

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-005232**Date Inspected:** 13-Jan-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**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:

Witnessing AWS D1.5 standard SMAW and FCAW welder qualification welding tests: Caltrans QAI representative Mr. Wai Pau witnessed two welders perform welder qualification test. The qualification welding tests utilizing the Shielded Metal Arc Welding (SMAW) and Flux Cored Arc Welding (FCAW) process were conducted by welders in the SMAW vertical position (3G) and FCAW flat position (1G). The names of welder are Mr. Yoshihiro Ohhinata (74-1825) and Masahiro Ito (73-4632), both performed welder qualification tests of SMAW and FCAW welding. The material used for the both welder qualification test specimens was reported by JSW Welding Engineer Mr. Takaaki Maruya as ASTM a 709M-HPS-485WT plate having a thickness measurement of 25mm. The weld joint design used butt joint, single-V-groove weld with 25mm wide backing bar.

The proper filler metal used in the test for SMAW is Hoballoy 9018-M with 5mm diameter electrode made by Hobart Brothers, USA. The filler metal and shield gas used in the test for FCAW is Hoballoy wire TM-95K2, 1.6 diameter with 100% CO2 made by Hobart Brothers, USA. The SMAW and FCAW welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA observation, the welder qualification tests appeared to be in general compliance with requirements of AWS D1.5 2002 Section 5 and Caltrans contract documents.

T1-1 Tower Saddle Casting and Steel Structure joint section: Caltrans Quality Assurance Inspector (QAI) representative observed three Japan Steel Works (JSW) welders perform Flux Cored Arc Welding (FCAW) process on rib plate welds #7Y-9U-1, 7Y-9U-2 and 7Y-9U-3 of T1-1 tower. These three welds are connecting 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

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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 observation, the FCAW welding operation appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

W2E2 West Deviation Saddle Casting and Steel Structure joint section: Caltrans QA Inspector representative observed a JSW welder perform SMAW process on numerous temporary U-shaped steel supports. The supports secure the casting and steel portion of saddle. The filler metal used is Hoballoy 9018-M with 5mm diameter electrode made by Hobart Brothers, USA. Base on Caltrans observation, no discrepancies were noted.

Casting Shop:

W2E3 and W2W3 West Deviation Saddle casting: Caltrans QAI observed two JSW workers perform grinding process on exterior rough surface of rib sides for W2E3 and W2W3 west deviation saddles after arc-gouging. Grinding process is to remove all the exceed metal, oxide film and slag caused by gouging. Based on Caltrans observation, 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
