

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-005845**Date Inspected:** 30-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**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 at Japan Steel Works.

Welding Operation of Middle Stiffener plate to cast section of Tower Saddle: Tower Saddle Segment T1-1

The QA Inspector observed the partial-joint penetration groove weld operation on middle stiffener plates to tower saddle (cast section) of tower saddle segment T1-1. The QA Inspector observed QC Inspector Mr. Chung Fu Kuan verify prior to the start of the welding operation that the preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. T. Inoue (08-5163) on middle stiffener plate weld no. 7ST-14 and the welding parameters of JSW welding personnel Mr. T. Watanabe (08-5169) on middle stiffener plate weld no. 7ST-15 were in compliance with WPS SJ-3012-8-1 per the SMAW process in the (3G) vertical position. The QA Inspector observed that the welding operation was in process at the end of the QA Inspectors' shift.

Machining of Steel Segment: West Deviation Saddle Segment W2-E2

The QA Inspector observed that west deviation saddle segment W2-E2 is located in Machine Shop #2 to have the final machining performed. The JSW machinist was performing the milling operation on the inside of the trough section. The QA Inspector observed that the milling operation was in process at the end of the QA Inspectors' shift.

Rib 1-5: West Deviation Saddle Segment W2-E1 (After PWHT and Final Machining)

The QA Inspector observed that JSW personnel previously ground into the cross-sectional area on rib (cast section) to rib (steel section) Rib 1-5 (100) mm thick of west deviation saddle segment W2-E1. The JSW

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personnel ground into the partial-joint penetration groove welds' exposed land to attempt to remove the jagged linear indications tailing off of each end of the exposed land previously detected by the QA Inspector by the magnetic particle test method. The surface was polished to a mirror finish and the jagged linear indications are still present and the indications visually appear to form on the back-side of the shielded metal arc weld root pass. The QA Inspector measured the amount of base metal removed on the cross-section at this time and the depth of metal removed was measured at approximately (2.5) mm. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-E1 during the QA Inspectors walk-through.

Grinding operation of Steel Section: West Deviation Saddle Segment W2-E3 (After PWHT)

The QA Inspector observed JSW personnel performing the grinding operation on the rib plates and stem plate's prepared edges (face of bevels) of west deviation saddle W2-E3 (steel section). These areas that are being prepared by grinding were difficult to be machined. The JSW personnel are grinding to the scribe lines (layout marks and punch marks of the final dimension of the groove area) prior to the fit-up operation of west deviation saddle W2-E3 (cast section) The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Machining of Steel Section: West Deviation Saddle Segment W2-W1 (After PWHT)

The QA Inspector observed that west deviation saddle segment W2-W1 is in Machine Shop #4 to have the root face dimension machined (partial-joint penetration groove welds) on the stem and ribs so the fit-up tolerances will meet the mill to bear surface requirements per the approved shop drawings and the contract specifications. The QA Inspector observed that no machining was performed on this date.

Grinding operation on Rib steel section to Rib cast section: Tower Saddle Segment T1-2

The QA Inspector observed JSW personnel performing the grinding operation after the shield metal arc welding root pass was completed and afterwards back-gouged from the opposite side of the complete-joint penetration groove weld. The grinding operation is being performed on rib (steel section) to rib (cast section) weld 8Y5U-1, 8Y5U-2, and 8Y5U-3 of tower saddle segment T1-2. The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Fit-up operation pending of Steel Section: West Deviation Saddle Segment W2-W2

The QA Inspector observed that (3) rib plates on each side of the stem plate were previously fit-up and tack-welded to the base plate on west deviation saddle (steel section) W2-W2. The QA Inspector observed that no work was performed on this date on west deviation saddle (steel section) W2-W2.

Fit-up operation pending of Steel Section to Cast Section: Tower Saddle Segment T1-3

The QA Inspector observed that tower saddle (steel section) T1-3 is ready to be fit to tower saddle (cast section) T1-3. On this date, JSW welding personnel are performing the buttering operation (multiple surface weld layers) on rib (cast section) 9Y-12U-3 and 9Y-8U on the square edge for the full length and width of the rib. The fit-up of tower saddle (steel section) T1-3 to tower saddle (cast section) T1-3 will be performed at a later date. The Caltrans METS QA Inspector Mr. Mike Brcic is monitoring the buttering operation on rib (cast section) 9Y-12U-3 and rib (cast section) 9Y-8U of tower saddle T1-3 on this date.

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

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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, 510 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Peterson, Art	Quality Assurance Inspector
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Reviewed By:	Lanz, Joe	QA Reviewer
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