

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-005694**Date Inspected:** 04-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Japan Steel Works**Location:** Muroran, Japan

CWI Name:	Imai Jomio (ASME Welding Engineer)			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:

Casting Shop:

E2-W1 East Deviation Saddle Casting Portion (shaping): Caltrans QAI observed one welder perform carbon-arc-gouging (shaping) process on exterior rough surface of rib sides of E2-W1 east deviation saddle after rough machining. The gouging surface is the exterior rough surface areas which are not uniform surface and not able to use machining. The gouging purpose is remove all of excess metal from the rib areas. The equipment used for gouging is manual torch with 10mm gouging electrode all made in Japan. The gouging process will continue for two weeks. Based on Caltrans observation, no discrepancies were noted.

T1-3 Tower Saddle Casting (Wet MT test): Caltrans observed QAI NIS NDT level II technician perform final wet MT test on the interior machining surface of T1-3 tower saddle casting portion after sand blasting. The power source of MT testing is used electromagnetic yoke with Alternating Current (AC) made by Magnaflux; model number Y-8 AC/DC. The detection media is used wet red suspension particles. The technique uses wet suspension particles that are applied while the magnetizing force (multi direction) is on. The particle application must cease before the current flow ceases. A flaw indicator used to check the magnetic field direction and to ensure adequate field strength during MT testing. The particles used are 10 liter water mixed with 1kg non-fluorescent red magnetic particles in a container. The mixed wet suspension particle samples have been filled into a measurable glass container for settling volumes standard prior MT test. The settling volumes have showed on glass container as is 2.3 ml (ASME standard from 1.2 ml to 2.4 ml per 100ml). 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.

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W2-E3 West Deviation Saddle Casting (Dry MT Test): Caltrans observed QAI NIS NDT level II technician perform QC final dry MT test on exterior rough surface of 5L to 8L rib sides 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. 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.

W2-W2 West Deviation Saddle Casting (repair welding): Caltrans QAI observed a JSW welder perform SMAW standard repair welding on exterior rib 3L section of W2-W2 west deviation saddle casting portion. The repair welding areas have been excavated 5mm to 8mm depth. The proper filler metal used for SMAW is LB62 with 5mm diameter electrode made by Kobe, Japan. The entire casting portion is preheated to temperature at min 150 C during repair welding. Based on Caltrans QA observation, the buildup SMAW welding operation appeared to be in general compliance with requirements of ASME IX 2005.

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
Reviewed By:	Lanz,Joe	QA Reviewer
