

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 #: 1.28**WELDING INSPECTION REPORT**

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027899
Date Inspected: 02-Jul-2012

Project Name: SAS Superstructure **OSM Arrival Time:** 700
Prime Contractor: American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 1030
Contractor: American Bridge/Fluor Enterprises, a JV **Location:** jobsite

CWI Name:	Fred Michaels/William Sherwood			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:	OBG		

Summary of Items Observed:

At the start of the shift this Quality Assurance Inspector (QA) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) welding and Quality Control (QC) personnel. The observations and inspections were performed as noted below:

Skyway

This QAI observed a stud welding Procedure Qualification Record (PQR) being conducted by Alex Lopes of the Bleyco Company and recorded by Quality Control Inspector Fred Michaels. The PQR consisted of shooting ten 1/4" diameter threaded studs (Ht#154688) with the base of the studs covered with Nelson Stud Ferrules (Part Number 100101077) conforming to ASTM F166, in the flat and overhead position on to a A709 Gr50 plate. The welding was being accomplished utilizing a Nelson Stud 101 Series 4500 power source and a Nelson Stud Model NS-40 Stud Gun. The welding parameters for the test were as follows: Weld Time: .17 seconds, Current: 425 amps, Polarity: Direct Current Electrode Negative.

Upon the completion of the welding of the twenty studs (ten overhead, ten flat) Fred Michaels conducted a torque test on the studs per Chapter 7 of the American Welding Society Bridge Welding Code 2002 edition. The studs were torque tested to 5 ft/lbs by use of a torque wrench Serial Number 1011069864 with a calibration date 3/22/12, and a calibration due date of 3/22/13. All 20 threaded studs were tested with no failures.

OBG W12 West Corner Drop-In

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QAI observed the preheating of weld joint W12 Corner Drop-In W2.1 by Welder Rich Garcia, utilizing the use of a rosebud torch. The joint was preheated to a Quality Control Recorded; Quality Assurance verified temperature of 150F.

This QAI observed QC inspector Fred Michaels take multiple temperature readings along the length of the weld joint prior to the start of welding operations, and after work stoppages randomly throughout the day. Inspector Michaels was using an Infrared non-contact heat gun to record preheat temperature, this QAI verified readings using a Tempil Stick at random intervals throughout the day.

This QAI observed Rich Garcia utilizing the Flux Cored Arc Welding Process to the following parameters 242 amps, 28 volts, which fall within the range of the governing Welding Procedure Specification ABF-WPS-D15-F3200-2.

This QAI observed Quality Control Inspector Fred Michaels recording welding parameters at various times throughout the shift and this QAI verified parameters at random intervals.

QAI observed the preheating of weld joint W12 Corner Drop-In W2.1 by Welder Jeremy Doleman, utilizing the use of a rosebud torch. The joint was preheated to a Quality Control Recorded; Quality Assurance verified temperature of 150F. This QAI observed QC inspector Fred Michaels take multiple temperature readings along the length of the weld joint prior to the start of welding operations, and after work stoppages randomly throughout the day. Inspector Michaels was using an Infrared non-contact heat gun to record preheat temperature, this QAI verified readings using a Tempil Stick at random intervals throughout the day.

This QAI observed Jeremy Doleman utilizing the Flux Cored Arc Welding Process to the following parameters 253 amps, 27 volts, which fall within the range of the governing Welding Procedure Specification ABF-WPS-D15-F3200-2. This QAI observed Quality Control Inspector Fred Michaels recording welding parameters at various times throughout the shift and this QAI verified parameters at random intervals.



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Summary of Conversations:

There were general conversations with Quality Control Inspector Fred Michaels, at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift. All observations were relayed to Danny Reyes and Bill Levell.

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:	Daggett, Matt	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
