

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-002681**Date Inspected:** 21-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2230**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 830**Contractor:** Japan Steel Works, Ltd.**Location:** Muroran, Japan

<b>CWI Name:</b>	Motoi-Hidaka		
<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

**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:

At the start of the shift, the QA inspector traveled to the Foundry Shop without a Japan Steel Works, Ltd. (JSW) personnel escort to observe the continued repair welding of the rib build-up areas on the West Deviation Saddle Casting identified as W2E1. The repair welding is being conducted at Lane 3 of the Foundry Shop at the designated area identified as "The Welding Area." The QA inspector observed the welding performed by JSW welding personnel Noritake-Tamura ID 93-2337 on the repair area of rib 1L identified as 3-10. The QA inspector also observed a second welder, Kazuya-Komai ID 06-8002 performing the repair welding on rib 8L identified as repair area 2-2. The weld inspection was performed by the QC inspector Motoi-Hidaka. The welding was performed by JSW welding personnel utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) identified as SJ-3026-2 which was also used by the QC inspector as a reference during QC verification.

The consumable utilized by the welders appeared to be a Hobart Brothers Product identified as LB-106, with the diameter size of 5.0mm which appeared to comply with the AWS Specification A5.5 and classification E10018-G. The welders performed the repair welding in the horizontal (2G) position.

At the conclusion of verifying the minimum preheat temperature of 160 degrees Celsius and the maximum interpass temperature of 260 degrees Celsius the QC inspector verified the Alternate Current (AC) welding parameters and were observed as follows; 204 AC amps and 22.4 AC volts with a travel speed measured at 142 mm/m.

Later during this shift this QA inspector, at random intervals, observed the QC inspectors perform QC verification

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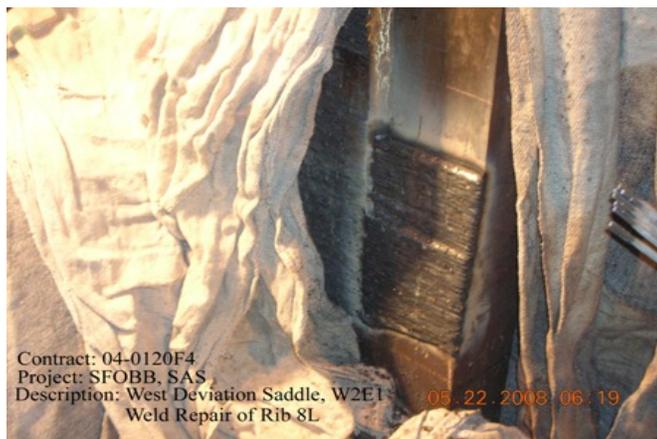
of the welding parameters, minimum and maximum surface temperatures and performing the visual weld inspection.

## 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 appropriate 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 as noted 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. See Weld Joints in Progress Inspected, below, in regards to QA observation of the welding parameters recorded during this shift on this date. The QC inspector, 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.

The calibration dates of the measuring instruments utilized by the QC inspectors, the clamp amp/volt meter and the digital surface thermometer, were previously verified by this QA inspector.

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



Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	W2E1, Rib1L/3-10	SJ-3026-2	Motoi_Hidaka	202 AC	22.3 AC	145 mm/m	160 Degrees C.	Kazuya-Komai
2	W2E1, Rib 8L/2-2	SJ-3026-2	Motoi_Hidaka	205.5 AC	23.0	147 mm/m	160 Degrees C.	Noritake-Tamura

## Summary of Conversations:

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

## Comments

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## WELDING INSPECTION REPORT

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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.

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<b>Inspected By:</b>	Reyes,Danny	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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