

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-028341**Date Inspected:** 07-Sep-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** jobsite**CWI Name:** Scott Kortum**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:**

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. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 1500mm (Face A)

2. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 150mm (Face A)

3. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 270mm (Face B)

1. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 1500mm (Face A)

This QA inspector observed Critical Weld Repair being performed without Engineer Approval by ABF welding personnel Jimmy Zen on Floor Beam Web to Flange Weld 12W-PP125.5-W2.8-BF-2, at the following location:

Y= 1500mm, D=7mm, W=15mm, L=1180mm

This QA Inspector observed Mr. Zen using the Carbon Arc Gouging process to remove defects at the

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

above-mentioned locations on the Splice, without the benefit of preheat. 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. Zen ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

Prior to welding Quality Control Technician Scott Kortum 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.

Prior to welding at this location this QAI spoke with the Scott Kortum the QC Technician about the weld joint being SPCM, Mr. Kortum informed this QAI that he had been instructed by his superiors that the joint was not SPCM. At this point the repair work was proceeding under the assumption that the joint was part of a redundant member.

The welder spent a part of the shift (till approx. 1630) depositing the root passes and fill passes with approximately 80% being completed at 1630. QC inspector Kortum was noted to be present in order to monitor the progress and ensure the welding was within the assumed Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1001 Rev 0 and supporting Procedure Qualification Records (PQR). Prior to and during the welding at this location the QC inspector observed the preheat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. The parameters, using a Fluke brand Tong style meter, was QC recorded, QA verified to be 155 amps.

At approximately 1630 QC Technician Kortum informed this QAI that the Contractor/QC had made a mistake and they were now in full agreement that the weld joint was SPCM and the length of the excavations made it a critical repair. He informed this QAI that the contractor would be submitting a repair procedure after the fact to the Engineer. No RWR has been received by this QAI at the time of this report. The welder was then instructed to follow the requirements of WPS-ABF-WPS-1004R (REV0).

2. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 150mm (Face A)

This QA inspector observed Critical Weld Repair being performed without Engineer Approval by ABF welding personnel Jose Torres on Floor Beam Web to Flange Weld 12W-PP125.5-W2.8-BF-2, at the following location:

Y= 150mm, D=10mm, W=16mm, L=30mm

This QA Inspector observed Mr. Torres using the Carbon Arc Gouging process to remove defects at the above-mentioned locations on the Splice, without the benefit of preheat. 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. Torres ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

Prior to welding Quality Control Technician Scott Kortum 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.

Prior to welding at this location this QAI spoke with the Scott Kortum the QC Technician about the weld joint being SPCM, Mr. Kortum informed this QAI that he had been instructed by his superiors that the joint was not SPCM. At this point the repair work was proceeding under the assumption that the joint was part of a redundant member.

The welder spent a part of the shift (till approx. 1630) depositing the root passes and fill passes with approximately 80% being completed at 1630. QC inspector Kortum was noted to be present in order to monitor the progress and ensure the welding was within the assumed Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1001 Rev 0 and supporting Procedure Qualification Records (PQR). Prior to and during the welding at this location the QC inspector observed the preheat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. The parameters, using a Fluke brand Tong style meter, was QC recorded, QA verified to be 155 amps.

At approximately 1630 QC Technician Kortum informed this QAI that the Contractor/QC had made a mistake and they were now in full agreement that the weld joint was SPCM and the length of the excavations made it a critical repair. He informed this QAI that the contractor would be submitting a repair procedure after the fact to the Engineer. No RWR has been received by this QAI at the time of this report. The welder was then instructed to follow the requirements of WPS-ABF-WPS-1004R (REV0)

3. Critical Weld Repair 13W-PP125.5-W2.8-BF-2; Y Location: 270mm (Face B)

This QA inspector observed Critical Weld Repair being performed without Engineer Approval by ABF welding personnel Jose Torres on Floor Beam Web to Flange Weld 12W-PP125.5-W2.8-BF-2, at the following location:

Y= 300mm, D=10mm, W=15mm, L=110mm

This QA Inspector observed Mr. Torres using the Carbon Arc Gouging process to remove defects at the above-mentioned locations on the Splice, without the benefit of preheat. 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. Torres ground the excavations to a bright clean metal condition in preparation of Visual and Magnetic Particle Testing.

Prior to welding Quality Control Technician Scott Kortum 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.

Prior to welding at this location this QAI spoke with the Scott Kortum the QC Technician about the weld joint being SPCM, Mr. Kortum informed this QAI that he had been instructed by his superiors that the joint was not SPCM. At this point the repair work was proceeding under the assumption that the joint was part of a redundant

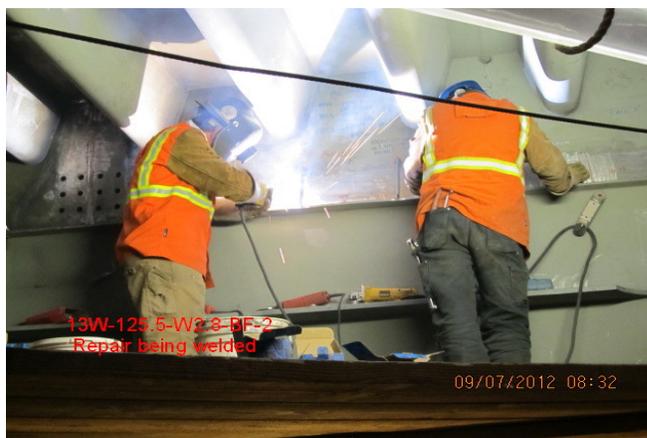
WELDING INSPECTION REPORT

(Continued Page 4 of 4)

member.

The welder spent a part of the shift (till approx. 1630) depositing the root passes and fill passes with approximately 100% being completed prior to 1630. QC inspector Kortum was noted to be present in order to monitor the progress and ensure the welding was within the assumed Welding Procedure Specification (WPS) noted as ABF-WPS-D15-1001 Rev 0 and supporting Procedure Qualification Records (PQR). Prior to and during the welding at this location the QC inspector observed the preheat temperature using a Raytek non-contact Thermometer, was sufficient and compliant to the above-mentioned WPS. The parameters, using a Fluke brand Tong style meter, was QC recorded, QA verified to be 155 amps.

At approximately 1630 QC Technician Kortum informed this QAI that the Contractor/QC had made a mistake and they were now in full agreement that the weld joint was SPCM and the length of the excavations made it a critical repair. He informed this QAI that the contractor would be submitting a repair procedure after the fact to the Engineer. No RWR has been received by this QAI at the time of this report. The welder was then instructed to follow the requirements of WPS-ABF-WPS-1004R (REV0)



Summary of Conversations:

There were general conversations with Quality Control Inspector Scott Kortum, 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 Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

Inspected By: Daggett, Matt

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer