

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-027001
Date Inspected: 09-Jan-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	

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:

Rick Bettencourt-OBG W12 (Observation of welding and QC inspection of lifting lug holes), OBG field splice W12/W13 (Observation of welding and QC inspection of "A" deck, identified as segment "A3"), observation of the modifications of the existing bike path panels as per the CCO: 193 and ABF Submittal 2549 R1 and QA/NDE verification.

Doug Frey-OBG Field Splice E13/E14 (Observation of welding and QC inspection of the "D3" Deck), OBG E12 (Observation of repair welding and QC inspection on the lifting lug holes), OBG field splice W12/W13 (Observation of repair welding and QC inspection of bottom plate splice identified as "D2"), OBG field splice (Observation of repair welding and QC inspection of bottom plate splice identified as "D3") and QA/NDE verification.

Quality Assurance Lead Inspector (QALI) Summary

This QA Lead Inspector (QALI) observed the QA Inspector's Rick Bettencourt and Douglas Frey monitor the

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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 was noted on this date. This QALI also verified the following in progress work:

FW Spencer/Piping at the South Tower Shaft

This QALI observed the fit-up and CJP welding of the pipe 3" utility compressed air system field splices identified as 1/3/T/154, 2/3/T/152, 3/3/T152, 1/T2/CA2/152, 2/T2/CA2/152 and 2" utility water system field splices identified as 1/2/T/154 and 1/T2/DW1/152. The welding was performed by FW Spencer personnel Damian LLanos, identification # 6645, utilizing the WPS identified as 1-12-1. The welding parameters were noted as 85 amps by the QC inspector, Steve Jensen.

The in process welding and the inspection performed by the QC inspector Mr. Jensen appeared to comply with the contract specifications.

OBG Field Splice W12/W13

The QAI observed the Flux Cored Arc Welding (FCAW-G) of the deck plate field splice identified as Weld Number (WN): 12W-13W-A, Segment A3. The Complete Joint Penetration (CJP) groove welding was performed by welding personnel Richard Garcia, welder stamp # 5892 utilizing the Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4, Rev. 0. The WPS was also used by the AB/F Quality Control (QC) Inspector Salvador Merino as a reference during the monitoring and QC inspection of the CJP welding. The groove joint appeared to comply with the AWS joint designation identified as B-U6-GF. The 1.6 mm consumable utilized by the welder were observed and noted as a ESAB Dual Shield 70 Ultra Plus electrode and appeared to meet the requirements of the AWS Specification A5.20 and the AWS Classification E71T-M. The QAI also observed the QC inspector verify the average welding parameters and were observed as follows: 255 amps, 23.2 volts and a travel speed measured at 151 mm/minute. The QC inspector also monitored the surface temperatures during the field welding and was observed and noted by the QAI and appeared to comply with the contract specifications minimum preheat temperature of 100 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius.

Also, this QALI performed QA/NDE verification of lifting lug holes at OBG W11. See attached TL-6028 for additional information.

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

This QA Inspector 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).

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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.

Also, this QALI had a conversation with QAI Rick Bettencourt in regards to the sampling of the elastomeric bearing pad to be provided by the contractor (MCM). Mr. Bettencourt informed this QALI that he sampled the bearing pad on Friday, January 6, 2012 and at this time the sampled item(s) was enroute to Sacramento. This QALI informed QA Supervisor William Levell of the status of the sampling of the bearing pad via e-mail.

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
