

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-027445
Date Inspected: 11-Apr-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	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/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, 9 Meter El. (Observed the welding, QC inspection of diaphragm plate to shear plate, drop-in plates, perimeter channels and fit lugs).

Ken Riley- OBG E12 and W12 (Observation of welding, QC inspection of deck access holes) and Mechanical Piping/FW Spencer (Observation of welding and QC inspection of field splices).

Doug Frey-Tower/13 Meter El. (Observation of the welding, QC inspection and testing of the diaphragm plates) and Tower Shear Plates (Electro-Slag) (Observation of repair welding, QC inspection and testing of the field welds) and QA/NDE verification.

Dan Smith-OBG W6 (Observation of welding and QC inspection of the longitudinal stiffeners) OBG W5 (Observation of welding and QC inspection and testing of deck access hole) OBG E8 (Observation of welding and QC inspection of the longitudinal) and QA/NDE verification.

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Art Peterson-Skyway/ CCO-193 (Modification to the existing bike path panels at the expansion joint on the Skyway portion of the SFOBB East Span) and review and inspection of punchlist items, in regards to East and West bound OBG, of work not performed by the contractor's shop fabricator.

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, Art Peterson, Doug Frey, Dan Smith and Ken Riley 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.

Tower

The QAI also observed the Submerged Arc Welding (SAW) process of the diaphragm plate identified as Weld Number (WN): 125. The welding was performed by the welding operator James Zhen ID-6001 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-4062-1 Rev. 0. The WPS was also used by the Quality Control (QC) Inspector, Fred Von Hoff, to monitor the welding and to perform QC inspection for compliance. The QAI observed Mr. Von Hoff verify the welding parameters and were noted as follows: 552 amps, 32.0 volts and a travel speed measured at 379 mm per minute. The calculation of the heat input was also noted as 2.79 kJ/mm by the QC inspector. The minimum preheat temperature of 140 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with the contract specifications.

This QAI also observed the repair welding of the Electro-Slag Weld (ESW) joint (shear plate) identified as "J". These areas mark by the QC inspector, Jesse Cayabyab, while performing a Visual and Magnetic Particle Test (VT and MPT). The welding was performed by Richard Garcia, ID-5982 utilizing the Shielded Metal Arc Welding (SMAW) process as per the WPS ABF-WPS-D15-1000 Repair, Rev. 2. The WPS was also used by the QC inspector as a reference during the monitoring of the welding and QC verification of the welding parameters.

Skyway, Hinge "A"/CCO-193

At approximately 0900, this QALI was informed by QAI, Art Peterson that there appeared to be a linear indication at the bike path panel (bottom plate) to end plate connection located approximately at the area of the traveler rail. Upon the arrival of this QALI at the east bound bike path panel at Hinge "A", this QALI performed a visual observation of this area and it did appear that the indication exhibited the characteristic of a plate interface (2 plates butted together). The indication was found during the MPT of the tack weld and the testing was performed by the QC inspector Bernard Docena. At approximately 0930, AB/F Welding Quality Control Manager (WQCP)

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James Bowers and Mets personnel, Robert Mertz, arrived at this location and Mr. Bowers also performed a visual observation of this area and in conclusion he informed Mr. Mertz and this QALI that it appeared to be an interface between two plates. He also said that he would review the shop drawing details prior to determining any resolution.

See digital photograph below in regards to the bike path issue.



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
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Reviewed By:	Levell,Bill	QA Reviewer
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