

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-005566**Date Inspected:** 26-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:

T1-1 Tower Saddle Casting and Steel Structure Joint Section (base plate SMAW welding): Caltrans QAI representative observed JSW welders in process of Shielded Metal Arc Welding (SMAW) root pass on base plate of T1-1. The weld number is 7Y-9L-1, 2, 3 and 4. The proper filler metal used is LB-52 (AWS A5.1/ E7016) with 4mm and 5mm diameter electrode, made by Kobe Steel, Japan. The entire steel structure remains preheated to a temperature minimum of 110 C degree during root pass welding. The root pass welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. The SMAW root pass welding surface also has been MT test after welding. 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.

W2-W1 West Deviation Saddle Steel Structure (FCAW welding): Caltrans QAI representative observed three welders perform FCAW process on rib plate weld numbers W1Y-17L-1 and 2, W1Y-11L and W1Y-11V, west deviation saddle. The filler metal and shield gas used for FCAW is Hoballoy wire TM-95K2, 1.6 diameter with 100% CO₂. The entire welding zone has been preheated to a 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 welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

Casting Shop:

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T1-3 Tower Saddle Casting (MT test): Caltrans observed QAI NIS one NDT level II technician performed dry MT test on the surface of T1-3 tower saddle casting portion after sand blasting. The dry MT test is using the yoke method. The yoke utilized appeared to be model UM 3BF, serial numbers 93-05. The magnetic field was verified with a field indicating gauge (pie gauge). Visible dry red magnetic particles were utilized and made by Magnotron, Japan. During dry MT test, various small size linear indications were found on the few surface spots and those indications will be ground after MT test. The MT test will continue tomorrow. Based on Caltrans QA observation, the MT test operation appeared to be in general compliance with requirements of ASTM standard E709 and Caltrans contract 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.

Inspected By:	Pau,Wai	Quality Assurance Inspector
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Reviewed By:	Lanz,Joe	QA Reviewer
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