

**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-005496**Date Inspected:** 19-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:

W2E2 Casting and Steel Structure Joint Section (FCAW welding): Caltrans QAI representative observed Japan Steel Works (JSW) welders perform FCAW welding processes on rib plate and stem plate welds E2S-2U, E2Y-4U-1, E2Y-4U-2 and E3Y17U-1 of W2E2 west deviation saddle. Those welds are connecting casting and steel structure. The proper filler metal used for FCAW is Hoballoy TM-95K2, 1.6mm diameter with 100% C02. The entire structure has been preheated to minimum 160 C prior welding. The FCAW welding process and parameters have been monitored and recorded by CWI inspector Mr. MaKhud Ashadi. Based on Caltrans observation, the FCAW welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

W2E3 West Deviation Saddle Steel Structure (fillet weld welding): Caltrans QAI representative observed Japan Steel Works (JSW) two welders performed FCAW fillet weld processes on weld access holes on rib plates 3-5 and 3-16 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 110 C 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.

T1-2 Tower Saddle Casting (build up welding): Caltrans QAI representative observed a welder perform SMAW buildup weld metal welding on two casting area surfaces. The buildup weld metal is for the temporary

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reinforcement supply structure. The buildup metal welding utilizing the SMAW process was conducted by welders in the horizontal position. 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 Venkatesh Iyer (858)697-6363, 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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