

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-001820**Date Inspected:** 26-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** Japan Steel Works, Ltd.**Location:** Muroran, Japan

CWI Name:	N/A	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:** PQR Test Plate, CW-3 and Cable Castings**Summary of Items Observed:**

On this date OSM Quality Assurance Representative Daniel L. Reyes observed the casting of the cable saddles, welding of the structural steel components and inspection relative to this project. The following was observed:

Foundry Shop

At the start of the shift this QA inspector observed the pouring of the Tower Saddle Casting identified as T1-3. The Japan Steel Works, Ltd. (JSW) personnel utilized two ladles during the pouring process. At the conclusion of the pouring of the Tower Saddle Casting this QA inspector also observed the pouring of the test block. The pouring process of the Tower Saddle and the test block was completed during this shift on this date.

Later in the shift at approximately 10:00 this QA inspector observed the welding and inspection of the Procedure Qualification Record (PQR) test plate identified as CW-3. The welding was performed by Japan Steel Works, Ltd. (JSW) welding personnel Satoshi Mokrohashi, ID 91-2255 who appeared to utilize the gas-shielded Flux Cored Arc Welding (FCAW) process as per the Welding Procedure Specification (WPS) SJ-2941 WP-3 which was also used by JSW Welding Engineer personnel Tomio Imai as a reference. The consumable utilized during the welding of the test plate was manufactured by Hobart Brothers and appeared to be identified as a Tri-Mark TMK-95K2 products. The diameter of the electrodes utilized appeared to be 1.6 millimeters. The 50 millimeter test plate, with a 60 degree included groove angle, was placed in the flat (1G) position and the weld metal was deposited with its axis horizontal.

Mr. Imai verified the preheat temperature of 161 degrees Celsius utilizing Tempilstik Heat Indicator crayon which appeared to comply with the WPS. At the conclusion of verifying the surface temperature the welder Mr. Mokrohashi commence the welding of the root pass. At this time the QA inspector observed Mr. Imai verify the

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amperage, voltage and the travel speed which was observed as follows; 288 AC amps, 24.0 AC volts with a travel speed measured at 37 cm/m.

Later in the shift at approximately 13:30 this QA inspector observed Mr. Imai perform the in process weld inspection of the subsequent weld layers and verify the following; the minimum preheat temperature, maximum interpass temperature and the DCEP welding parameters. At this time this QA inspector reviewed the PQR work documentation report and observed the following average welding parameters; 305 DC amps, 33 DC volts with a travel speed measured at 37 cm/m. The welding of the Test Plate identified as CW-3 was not completed during this shift on this date and appeared to comply with ASME IX, ASTM A488 and the WPS.

At approximately 11:15 hours this QA inspector observed the continued Ultrasonic Testing (UT) of the West Deviation Saddle identified as W2E2 which was performed by Nikko Inspection Services (NIS) technician Harumi Kohama. The Mr. Kohama appeared to be performing the testing at the rib radiuses and utilized the shear wave technique. The ultrasonic testing was not completed during this shift on this date and appeared to comply with the contract documents. (See Digital Photographs)

Summary of Conversations:

There were general conversations with the Deputy Manager Bridge Group personnel Kazunori Sato relative to the Procedure Qualification Record Test, ultrasonic testing of the steel castings and the location of the welding and inspection personnel.



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: Brasel, Ron

QA Reviewer