

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-005786**Date Inspected:** 19-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

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|------------------------------------|---------------|----|-----|
| 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 |

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|----------------------------------|-----|----|-----|
| 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 Rib Plate to Base Plate: Tower Saddle Segment T1-1

The QA Inspector observed the complete-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. 7Y5L-1, Mr. M. Kato (08-5018) on weld joint no. 7Y5L-3, and Mr. K. Kobayashi (08-5023) on weld joint no. 7Y5L-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.

Inspection of Stiffener Plates: Tower Saddle Segment T1-1

The QA Inspector observed that JSW Quality Control personnel were checking the bevel angles of the prepared edges on the stiffener plates prior to the fit-up operation to Tower Saddle Segment T1-1. The JSW Quality Control personnel were recording the values on an inspection report and afterwards would verify the values against the approved shop drawings. The QA Inspector observed that the inspection of the stiffener plates were in process at the end of the QA Inspectors' shift.

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

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The QA Inspector observed that west deviation saddle segment W2-E2 was located in Machine Shop #2 to have the final machining performed. The west deviation saddle segment was being re-positioned on this date after the drilling of holes was completed on the mating surface that will join west deviation saddle segment W2-E3.

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

The QA Inspector observed that the final dimensional inspection performed by JSWs' independent third party inspection company on the machined surfaces was completed on this date. Afterwards, JSW Representative Mr. Hideaki Kon informed the QA Inspector that the magnetic particle testing (MPT) inspection (wet method) will be performed by the JSW QC Department at a later date on the steel section of the machined surfaces (mating surface of west jacking saddle and mating surface of west deviation saddle segment W2-E2). The MPT inspection was performed on the cast section of the machined surfaces on March 13th and March 14th prior to the final dimensional inspection which was started on March 17th and completed on March 18th, 2009.

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) was located in Machine Shop #2 to have the root face milled so during the fit-up operation of the W2-E3 (steel section) to W2-E3 (cast section) the gap will meet the mill to bear surface requirements per the approved shop drawings and the contract specifications. The QA Inspector observed that no machining had been started on this date.

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

The QA Inspector observed that 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 has not started on this date.

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

The QA Inspector observed that the staging around tower saddle (steel section) T1-2 fit to tower saddle (cast section) T1-2 was completed on this date and the preheat operation will be started at a later date in preparation of the welding of the partial-joint and complete-joint penetration groove welds.

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

The QA Inspector observed that JSW welding personnel were welding temporary supports to the welding fixture which supports and secures the base plate in position prior to the fit-up operation of the rib plates and stem plate to the base plate of west deviation saddle (steel section) W2-W2. The welding of the temporary supports was performed per the SMAW process in the (3F) vertical position. The QA Inspector observed that the work was in process at the end of the QA Inspectors' shift.

NDT of Steel Section: Tower Saddle Segment T1-3

The QA Inspector observed that NIS NDT Inspector Mr. R. Kumagai completed the MPT inspection for information only on the prepared edges (bevels) of the rib plates and stem plates of tower saddle (steel section) T1-3. No indications were observed by the NIS NDT Inspector on the prepared edges (bevels) of the rib plates and stem plates. The tower saddle (steel section) is now ready to be fit to tower saddle (cast section) which will be at a later date.

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

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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.

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