

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-005736**Date Inspected:** 17-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**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: Tower Saddle Segment T1-1

The QA Inspector observed the partial-joint penetration groove welding operation on 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. 7Y8L, and Mr. K. Kobayashi (08-5023) on weld joint no. 7Y6L 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 Section: West Deviation Saddle Segment W2-E2

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

Dimensional Inspection of Machined Surfaces: West Deviation Saddle Segment W2-E1 (After PWHT and Final Machining)

The QA Inspector observed that JSW has started the dimensional inspection on west deviation saddle segment W2-E1 of the machined base plate, machined surfaces inside of the trough, the tie rod and anchor bolt holes, the

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connection bolt holes on the base plate, and the machined surface that mates to the west jacking saddle and the machined surface that mates to west deviation saddle segment W2-E2. The dimensional inspection is being performed by an independent company. The equipment being used is a 3D Laser tracking device manufactured by Leica and the QA Inspector observed the calibration of the equipment prior to the start of the inspection. The QA Inspector was informed by JSW Representative Mr. Hideaki Kon that the dimensional inspection will be completed in approximately 2 days. The QA Inspector observed that the dimensional 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 was located in Machine Shop #2 to have the root face dimension on the stem and rib machined prior to the fit-up operation to have the root face meet the mill to bear surface requirements per the approved shop drawings and the contract specifications.

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

The QA Inspector observed NIS NDT Inspector Mr. R. Kumagai performing magnetic particle testing (MPT) inspection (dry method) on the partial-joint penetration groove welds after the post weld heat treatment operation on the rib to stem and rib to base plate of west deviation saddle segment W2-E1. The QA Inspector observed that the MPT inspection was completed by the end of the QA Inspectors' shift.

Welding of Steel Section to Cast Section: Tower Saddle Section T1-2

The QA Inspector observed that tower saddle steel section T1-2 is fit-up to tower saddle cast section T1-2 and all of the strong backs and temporary supports have been completely welded into place for distortion control. The QA Inspector observed that tower saddle section T1-2 is being prepared (staging is being formed around the tower saddle section) so the preheat operation can begin. The preparation of the staging was in process at the end of the QA Inspectors' shift.

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

The QA Inspector observed that the fit-up operation (stem plate to base plate, rib plate to stem plate, and rib plate to base plate) of west deviation saddle steel section W2-W2 has not started on this date.

Grinding of Steel Section: Tower Saddle T1-3

The QA Inspector observed that JSW personnel completed the grinding operation to final dimension on the beveled face and root face of the machined partial penetration double groove areas of the stems and ribs on tower saddle steel section T1-3. The purpose of the grinding operation was that JSW personnel performed the final layout (placement of scribe lines and punch marks) on the beveled face and root face of the stems and ribs in preparation of fitting up the tower saddle steel section to the tower saddle cast section.

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

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your project.

Inspected By: Peterson, Art

Quality Assurance Inspector

Reviewed By: Lanz, Joe

QA Reviewer