

**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-010428**Date Inspected:** 06-Nov-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** T. Imai**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 and the Foundry Shop at Japan Steel Works.

**Fabrication Shop #4:**

Storage of Saddles: West Deviation Saddle Segments - W2-E1, W2-E2, and W2-E3

The QA Inspector observed that west deviation saddle segments W2-E1, W2-E2, and W2-E3 are being stored in Fabrication Shop #4 until the paint quality work plan (PQWP) is approved. Afterwards the west deviation saddle segments will be moved into the paint shop to start the blast cleaning and metalizing operation on the interior of the troughs.

**Foundry Shop:**

NDT Operation in-process on Saddle: West Jacking Saddle (before final machining)

The QA Inspector observed Nikko Inspection Services (NIS) Quality Control (QC) Non-Destructive Testing (NDT) Inspector Mr. H. Kohama (#86) performing the magnetic particle test (MPT) inspection by the (wet method) on the interior of the trough and exterior of the trough in between the rib sections of the west jacking saddle at locations where the major and minor weld repairs were previously performed. Prior to the start of the MPT inspection, NIS QC NDT Inspector Mr. H. Kohama verified the lifting force and the sensitivity of the yoke as per ASTM E709. The QA Inspector verified that the bath concentration of the non-fluorescent particles were between (1.2 and 2.4) mL per (100) mL as per ASTM E709 Section 20.6.3 and the manufacturer's recommendations. The actual settling volume was recorded at (1.9) mL as measured using a centrifuge tube with a

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## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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(1.5) mL stem after allowing the particles to settle for approximately (30) minutes prior to taking the settling volume measurement. The QA Inspector observed that the MPT inspection performed by Mr. H. Kohama was in-process at the end of the QA Inspectors' shift.

Performed "Ok to Cut" on ASTM A709 Grade 345-T2 Material: Divider Plates for East Saddles

The QA Inspector was escorted by JSW representative Mr. Hideaki Kon to Narasaki-Seisakusyo Company in Muroran, Japan to perform an "OK to Cut" on (6) steel plates to be used for cutting out the divider plates for the east saddles. The plates were identified as follows: Plate (#1) ASTM A709 Grade 345-T2- (16 mm x 1870 mm x 7560 mm) Heat No. 847467-8; Plate (#2) ASTM A709 Grade 345-T2- (16 mm x 1970 mm x 7560 mm) Heat No. 847473-1; Plate (#3) ASTM A709 Grade 345-T2- (16 mm x 1850 mm x 7560 mm) Heat No. 847473-5; Plate (#4) ASTM A709 Grade 345-T2- (18 mm x 1970 mm x 7560 mm) Heat No. 847475-2; Plate (#5) ASTM A709 Grade 345-T2- (16 mm x 1870 mm x 7560 mm) Heat No. 847467-7; and Plate (#6) ASTM A709 Grade 345-T2- (18 mm x 1970 mm x 7560 mm) Heat No. 847475-1. The QA Inspector verified the plate heat numbers stenciled on the steel plate against the material test reports for accuracy and also verified that the mechanical properties and chemistry results were in compliance with the material specification and contract specifications. The QA Inspector assigned Caltrans Lot number B273-019-09 for JSW to proceed with the cutting operation of the divider plates.

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

### 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 at (510) 385-5910, who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Peterson, Art   | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Edmondson, Fred | QA Reviewer                 |

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