

**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-005442**Date Inspected:** 12-Feb-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Chung 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:**

Steel Structure Welding Shop:

W2E3 West Deviation Saddle Steel Structure: Caltrans Quality Assurance Inspector (QAI) representative observed Japan Steel Works (JSW) welders perform FCAW fillet weld processes on weld access holes on rib plates 3-4, 3-7 and 3-8 of W2E3 west deviation saddle. The filler metal and shield gas used for FCAW is Hoballoy wire TM-95K2, 1.6 diameter with 100% C02. The entire welding zone has been preheated to minimum of 110C prior welding. The FCAW welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA observation, the FCAW fillet weld welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

W2W1 West Deviation Saddle Steel Structure: Caltrans QAI representative observed three welders perform Shielded Metal Arc Welding (SMAW) 4 layer root pass on rib plates 4-17, 4-16 and 4-15 of W2W1 west deviation saddle. The proper filler metal used for SMAW is Hoballoy 9018-M with 4mm diameter electrode made by Hobart Brothers, USA. The entire steel structure remains preheated to a temperature minimum of 110C degree during root pass welding. The root pass welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA observation, the SMAW root pass welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents. The SMAW root pass welding surface also has been MT test after welding.

T1-2 Tower Saddle Casting: Caltrans QAI representative observed two welders perform SMAW buildup welding on two casting area surfaces. The buildup weld metal is for the temporary reinforcement supply structure. The buildup metal welding utilizing the SMAW process was conducted by welders in the uphill vertical position (3G).

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## WELDING INSPECTION REPORT

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A 6mm high weld metal has been weld up on surface. The proper filler metal used for SMAW is LB52A (E7016) with 5mm diameter electrode made by Kobe, Japan. The SMAW welding process and parameters have been uses Caltrans approved WPS # SJ-3012-5, also monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA observation, the SMAW welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans approved RFI documents.

**Summary of Conversations:**

As noted within the report above.

**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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<b>Inspected By:</b>	Pau,Wai	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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