

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-005820**Date Inspected:** 24-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		
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 at Japan Steel Works.

Welding Operation of Stem Plate to Base Plate: Tower Saddle Segment T1-1

The QA Inspector observed the partial-joint penetration groove welding operation on the 2nd side of the structural steel stem plate to structural steel base plate on tower saddle segment T1-1. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to the start of welding that the preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. M. Kashiwada (08-2008) on weld joint no. 7S-2L and Mr. K. Sadakawa (06-2929) on weld joint no. 7S-3L were in compliance with WPS SJ-3012-3 per the FCAW process in the (2G) horizontal position. The QA Inspector observed that the welding 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 was 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.

Repairs pending on Machined Surfaces: West Deviation Saddle Segment W2-E1 (After PWHT and Final Machining)

The QA Inspector observed previously that NIS NDT Inspector Mr. Atsui Seino completed the magnetic particle

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testing (MPT) inspection (dry method) on the final machined areas of the (steel) base plate and on the (steel portion) of the mating surfaces that connect west deviation saddle segment W2-E2 and the west jacking saddle. The QA Inspector observed that there are areas marked up on the (steel portion) of both mating surfaces from the MPT inspection. The QA Inspector observed that no work was performed on this date.

The QA Inspector took photographs of the PJP groove that joins Rib 1-5 (cast section) to Rib 1-5 (steel section). The photograph shows the exposed land on the cross-section of the Rib and also noted on each end of the exposed land a jagged linear indication protruding up into the (cast section) of Rib 1-5. The (cast section) is the square edge of the double groove weld and the (steel section) of Rib 1-5 is the prepared edge (double bevel) of the double groove weld. The QA Inspector was informed by Caltrans METS Structural Materials Representative (SMR) Ms. Nina Choy that she will notify Caltrans Construction Structures Representative Mr. Warren Collins, Caltrans Materials Engineering Testing Services (METS) Structural Materials Representative Mr. Kittric Guest and Caltrans METS Lead Inspector Mr. Joseph Lanz for further review and disposition. The QA Inspector also provided printed photographs to JSW Representative Mr. Hideaki Kon for his review. See Photos below for reference.

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

The QA Inspector observed that the milling operation was completed on the prepared groove (root face) on the rib plates and stem plate of west deviation saddle segment W2-E3 (steel section) to meet the mill to bear surface requirements and was re-located in fabrication shop #4. The QA Inspector observed JSW personnel performing the grinding operation on the rib plates and stem plate prepared edges' (face of bevels) of W2-E3 (steel section). These areas to be prepared by grinding are 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 W2-E3 (cast section) The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Repairs pending on PJP groove welds of Steel Section: West Deviation Saddle Segment W2-W1 (After PWHT)

The QA Inspector observed that JSW personnel have not started on the grinding operation and welding operation (if necessary) of MPT indications marked up by NIS NDT Inspector Mr. R. Kumagai on the partial-joint penetration groove welds of the rib plate to stem plate and of the rib plate to base plate of west deviation saddle (steel section) W2-W1.

Welding of temporary lifting lugs to Cast Section: Tower Saddle Segment T1-2

The QA Inspector observed the partial-joint penetration groove welding operation on (2) temporary attachments (lifting lugs) to the edge (cross section) of the (2) cast rib plates (125) mm thick on the upper side of tower saddle segment T1-2. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to the start of welding that the preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. M. Inoue (92-5683) and Mr. Y. Maeyama (94-5234) were in compliance with WPS WE08-CP15 Rev.1 per the FCAW process in the (3G) vertical position. The QA Inspector observed that both welders were not previously submitted and approved nor was the WPS submitted into JSW's weld quality control plan (WQCP). The QA Inspector notified Caltrans METS SMR Ms. Nina Choy of the QA Inspectors' observations and Ms. Choy informed the QA Inspector that since the temporary attachments will be removed by JSW at a later date and JSW personnel will perform magnetic particle testing (dry method) on those areas after removal then there was no significant reason to generate a non-conformance report.

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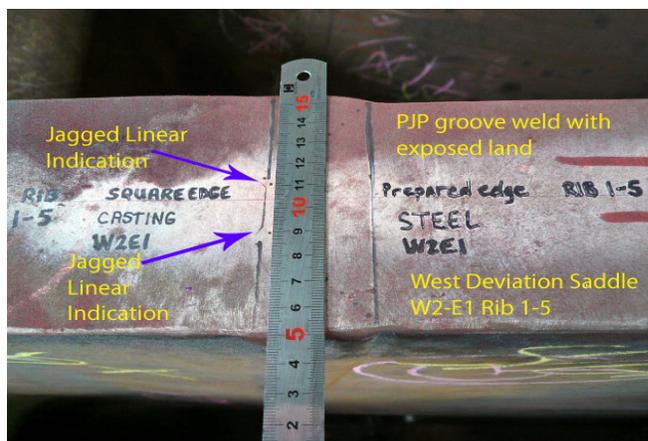
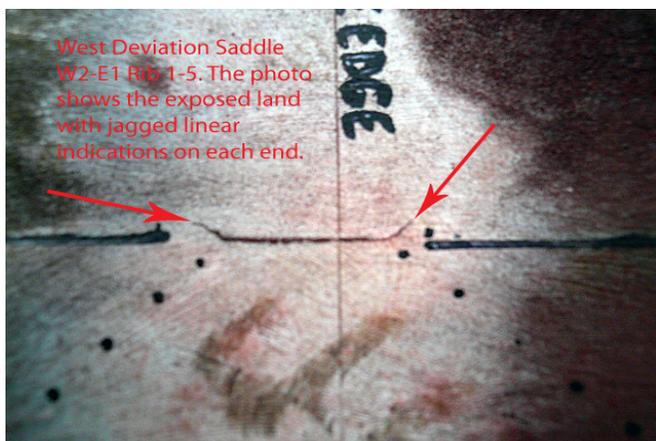
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Fit-up operation of Steel Section: West Deviation Saddle Segment W2-W2

The QA Inspector observed previously that (3) rib plates on each side of the stem plate were fit-up and tack-welded to the base plate on west deviation saddle (steel section) W2-W2. The QA Inspector observed that the fit-up operation was not performed on this date.

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 stem (cast section) 9S3U on the square edge for the full length and width of the stem. 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 QA Inspector Mr. Mike Brcic is monitoring the buttering operation on stem (cast section) 9S3U 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.



Summary of Conversations:

See above for significant conversations 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:	Lanz, Joe	QA Reviewer
