

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-005099**Date Inspected:** 23-Dec-2008**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:

T1-3 Tower Saddle Steel Structure: Caltrans Quality Assurance Inspector (QAI) representative observed three welders perform flux cored arc welding (FCAW) process on a rib welds # 9Y-5V (3-3), 9Y-12V (3-2) and 9Y-12V (3-3) of T1-3 tower saddle steel structure. The three welders started welding from 70% complete and continued to 100%. The weld joint design used double-V groove partial joint penetration groove weld (PJP). The filler metal and shield gas used for FCAW welding is Hoballoy wire TM-95K2, 1.6 diameter made by Hobart Brothers, USA with 100% C02. The parameters used for FCAW welding of assemblies were conducted in accordance with Caltrans approved WPS #SJ-3012-3. 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.

W2E3 West Deviation Saddle Steel Structure: Caltrans QAI representative observed two JSW welders in process fit up and SMAW temporary tack weld on the W2E3 west deviation saddle steel structure portion. Total three rib plates numbered 3-7, 3-8 and 3-9 has been fit up and tack welding to stem plate numbered 3-2. The fit up and tack welding process and parameters have been monitored and recorded by CWI inspector Mr. Chung Kuan. Based on Caltrans QA Inspector observation, the fit up and SMAW tack welding appeared to be in general compliance with requirements of AWS D1.5 2002 and Caltrans contract documents.

Casting Shop: Casting Shop:

W2W3 West Deviation Saddle Casting Portion: - Caltrans QAI observed two welders perform air carbon arc gouging process on exterior rough surface of rib side for west deviation saddle W2W3 after rough machining. The

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gouging areas are not uniform surface and not able to use machining. The equipment used with 10mm gouging electrode made in Japan. The gouging process will continue to December 28, 2008. Based on Caltrans QA Inspector observation, no discrepancies were noted.

W2E3 West Deviation Saddle Casting Portion and T1-3 Tower Saddle Casting Portion: Caltrans QAI observed two NIS NDT level II technicians performed shear wave UT test on rib side of W2E3 West Deviation Saddle and straight beam UT test on rib side of T1-3 Tower Saddle. The thickness of both casting portions are 150mm to 500mm and both casting test surfaces have been magnetic particle tested (MT) prior UT test. Krautkramer Branson USM 3 and Krautkramer USD52 UT instruments were used for the scanning. The search unit used for angle beam is an angle wedge 70 degrees x 2.5MHz transducer and straight beam is 24mm x 2 MHz single transducer. The distance, reflection and sensitivity are calibrated on reference block made by same casting material. The liquid glycerin is be used to couple the search unit to the test surface. Based on Caltrans observation, no discrepancies were noted. The UT test for both casing portions will be continuing tomorrow.

Summary of Conversations:

No relevant conversations.

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
