

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002418**Date Inspected:** 12-May-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, Ltd.**Location:** Muroran, Japan

CWI Name:	Tomio Imai		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

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

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

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes observed the following activities relative to this project. The following was observed:

Foundry Shop

At the start of the shift, this QA inspector was escorted to the Foundry Shop by Japan Steel Works, Ltd. (JSW) personnel, Kunio Hagaya to observe the preparation and the repair welding of the rib build-up on the West Deviation Saddle Casting identified as W2E1. It appears that the casting will be preheated entirely and will be maintained through out the repair welding with heat blankets covering the entire casting during the repair welding of the rib build-up. The weld repair areas appeared to be laid out in a grid like pattern identified with a unique numbering system. Prior to the start of the welding the Quality Control (QC) inspector Tomio Imai verified and documented the dimensions of the rib to rib spacing and will be verified daily in regards to monitoring the distortion control. At the conclusion of the verifying the dimensions, Mr. Imai verified the minimum preheat temperature of 150 degrees Celsius and the maximum interpass temperature of 260 degrees Celsius utilizing a digital surface thermometer manufactured by Anritsu Model Number HA-400E and identified with a unique JSW number. Shortly thereafter, this QA inspector observed Mr. Imai verify the Alternating Current (AC) welding parameters for the following welders assigned to this project; Noritake-Tamura ID 93-2337 and Kazuya-Komai ID 06-8002. This task was performed on a test plate and not on the actual casting and a clamp amp/volt meter utilized by Tomio Imai appears to be a Hioki 3288. At the completion of this task the welding of the rib build-up commenced and was performed utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) SJ-3026-2 which was also used by the QC inspector Mr. Imai as a reference during the QC verification. The consumable utilized by the welders appeared to be a Hobart Brothers Product identified

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as LB-106, with the diameter sizes of 3.2mm and 5.0mm which appeared to comply with the AWS specification A5.5 and classification E10018-G. The welders Noritake-Tamura and Kazuya-Komai performed the repair welding in the horizontal (2G) position and were assigned to perform the repair welding accordingly on Rib 8L with the repair area identified as 2-2 grid B-4, B-5 and B-6 and Rib 1L with the repair area identified as 3-10, grid I-4, I-5 and I-6. The repair welding was performed on the unstamped side of the W2E1 West Deviation Saddle.

Later in the shift this QA inspector observed, at random intervals, the QC inspectors Tomio Imai and Motoi-Hidaka verify the minimum preheat, maximum interpass temperatures and the welding parameters which appeared to comply with the contract documents.

QA Observation Summary

This QA inspector randomly observed the in process Shielded Metal Arc Welding (SMAW) for the repair welding of the ribs on the West Deviation Saddles identified as W2E1. This QA inspector noted that it appeared the approved and latest revised WPS's were posted at the welding station and that each approved welder was entered in the latest revised Welding Personnel Log issued by Japan Steel Works, Ltd. The welding parameters, preheat and interpass temperatures were verified by this QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators for preheat and interpass temperatures. The filler metal utilized at the welding stations was also verified. The QC inspectors, Tomio Imai and Motoi-Hidaka appeared to perform the visual examinations and monitoring of the welding per the contract documents. The welding and inspection was not completed during this shift and appeared to be in general compliance with the contract documents.

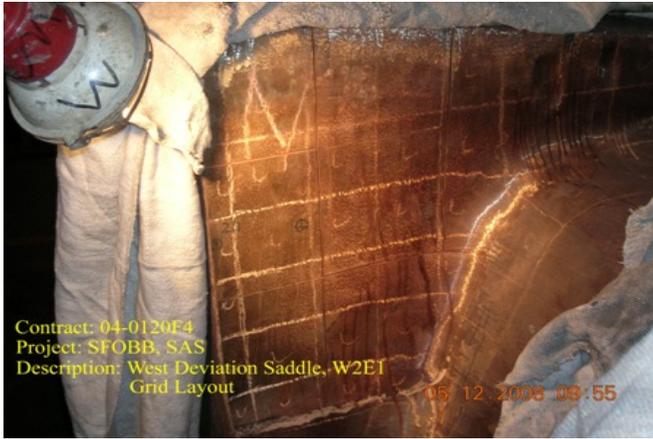
See Weld Joints in Progress Inspected, below, in regards to QA observation of the welding parameters recorded during this shift on this date.

This QA inspector also observed the calibration dates of the measuring units utilized by the QC inspectors during QC verification and were as follows; A Anritsu digital surface thermometer, JSW ID STK-04 calibration due date appeared to be 07/10/08 and a second digital surface thermometer, JSW ID STK-06 calibration due date appeared to be 07/24/08. Also a digital Hioki 3288 amp/volt clamp meter, JSW ID CMK-13 calibration due date appeared to be 07/27/08.

The following digital photographs illustrate the observations of the activities performed on this date.

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Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	W2E1, Rib 1L,, 3-10	SJ-3026-2	Tomio Imai	96	22.5	105mm/m		K. Kozuya
2	W2E1, Rib 8L, 2-2	SJ3026-2	Tomio Imai	100	22.0	100mm/m		T. Noritake
3	W2E1, Rib 8L, 2-2	SJ-3026-2	Tomio Imai	200	23	185mm/m		T. Noritake
4	W2E1, Rib 1L, 3-10	SJ-3026-2	Tomio Imai	195	23	182mm/m		K. Kozuya

Summary of Conversations:

There were no pertinent conversations relative to this project on this date.

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: Reyes,Danny Quality Assurance Inspector

Reviewed By: Lanz,Joe QA Reviewer
