

**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-002289**Date Inspected:** 12-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Japan Steel Works**Location:** Muroran, Japan

<b>CWI Name:</b>	Tamio Imai		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A
<b>Component:</b>	Tower, Jacking and Deviation Saddles		

**Bridge No:** 34-0006**Summary of Items Observed:**

The following report is based on METS observations at Japan Steel Works (JSW) in Muroran Japan. Current work: Casting, machining and repair of Saddles.

## Foundry

On this date the QA representative Joe Lanz arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW foundry at 0930 hours with the QA inspector, Mr. Daniel Reyes, escorted by JSW representative Mr. Yoshihiro Itoh, to monitor the casting repair welding on West Deviation Saddle casting W2-E1. The welding was performed to build up the thickness of the ribs in areas that were found to not meet the minimum thickness of the contract special provisions. The repair locations and repair details for this casting were submitted as number 000643, revision 02. The welding today was performed ribs as shown on section B-B and section I-I. The following is information that pertains to the repair welding. Listed below are the Welders, WPS and welding essential variables, followed by a short summary:

Welder Noritake Tamuri, ID 93-2337 (Rib 8L, repair 2-2).

Welder Kozuya Komai, ID 06-8002 (Rib 1L, repair 3-10).

\*WPS: SJ 3026-2 (Shielded Metal Arc Weld (SMAW) Process.

Welding variables minimum maximum range recorded is as follows:

For 5 mm diameter, Class E10016-G, Brand name LB-106 in the horizontal (2G) position;

Volts: 22-23, Amperage: 200-210 Travel Speed: 126-150 mm per minute.

The above essential variables appear to meet the WPS ranges of; Volts: 22-26, Amperage: 180-240 Travel Speed:

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

115-280 mm per minute.

Base Metal Preheat Temperature: 150 degrees Celsius.

The Nikko Inspection Services Quality Control (QC) Mr. Tamio Imai monitored the minimum preheat temperature and maximum interpass temperature of 260 degrees Celsius and the welding parameters and heat control at periodic intervals. The QA inspector observed that there was light rust on the base metal in the areas of the weld repairs. This was brought to the attention of JSW escort Mr. Itoh, who replied that the rust was a result of preheating and that the casting repair areas had been cleaned prior to preheating. Immediately after this conversation, both welders cleaned the remaining repair area using a power brush. The work was not completed on this day and appears to meet the minimum requirements of the contract documents.

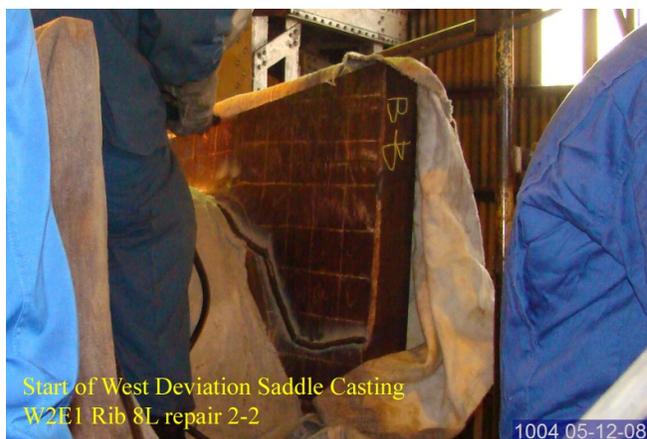
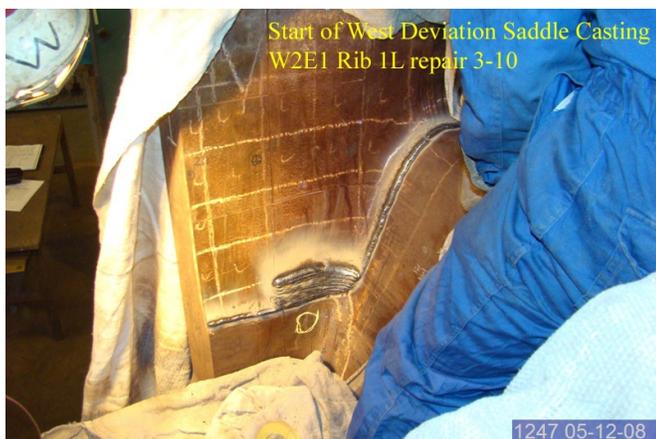
The following castings were also located in the foundry.

Casting T1-1 and T1-3 were in the foundry and casting T1-3 is in the as cast condition with no work performed at the time of inspection.

Casting W2-W1, which was poured on 4/29/08, was still cooling in the mold in the foundry.

Casting W2-E2 was in the NDT area of the foundry and no work was being performed at the time of inspection.

The following digital photographs illustrate observations of the activities being performed.



### Summary of Conversations:

As noted 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) 967-6363, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Lanz, Joe

Quality Assurance Inspector

**Reviewed By:** Brasel, Ron

QA Reviewer