observed that the west jacking saddle (cast section) is located in machine shop #4 to have the rough machining performed on the west jacking saddle. The QA Inspector observed that no machining was performed on this date.

Buttering operation of Saddle: West Deviation Saddle Segment W2-E3 (cast section)

The QA Inspector observed JSW welding personnel Mr. H. Mitsumori (81-5438) performing the buttering operation-(overlay weld on cast material) inside of the trough section of west deviation saddle segment W2-E3 (cast section). The buttering operation was for the addition of temporary supports and Quality Control Inspector Mr. Chung Fu Kuan informed the QA Inspector that JSW uses their in-house weld procedure specifications to perform the overlay welding. The QA Inspector observed that the buttering operation was in process inside the trough at the end of the QA Inspectors' shift.

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

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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:	Lanz, Joe	QA Reviewer
