

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-028292
Date Inspected: 28-Aug-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: 1900
Location: jobsite

CWI Name: As noted below
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: Yes No N/A
Approved WPS: Yes No N/A
Delayed / Cancelled: Yes No N/A
Component: OBG

Bridge No: 34-0006**Summary of Items Observed:**

Quality Assurance inspector (QA) Matthew Daggett was at the American Bridge/Fluor (ABF) job site at the San Francisco/Oakland Bay Bridge in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. Weld Repairs 12W/13W-B1 Face B
2. Weld Repair of grinding divots 12W-PP111.1-C1
3. Weld Repairs PP111.1 LS-1

Weld repairs 12W/13W-B1 Face B

The QA inspector from time to time monitored critical weld repair being performed by ABF welding personnel Mike Jiminez on Splice 12/13W-B1 Face B repair #201208-092, at the following location:

Y= 1070mm, D=9mm, W=25mm, L=90mm

Y=1260mm, D=9mm, W=25mm, L=90mm

Y=1430mm, D=13mm, W=25mm, L=80mm

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This QA Inspector observed Mr. Jiminez preheating to a QA verified temperature of 250F prior to using the Carbon Arc Gouging process to remove defects at the above-mentioned locations on the Splice. The locations and depth of the defects had been marked on the steel by the Ultrasonic Technician at the conclusion of his testing. At the end of gouging operations Mr. Jiminez ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

Prior to welding Quality Control Technician Pat Swain performed Visual and Magnetic Particle Testing on the above excavations. This Quality Assurance Inspector verified the results of the test by doing duplicate testing to the excavations. No indications were noted.

The welder spent the majority of the shift depositing the root passes, fill passes, and cap passes with approximately 100% being completed at the end of the shift. QC inspector Pat Swain was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1004R and supporting Procedure Qualification Records (PQR). Prior to initiating the welding at this location the QC inspector observed the preheat temperature and post heat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. Using a Tempil Stick, (temperature indicating crayon) the preheat, and post heat temperature was then verified by this QA inspector to be greater than 350F and 450F respectively. The parameters, using a Fluke brand Tong style meter, were verified to be 135 amps.

Weld Repair of grinding divots 12W-PP111.1-C1

The QA inspector monitored the further critical weld repair being performed by ABF welding personnel Eric sparks on grinding divots of Splice 12W PP111.1 C1. The divots were at various locations along the splice.

The welder spent the majority of time depositing the root passes, fill passes, and cap passes with approximately 100% being completed at the end of the shift. QC inspector Pat Swain was noted to be present in order to monitor the progress and ensure the welding was within the established Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1004R and supporting Procedure Qualification Records (PQR). Prior to initiating the welding at this location the QC inspector observed the preheat temperature and using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. Using a Tempil Stick, (temperature indicating crayon) the preheat, temperature was then verified by this QA inspector to be greater than 350F. The parameters, using a Fluke brand Tong style meter, were verified to be 160 amps. At the conclusion of welding operations Mr. Sparks post heated at a QC recorded QA verified temperature of 450F for one hour.

Weld Repairs PP111.1 LS-1

This QA Inspector observed Eric Sparks pre-heating to a QA verified temperature of 250F prior to using the Carbon Arc Gouging process to remove defects on the above-mentioned Longitudinal Stiffener. The locations and depth of the defects had been marked on the steel by the Ultrasonic Technician at the conclusion of his testing. At the end of gouging operations Mr. Sparks ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

Prior to welding Quality Control Technician Pat Swain performed Visual and Magnetic Particle Testing on the

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above excavations. This Quality Assurance Inspector verified the results of the test by doing duplicate testing to the excavations. No indications were noted. No welding was performed to the repairs.



Summary of Conversations:

There were general conversations with Quality Control Inspector Chris Concha, 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
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Reviewed By:	Levell, Bill	QA Reviewer
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