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

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

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

Report No: WIR-027304
Date Inspected: 08-Mar-2012

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

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: See Below

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: OBG/Tower

Summary of Items Observed:

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

A). This Quality Assurance Lead Inspector (QALI) assigned the QA Inspectors to the following, but not limited to the work station (s) listed, to observe the welding and the QC inspection of the following:

Joselito Lizardo-Tower, at the 9 Meter El. (Observed the welding, QC inspection and testing of diaphragm plates and fit-up of the drop-in plates) and OBG W5 (Observation of the welding and QC inspection of the Deck Access Hole, DAH).

Craig Hager-Tower, at the 13 Meter El. (Observed the welding, QC inspection and testing of the diaphragm plates) and OBG field splices 12W/13W and 13W/14W (Welding and QC inspection of the horizontal stiffeners @ the "A" deck longitudinal stiffeners).

Skyway-No work

NOTE: See QA daily Weld Inspection Reports (WIR) and NDE reports for additional information and details.

Quality Assurance Lead Inspector (QALI) Summary

This QA Lead Inspector (QALI) observed the QA Inspector's Joselito Lizardo and Craig Hager monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures for compliance with the contract specifications. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift, this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and no issues were noted.

OBG-QAI Observations

Deck Access Holes

The QAI observed the Shielded Metal Arc Welding (SMAW) of the Deck Access Hole (DAH) plate identified as Weld Number (WN): 8E-PP70.5-E2. The welding was performed by Salvador Sandoval ID-2202 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1110-A, Rev. 1. The WPS was also utilized by the QC inspector Steve Jensen as a reference to monitor the welding and verify the welding parameters which was recorded as 139 amps. Later in the shift, at random intervals, this QAI observed the Complete Joint Penetration (CJP) welding and QC inspection performed during the welding of the "B" face.

The QAI also observed the Magnetic Particle Testing (MPT) of back gouge, which was ground to a bright metal, of the Deck Access Hole (DAH) plate identified as Weld Number (WN): 9W-PP84.5-W2. No rejectable indications were noted by the QC technician, Fred Von Hoff. Later in the shift this QAI observed the welding and QC inspection. The welding was performed by Mike Jiminez ID-4671 utilizing the SMAW process as per the WPS identified as ABF-WPS-D15-1110-A, Rev. 1. At random interval this QAI observed the QC inspector, Mr. Jensen, monitor the welding and perform QC inspection for compliance with the contract documents.

The welding of the DAH utilized the 3.2 mm Lincoln electrode to perform the welding in the vertical (3G) position with the work placed in an approximately vertical plane with the groove approximately vertical. The minimum preheat temperature of 10 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with the contract specifications.

OBG E14-Punch List Item # 3759-S

The QAI observed the continued Shielded Metal Arc Welding (SMAW) of the new flange plate (500 mm-L) splice located south of grid line E3 at Panel Point (PP) 128 and identified X4575E. The welding was performed by Rory Hogan ID-3186 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-1110A, Rev. 1. The WPS was also used by the Quality Control (QC) Inspector John Pagliero to monitor the Complete Joint Penetration (CJP) welding and to perform the QC inspection for compliance. The QAI observed the QC inspector verifying the welding parameters and were noted as 136 amps. The minimum preheat temperature of 20 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The welding was performed in the vertical (3G) position with the work placed in an approximately vertical plane with the groove approximately vertical. The flange plate was removed because of interference with the lifting rod

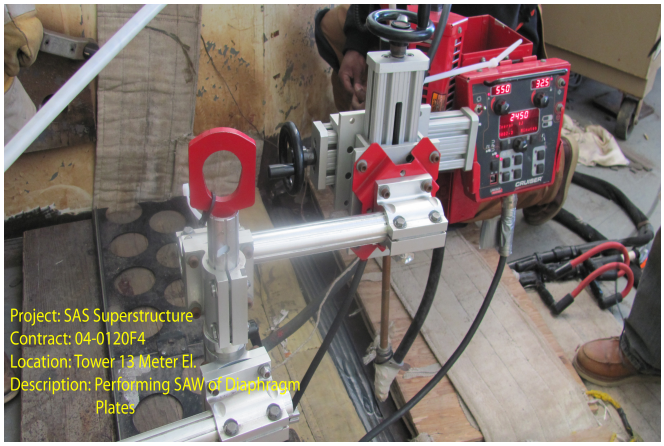
which was utilized during the erecting of the OBG E14. Reference TC-RFI-0485R0.

QAI/NDE Verification (Tower)

The QAI performed a Magnetic Particle Test (MPT) of the root pass in regards to the Partial Joint Penetration (PJP) identified as Weld Numbers W104 and W105. The root passes were tested 10% to verify that the weld and testing by QC meet the requirements of the contract documents. The examination was performed as per the contract documents and for test results, identity and location of the welds see QAI test report TL-6028 generated on this date.

This QALI continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates).

See attached digital photographs below for some of the work observed during this shift.



Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection 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:	Levell,Bill	QA Reviewer