

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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018901**Date Inspected:** 28-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**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:** Orthotropic Box Girders**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

- A). Lifting Lug Hole
- B). Pipe Supports
- C). Miscellaneous Tasks

A). Lifting Lug Hole

The QAI observed the welder, Darcel Jackson ID-9967, perform the Complete Joint Penetration (CJP) groove welding of the Lifting Lug Hole (LLH) identified as WN: 1W-PP9.5-W3-Weld No. 3 located along the grid line W3 of the OBG identified as W1. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process and the 4.8 mm, E7018 H4R electrode as per the Welding Procedure Specification (WPS) ABF-WPS-D15-1070, Rev. 1. The WPS was also utilized by the QC inspector, Mike Johnson, as a reference to monitor the welding and to verify the welding parameters. The QC verification of the welding parameters was observed by the QAI and recorded as 265 amps. The welding was performed in the flat (1G) position with the work placed in an approximately horizontal plane and the weld metal deposited from the upper side. The CJP welding was completed during this shift and appeared to comply with contract specifications.

Later in the shift, the QAI also observed the welder, Mr. Jackson, perform the CJP groove welding of the LLH identified as WN: 2W-PP15-W3-Weld No. 3 located along the grid line W3 of the OBG identified as W2. The

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welding was performed utilizing the Shielded Metal Arc Welding (SMAW) process and the 4.0 mm, E7018 H4R electrode as per the Welding Procedure Specification (WPS) ABF-WPS-D15-1070, Rev. 1. The WPS was also utilized by the QC inspector, Mike Johnson , as a reference to monitor the welding and to verify the welding parameters. The QC verification of the welding parameters was observed by the QAI and recorded as 174 amps. The welding was performed in the flat (1G) position with the work placed in an approximately horizontal plane and the weld metal deposited from the upper side. The CJP welding was not completed during this shift and appeared to comply with contract specifications.

The QAI also observed the welder, Mike Jiminez ID-4671, perform the Complete Joint Penetration (CJP) groove welding of the Lifting Lug Hole (LLH) identified as WN: 1W-PP11-W4-Weld No. 2 located along the grid line W4 of the OBG identified as W1. The welding was also performed utilizing the Shielded Metal Arc Welding (SMAW) process and the 4.0 mm and the 4.8 mm, E7018 H4R electrodes as per the Welding Procedure Specification (WPS) ABF-WPS-D15-1070, Rev. 1. The WPS was also utilized by the QC inspector, Mike Johnson, as a reference to monitor the welding and to verify the welding parameters. The QC verification of the welding parameters was observed by the QAI and recorded as 180 amps and 272 amps accordingly. The welding conducted during this shift was performed in the flat (1G) position with the work in an approximately horizontal plane and the weld metal deposited from the upper side.

B). Pipe Supports

The QAI observe the installation, field fit-up and tack welding of the pipe supports PS-8, identified as WN: 101108-01 and 101105-05 which were located at the bent cap W2-W1 and W2-E1. The QC inspection was performed by Mike Johnson utilizing the Welding Procedure Specification (WPS) identified as Fillet Murex to monitor the tack welding and to verify the welding parameters. The welding parameters were observed and recorded as 91 amps utilizing 2.4 mm electrodes with the welding performed in the 4F position. The tack welding was performed David Garcia ID-8789.

C). Miscellaneous Task

This QAI also performed a review and update of the project progress utilizing QA field reports and NDT reports. The updated project information was documented into the various QA tracking logs.

QA Observation and Verification Summary

The QA inspector observed the QC activities and the welding of the field splices utilizing the WPS as noted above, which appeared to be posted at the weld station. The welding parameters and surface temperatures were verified by the QC inspector and utilizing a Fluke 337 clamp meter for the electrical welding parameters and a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. The ESAB consumables utilized for the SMAW welding process appeared to comply with the AWS Specification and AWS Classification. The QC inspection, testing and welding performed on this shift appeared to be in general compliance with the contract documents. At random intervals, the QAI verified the QC inspection, testing, welding parameters and the surface temperatures utilizing various inspection equipment and gages which included a Fluke 337 Clamp Meter and Tempilstik Temperature indicators.

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The digital photographs below illustrate the work observed during this scheduled shift.



Summary of Conversations:

There were general conversations with Quality Control Inspector Bonifacio Daquinag, Jr. at the start of the shift regarding the location of American Bridge/Fluor welding, inspection and N.D.E. testing personnel scheduled for this shift.

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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer
