

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-007460**Date Inspected:** 25-Jun-2009**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Japan Steel Works**OSM Arrival Time:****OSM Departure Time:****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 shop at Japan Steel Works.

Machine Shop #4:

Final Machining Operation in process on Saddle: Tower Saddle Segment T1-1

The QA Inspector observed that tower saddle segment T1-1 is located in Machine Shop #4 to have the final machining performed. On this date, the QA Inspector observed the JSW personnel drilling holes in the top of the stiffener, trough, and rib on tower saddle segment T1-1.

Fabrication Shop #4:

Weld Operation in process on Saddle: Tower Saddle Segment T1-2

The QA Inspector observed the partial-joint penetration (PJP) weld operation on the middle stiffener plates welded to the rib plate (cast section) and trough (cast section) of tower saddle T1-2. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the PJP weld operation that the minimum preheat temperature of 110 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. T. Ohkawa (03-3091) on plate no. 8ST-24, Mr. M. Yamashita (73-4195) on plate no. 8ST-20, and Mr. T. Watanabe (08-5153) on plate no. 8ST-21 were in compliance with WPS SJ-3012-8-1 / SJ-3012-8-2 per the SMAW and FCAW process in the (2G) horizontal position using (4.0) and (1.6) mm diameter LB52A and TM55 electrode, respectively. The QA Inspector observed that the PJP weld operation was in process at the end of the QA Inspectors' shift.

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Re-Beveling Operation in process on Saddle: Tower Saddle Segment T1-3

The QA Inspector observed JSW personnel performing the re-beveling operation on the rib plates and stem plate's prepared edges (face of bevels) on tower saddle T1-3 (steel section). These areas are being re-beveled to the layout marks (scribe lines and punch marks) of the final dimensions of the groove areas prior to the fit-up operation of the base plate. The QA Inspector observed that the re-beveling operation was in process at the end of the QA Inspectors' shift.

Storage of Saddle: West Deviation Saddle Segment W2-E1

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

Storage of Saddle: West Deviation Saddle Segment W2-E2

The QA Inspector observed that west deviation saddle segment W2-E2 is located in Fabrication Shop #4. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-E2 on this date.

Machine Shop #2

Final Machining Operation pending on Saddle: West Deviation Saddle Segment W2-E3

The QA Inspector observed that west deviation saddle segment W2-E3 is located in Machine Shop #2. The JSW personnel completed the dimensional inspection and verified the locations of the ribs and stem against the approved drawings. Afterwards, the JSW personnel scribed the assembly control lines (ACL) on the edges of the ribs, stem and base plate for reference points during the machining operation. The QA Inspector observed that the final machining operation has not started on west deviation saddle segment W2-E3 on this date.

Fabrication Shop #4

PWHT Operation completed on Saddle: West Deviation Saddle Segment W2-W1

The QA Inspector observed that the post weld heat treatment (stress relief) operation was completed on west deviation saddle W2-W1 on this date. The next operation on the west deviation saddle segment will be the blast cleaning operation.

Weld Operation in process on Saddle: West Deviation Saddle Segment W2-W2

The QA Inspector observed the partial-joint penetration (PJP) groove (root and fill pass) weld operation on the rib plate (steel section) to rib (cast section) of west deviation saddle segment W2-W2. The QA Inspector observed Quality Control (QC) Inspector Mr. Chung Fu Kuan verify prior to and during the PJP groove weld operation that the minimum preheat temperature of 160 degrees Celsius was maintained and the welding parameters of JSW welding personnel Mr. M. Matudate (08-5151) on weld joint no. W2Y-16U- (5-17) side and Mr. S. Watanabe (08-5159) on weld joint no. W2Y-7U- (plate 5-5) and W2Y-5U- (plate 5-4) side were in compliance with WPS SJ-3011-7 per the SMAW process in the (2G and 3G) horizontal and vertical positions using (4.0 and 4.8) mm diameter E9018 electrode. The QA Inspector observed that the PJP groove (root and fill pass) weld operation was in process at the end of the QA Inspectors' shift.

PWHT Operation completed on Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed that the intermediate post weld heat treatment (stress relief) operation was completed on west deviation saddle segment W2-W3 (steel section) on this date. The next operation on the west deviation

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saddle segment will be the blast cleaning operation.

Storage of Saddle: West Deviation Saddle Segment W2-W3

The QA Inspector observed that west deviation saddle segment W2-W3 (cast section) is located in Fabrication Shop #4. The QA Inspector observed that no other work was performed on west deviation saddle segment W2-W3 on this date.

Layout Operation of Rocker Bearing Plate Assembly: East Saddle E2-W1

The QA Inspector observed that rocker bearing plate assembly for E2-W1 is located in Machine Shop #2. The JSW personnel are in preparation to perform the layout operation of rocker bearing dowel locations against the approved dimensional drawings and assembly control lines. On this date, the QA Inspector observed that the layout operation has not started on the rocker bearing plate assembly.

PWHT Operation pending on End Splay Cover Plate Assemblies: East Saddle E2-E1 and East Saddle E2-W1

The QA Inspector observed that the fillet weld operation on the diaphragm plates welded in between the cover plate stiffeners on end splay cover plate assemblies for east saddles E2-E1 and E2-W1 have been completed. The next operation on the end splay cover plate assemblies is the post weld heat treatment (PWHT) operation. The QA Inspector observed that no other work was performed on the end splay cover plate assemblies for east saddles E2-E1 and E2-W1 on this date.

Foundry Shop:

Pending Approval of Engineering Communication Sheet (ECS) on Cast Saddle: East Saddle E2-E1

The QA Inspector observed that Nikko Inspection Services (NIS) Quality Control (QC) NDT Inspector Mr. A. Seino (#82) completed the major and minor repair excavation maps on east saddle E2-E1. The JSW Representative Mr. Hideaki Kon informed the QA Inspector that JSW is waiting for approval of the engineering communication sheet (ECS) on the major repairs by the Caltrans Engineer prior to the start of the repair weld operation. The QA Inspector observed that no other work was performed on east saddle E2-E1 at the end of the QA Inspectors' shift.

Grinding Operation in process on Cast Saddle: East Saddle E2-W1

The QA Inspector observed the JSW personnel performing the grinding operation on the completed repair welds to grind smooth to the surface contour of the casting on east saddle E2-W1. The QA Inspector observed that the grinding operation was in process at the end of the QA Inspectors' shift.

Shaping Operation in process on Saddle: West Jacking Saddle

The QA Inspector observed the JSW personnel performing the shaping (scarfing) operation- (removal of excess cast material on the rough casting) by the air-carbon arc gouge method using (19) mm diameter carbon electrode on the opposite side of the identification (ID) side on the trough, stem and rib sections of the west jacking saddle to profile the trough, stem, and rib sections of the west jacking saddle to the proper shape, dimension and radius. The QA Inspector observed that the JSW personnel were in process on the shaping operation at the end of the QA Inspectors' shift.

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

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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
Reviewed By:	Guest, Kittric	QA Reviewer
