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-005816
Date Inspected: 20-Mar-2009

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

OSM Arrival Time: 730
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 at Japan Steel Works.

Welding Operation of Rib 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 rib 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. T. Watanabe (08-5153) on weld joint no. 7Y6L, Mr. M. Kato (08-5018) on weld joint no. 7Y8L, and Mr. K. Kobayashi (08-5023) on weld joint no. 7Y7L-2 were in compliance with WPS SJ-3012-3 per the FCAW process in the (1G) flat 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 work performed on this date is machining the mating surface that will bolt to west deviation saddle W2-E1. The QA Inspector observed that the machining was in process at the end of the QA Inspectors' shift.

NDT of Machined Surfaces: West Deviation Saddle Segment W2-E1 (After PWHT and Final Machining)
The QA Inspector observed NIS NDT Inspector Mr. Atsui Seino performing magnetic particle 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 will connect west deviation saddle segment W2-E2 and the west jacking saddle. The QA Inspector observed that Mr. Seino marked up areas on the (steel portion) of both mating surfaces of MPT indications. The QA Inspector observed that the MPT inspection was in process at the end of the QA Inspectors' shift.

Machining of Steel Section: West Deviation Saddle Segment W2-E3 (After PWHT)
The QA Inspector observed that west deviation saddle segment W2-E3 (steel section) is in Machine Shop #4 to have the steel plate section of the prepared groove area (root face) milled prior to the fit-up operation of the W2-E3 (steel section) to W2-E3 (cast section). The machining is performed by JSW to meet the mill to bear surface tolerances of the fit-up of west deviation saddle W2-E3 (steel section) to the W2-E3 (cast section) per the approved shop drawings and the contract specifications.

Repair of Steel Section: West Deviation Saddle Segment W2-W1 (After PWHT)
The QA Inspector observed that JSW personnel have not started on the grinding and welding (if necessary) of MPT indications marked up by NIS NDT Inspector Mr. R. Kumagai of the partial-joint penetration groove welds on the rib plate to stem plate and on 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 that JSW personnel Mr. M. Sainokami was in preparation to start welding the temporary lifting lugs on the edge (cross section of the rib plate- 125 mm thick cast portion) of Tower Saddle (cast section) T1-2 by first welding (2) layers of buttering passes in the vertical position per the SMAW process. Mr. Sainokami will use welding electrode E7016 (4) mm diameter and Mr. Sainokami was in process of preheating the cast section to 150 degrees Celsius as per the requirements in WPS SJ3012-1-2. The QA Inspector observed that QC Inspector Mr. Chung Fu Kuan was present and was monitoring the preheat temperature to verify compliance with the WPS prior to the start of welding. The QA Inspector observed that the preheating of the cast section was in process at the end of the QA Inspectors' shift.

Fit-up of Steel Section: West Deviation Saddle Segment W2-W2
The QA Inspector observed the fit-up an tack-welding operation of the structural steel stem plate to structural steel base plate on west deviation saddle (steel section) W2-W2. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to the start of the tack-welding operation that the preheat temperature of 160 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. Ohta (08-2017) were in compliance with WPS SJ-3011-11 per the SMAW process in the (2G) horizontal position using welding electrode E9018M. The QA Inspector observed that the tack-welds will be placed chained intermittently along the length of the stem plate and Mr. Kuan informed the QA Inspector that there will be (2) tack-welds welded to the stem plate that will be approximately (150) mm in length. The QA Inspector observed that the tack-welding was in process at the end of the QA Inspectors' shift.

Fit-up 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. The tower saddle (cast section) is being prepared on this date (welding of butter pass welds on the square edge (cross section) on the full length and width of the ribs and stems (cast section). 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 butter pass welding on the ribs and stems (cast section) on this date.

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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 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