

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-005247**Date Inspected:** 20-Jan-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2000**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: Caltrans Quality Assurance Inspector (QAI) representative observed Japan Steel Works (JSW) welders perform Flux Cored Arc Welding (FCAW) process on rib plate welds 7S-2U-2 and 7S-3U-2. These two welds are connecting to casting and steel structure. The filler metal used for FCAW is Hoballoy wire TM-55, 1.6 diameter made by Hobart Brothers, USA. The parameters used for FCAW welding of assemblies were conducted in accordance with Caltrans approved WPS SJ-3011-6. The FCAW welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA observations, the FCAW welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

T1-2 Tower Saddle Casting: Caltrans QAI representative observed four welders perform buttering build up welding on two stem plates numbered 8S-2U and 8S-3U of T1-2 tower saddle casting portion. This buttering welding is approved by Caltrans RFI# ABF-RFI-001453. The buttering layer in order to decrease the preheat temperature to 110 C degree minimum for casting and steel portion during joint welding. The buttering buildup metal welding utilizing the SMAW process was conducted by welders in the flat position. A 10mm high weld metal has been weld up entire surface of two stem plate. 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 per Caltrans approved WPS SJ-3012-1-2, also monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA observations, the buildup SMAW welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans approved RFI documents.

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

W2W1 West Deviation Saddle Steel Structure: Caltrans QAI representative observed JSW welders in process fit up and Shielded Metal Arc Welding (SMAW) temporary tack welds on the W2W1 west deviation saddle steel structure portion. Total two rib plates numbered 4-10 and 4-11 have been fit up and tack welding attached to stem plate numbered 4-2. The proper filler metal used for SMAW is Hoballoy 9018-M with 4.2mm diameter electrode made by Hobart Brothers, USA. The tack weld areas have been preheated to 110C prior welding. The fit up and tack welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans observations, no discrepancies were noted.

Casting Shop:

W2W2 and W2W1 West Deviation Saddle casting: Caltrans QAI observed NIS NDT level II technicians perform straight beam UT test on rib side of W2W2 and W2W3 West Deviation Saddles. The thickness of saddle segment is from 150mm to 500mm and both saddle test surface have been Magnetic Particle Test (MT) prior UT test. The straight beam tests have been not completed today and continue to tomorrow. Based on Caltrans observations, no discrepancies were noted.

Summary of Conversations:

As noted within the report.

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
Reviewed By:	Lanz,Joe	QA Reviewer
