DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-004610
Date Inspected: 10-Nov-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 830
OSM Departure Time: 1700
Location: Muroran, Japan

CWI Name: Chung-Fu Kuan

Inspected CWI report:	☑ Yes	☐ No	☐ N/A	**CWI Present:**	☑ Yes ☐ No
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
				Approved WPS:	☑ Yes ☐ No ☐ N/A
				Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Tower, Jacking and Deviation Saddles

Summary of Items Observed:

On this date OSM Quality Assurance (QA) Representative Daniel L. Reyes was present during the welding of the structural steel components regarding the Tower and West Deviation Saddles relative to this project. The following was observed:

Fabrication Shop # 4

At the start of the shift, the QA inspector traveled to the fabrication shop to observe the scheduled welding of the Partial Joint Penetration (PJP) groove welds on the Tower Saddle identified as T1-2. The welding process utilized appeared to be the Shielded Metal Arc Welding (SMAW) and was performed by the following JSW welding personnel; Kobayashi Kouzou ID 08-5023 and Kato Makoto ID 08-5018. The Welding Procedure Specification (WPS) utilized by the welders appeared to be SJ-3012-2 which was also used by the Intertek Testing Service (ITS) Quality Control (QC) Inspector Chung Fu-Kuan as a reference during verification of the welding parameters. It was also noted by the QA inspector that JSW Distortion Control Plan identified as Document No. SJ-3151Rev. 3 was utilized in conjunction with the WPS. The welding of the PJP groove weld was performed on the rib to stem connection identified as weld numbers 8Y-5V (2-2) and 8Y-5V (2-3). The welding was performed in the vertical (3G) position with the work in the vertical plane and the axis of the weld vertical.

The QA inspector observed, at random intervals, the QC inspector performing verification the surface temperatures of and the welding parameters during the welding of the root pass and subsequent weld layers.

The consumables utilized appeared to be a Hobart Brothers product and was identified as a Hoballoy 9018-M, with a diameter size of 4.0 which appeared to comply with the AWS Specification A5.5 and the AWS Electrode Classification E9018-M H4R.

Foundry Shop

Later in the shift, the QA inspector traveled to the Foundry Shop to observe the continued repair welding of the rib build-up areas on the West Deviation Saddle Casting identified as W2E2. The repair welding is being conducted at Lane 1 of the Foundry Shop at the designated area identified as "The Gouging and Grinding Area." The welding was performed on the rib identified as Rib 8U by JSW welding personnel Kazuya Komai ID 06-8002 utilizing the SMAW process as per the WPS SJ-3026-2. The WPS was also used by the Welding Engineer, Tomio Imai as a reference during the verification of the welding parameters and surface temperatures.
The consumable utilized by the welder 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 AWS Electrode Classification E10018-G. The welding was performed in the horizontal (2G) position with the work in the vertical plane and the axis of the weld horizontal.

The QA inspector's observations were performed at random intervals during the shift. The 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 the QA inspector utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempilstik temperature indicators were utilized during the verification of the heat control. The filler metal utilized by the JSW welding personnel was also verified. The QC inspector ITS personnel, Chung Fu-Kuan and JSW Welding Engineer Tomio Imai appeared to perform the visual weld examinations, monitoring of the welding and the verification of the welding parameters in accordance with the contract documents.

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 and 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