

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 #: 04-0120F4Cty: 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-028243**Date Inspected:** 25-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** jobsite

CWI Name: Chris Concha
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-111.1-C1 Y Location 180mm
2. Weld Repairs 12W-111.1-C1 Y Location 420mm
3. Weld Repairs 12W-111.1-C1 Y Location 580mm

Weld Repairs 12W-111.1-C1 Y location 0mm

The QA inspector observed critical weld repair being performed by ABF welding personnel Rick Clayborn on Splice 12W-111.1-C1, without the benefit of Engineer Approval, at the following location:

Y= 180mm, D=17mm, W=32mm, L=890mm

This QA Inspector observed Mr. Clayborn 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. Clayborn ground the excavations to a bright clean metal condition in

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

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 a fraction of the shift depositing the root passes and fill 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 postheat 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 postheat 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, was verified to be 151 amps.

Weld Repair 12W-111.1-C1 Y location 1770

The QA inspector observed critical weld repair being performed by ABF welding personnel Rick Clayborn on Splice 12W-111.1-C1 , at the following location:

Y= 420mm, D=16mm, W=30mm, L=75mm (Repair #201208-093)

This QA Inspector observed Mr. Clayborn 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. Clayborn 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 a fraction of the shift depositing the root passes and fill 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 postheat 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 postheat 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, was verified to be 151 amps

Weld Repair 12W-111.1-C1 Y location 580

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

The QA inspector monitored critical weld repair being performed by ABF welding personnel Rick Clayborn on Splice 12W-111.1-C1, at the following location:

Y= 580mm, D=10mm, W=30mm, L=90mm (Repair #201208-093)

This QA Inspector observed Mr. Clayborn 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. Clayborn 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 a fraction of the shift depositing the root passes and fill 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 postheat 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 postheat 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, was verified to be 151 amps



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.

WELDING INSPECTION REPORT

(*Continued Page 4 of 4*)

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
