

**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-028186**Date Inspected:** 14-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** jobsite**CWI Name:** See Body of Report**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. Welding of 13W/14W Plate G
2. Back gouging 12E-PP116.5-E5 Deck Access Hole Face B
3. Welding 12W-PP116.5-W5 Deck Access Hole Face B

13W/14W Plate G

Due to the contractor choosing to weld prior to getting engineer approval for the poor fit up an Incident Report was issued on the above-mentioned welded splice. At the time of this report the joint exhibited a 3mm to 5mm offset with a maximum root opening of 20mm.

The QA inspector from time to time observed the in process Shield Metal Arc Welding being performed by ABF welding personnel Jim Quan Huang (9340) on 13W/14W Plate G vertical splice. The welder spent the shift depositing the fill passes with approximately 80% being completed at the end of the shift. QC inspector Fred Michels 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-D15-1040-C and supporting Procedure Qualification

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# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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Records (PQR). Prior to initiating 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. Using a Tempil Stick, (temperature indicating crayon)the preheat and interpass temperature was then verified by this QA inspector to be greater than 150F and the parameters, using a Fluke brand Tong style meter, was verified to be 160 amps. See digital photo included in the body of this report for general information.

## Back gouging 12E-PP116.5-E5 Deck Access Hole Face B

The QA inspector noted and periodically observed ABF welder Jin Pei Wang (7299) performing the back gouging and grinding operations on Side B of Deck Access Hole 12E-E116.5-E5. QC inspector Chris Concha was noted to be in the vicinity in order to monitor the progression of work, perform in process visual inspection and ensure the work was being performed in general conformance with the contract documents. The work was not completed on this date and appeared to be progressing in general conformance with the contract documents.

## Welding 12W-PP116.5-W5 Deck Access Hole Face B

The QA inspector intermittently observed the in process Shield Metal Arc Welding being performed by ABF welding personnel Roby Smith on Face B of Deck Access Hole 12W-116.5-W5. The welder spent the shift depositing the root passes and fill passes with approximately 20% being completed at the end of the shift. QC inspector Chris Concha 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-D15-1110-A and supporting Procedure Qualification Records (PQR). Prior to initiating 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. Using a Tempil Stick, (temperature indicating crayon)the preheat and interpass temperature was then verified by this QA inspector to be greater than 150F and the parameters, using a Fluke brand Tong style meter, was verified to be 160 amps. See digital photo included in the body of this report for general i



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# WELDING INSPECTION REPORT

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## Summary of Conversations:

There were general conversations with Quality Control Inspector Chris Cocha, at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift. All observations were relayed to 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.

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<b>Inspected By:</b>	Daggett, Matt	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell, Bill	QA Reviewer

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