

**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 #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-004673**Date Inspected:** 18-Nov-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Japan Steel Works**Location:** Muroan, Japan

<b>CWI Name:</b>	Chung-Fu Kuan		
<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 Muroan Japan. Current work: Casting, machining and nondestructive testing of Saddles.

## Fabrication Shop 4

## T1-1 Base

No work performed on this date.

## T1-1 Casting

No work performed on this date.

## T1-2 Base

The QA inspector observed the in process welding of the structural steel plates for the Tower Saddle Base T1-2. The JSW welding personnel Satoru Watanabe, ID 08-5159 continued the fill welding of joint 8Y-7V (2-2) in the flat position. The welding was performed utilizing the gas shielded flux cored arc welding process per the welding procedure specification (WPS) SJ-3012-3. Takatoshi Inoue, ID 08-5163 continued the cover pass welding of joint 8Y-7V (2-3) in the flat position. The welding was performed utilizing the shielded metal arc welding process per the welding procedure specification (WPS) SJ-3012-2. Intertek Testing Services Quality Control (QC) inspector Mr. Chung-Fu Kuan monitored the welding parameters and heat control at periodic intervals. The minimum preheat temperature of 110°Celsius and maximum interpass temperature of 260°Celsius were verified to meet the WPS requirements by Mr. Kuan and the QA inspector utilizing Tempilstik temperature indicators. This data was

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entered into the QC inspector's daily log, identifying the location on a weld map. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

## T1-3 Base

The QA inspector observed the in process assembly layout and fit-up operation of the structural steel plates for the Tower Saddle Base T1-3. The center rib plates were aligned on the base plate and to the stem plate. The JSW fitter personnel Kiyotaka Koanagi performed the layout in accordance with approved drawings. This data was entered into the QC inspector's daily log, identifying the location on a weld map. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

## W2-E1

No work performed on this date.

## W2-E2 Base

No work performed on this date.

## Foundry

### W2-E2 Casting

The QA inspector observed the in process casting repair welding on West Deviation Saddle casting W2E2. The welding was performed to build up the thickness of the ribs in areas that were found to not meet the minimum thickness as shown on the approved drawings. The repair locations and repair details for this casting were submitted as number 000712, revision 00. The JSW welding personnel Hitoshi Sato, ID 69-2694 and Yoshio Kabutomori, ID 06-8000 continued the repair welding of repair 3-8 as shown in section H-H. The repairs were performed utilizing Shielded Metal Arc Welding (SMAW) per the welding procedure specification (WPS) SJ 3026-2. JSW welding engineer Mr. Imai monitored the welding parameters and heat control at periodic intervals. The minimum preheat temperature of 150° Celsius and maximum interpass temperature of 260° Celsius was verified to meet the WPS requirements by the QA inspector utilizing Tempilstik temperature indicators. The SMAW welding average amperage and voltage by clamp type meter and travel speed were verified to be within the welding procedure specification parameter range of 180 amps to 240 amps, 22 volts to 26 volts and travel speed of 115 to 280 mm per minute by the QA inspector. The work was not completed on this date and appears to meet the minimum requirements of the welding procedure specification and contract documents.

### W2-W3 Casting

Two JSW employees were observed removing excess riser material from the exterior surface of the casting W2-W3. The material was removed utilizing the Air-Carbon Arc method. Work was not completed on this date and appears to meet the minimum requirements of the contract documents.

## T1-2 Casting

No work performed on this date.

## T1-3 Casting

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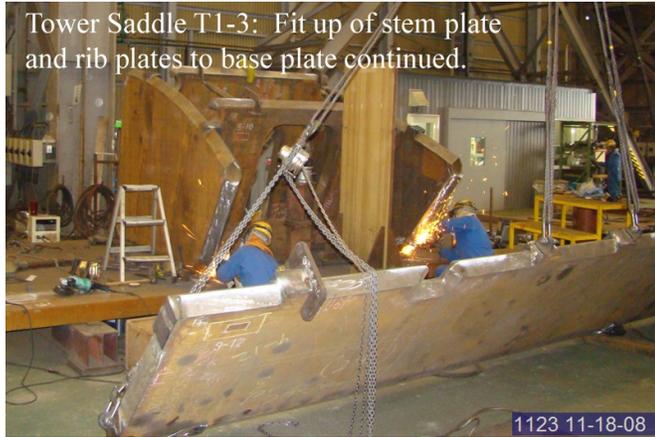
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Two JSW employees were observed removing excess riser material from the exterior surface of the casting T1-3. The material was removed utilizing the Air-Carbon Arc method. Work was not completed on this date and appears to meet the minimum requirements of the contract documents.

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



### Summary of Conversations:

There were general conversations with Intertek Testing Services Certified Welding Inspector Mr. Chung-Fu Kuan relative to the location of the welding and inspection personnel in the fabrication shop number 4.

### 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.

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