

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-005499**Date Inspected:** 24-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:

W2W1 West Deviation Saddle Steel Structure (FCAW welding): Caltrans QAI representative observed two welders perform FCAW processes one rib plates 5L and 5U and weld numbers W1Y-11L, W1Y-11V, W1Y-12L and W1Y-12V, 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 welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

T1-1 Tower Saddle Casting and Steel Structure Joint Section (base plate FCAW 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 numbers are 7S-2L and 7S-3L. 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 temperature minimum 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.

Casting Shop:

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T1-3 Tower Saddle Casting (MT test): Caltrans QAI observed NIS NDT level II technician perform 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.

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.

W2W3 West Deviation Saddle Casting: Caltrans QAI observed NIS NDT level II technician perform dry MT test on the excavation areas after grinding. The dry MT test is using the yoke method. The yoke utilized appeared to be model UM 3BF, serial numbers 96-01. The magnetic field was verified with a field indicating gauge (pie gauge). Visible dry red magnetic particles were utilized and made by Magnotron, Japan. The MT test has been completed and accepted on all the excavation areas and will be scheduled for casting repair welding. Caltrans QAI also used same MT method to random verified the excavation areas. 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 Venkatesh Iyer (858)697-6363, who represents the Office of Structural Materials for your project.

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