

**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-026953**Date Inspected:** 21-Dec-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**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:** SAS**Summary of Items Observed:**

12W/13W-E1

The QA Inspector randomly observed the SE QC Inspector Jesse Cayabyab indicate with a paint marker the area in which a UT reject, a second time repair or R2 was located in the above identified weld joint. The QA Inspector noted the ABF welder Fred Kaddu was on site to excavate and repair the rejected area. After the rejected area was indicated directly on the ground flush weld reinforcement, the QA Inspector randomly observed the ABF welder begin excavating the weld utilizing a carbon air arc. After the area had been excavated, ground and blended to a weldable profile, the SE QC Inspector performed Magnetic particle testing (MT) of the excavation. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector performed dimensional measurements of the excavation and noted as follows: Y=3230, L=20mm, D=17mm, W=23mm. The QA Inspector randomly observed the ABF welder preheat the excavated area and surrounding base metal to the minimum required 100F. The QA randomly observed the QC Inspector verify the preheat utilizing a temperature indicating laser. The QA Inspector noted the ABF welder began the shielded metal arc welding (SMAW) repair utilizing 1/8" E7018 low hydrogen electrodes with 119 Amps. The QA Inspector noted the preheat and welding parameters did appear to be in general compliance with ABF-WPS-1001-Repair. After the root/fill/cover passes were completed the ABF welder performed grinding tasks and removed the weld reinforcement flush with base metal.

12W/13W-E2

The QA Inspector randomly observed the SE QC Inspector Jesse Cayabyab indicate with a paint marker the area

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in which a UT reject, was located in the above identified weld joint. The QA Inspector noted the ABF welder Fred Kaddu was on site to excavate and repair the rejected area. After the rejected area was indicated directly on the ground flush weld reinforcement, the QA Inspector randomly observed the ABF welder begin excavating the weld utilizing a carbon air arc. After the area had been excavated, ground and blended to a weldable profile, the SE QC Inspector performed MT of the excavation. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector performed dimensional measurements of the excavation and noted as follows: Y=3180, L=90mm, D=17mm, W=22mm. The QA Inspector randomly observed the ABF welder preheat the excavated area and surrounding base metal to the minimum required 100F. The QA Inspector randomly observed the QC Inspector verify the preheat utilizing a temperature indicating laser. The QA Inspector noted the ABF welder began the SMAW repair utilizing 1/8" E7018 low hydrogen electrodes with 119 Amps. The QA Inspector noted the preheat and welding parameters did appear to be in general compliance with ABF-WPS-1001-Repair. After the root/fill/cover passes were completed the ABF welder performed grinding tasks and removed the weld reinforcement flush with base metal. The weld repair was completed on this date.

12W/13W-D3

The QA Inspector randomly observed a large area of the above identified weld segment had been indicated for excavation and repair. The QA Inspector noted the repair was to be performed from the exterior side of the weld joint. The QC Inspector John Pagliero informed the QA Inspector that multiple weld defects were located at close proximity throughout the rejected area. The QA Inspector noted the ABF welder Jeremy Dolman was on site to excavate and repair the rejected area. After the rejected area was indicated directly on the ground flush weld reinforcement, the QA Inspector randomly observed the ABF welder begin excavating the weld utilizing a carbon air arc. Due to the length and the depth of the reject the excavation took several hours. After the area had been excavated, ground and blended to a weldable profile, the SE QC Inspector performed MT of the excavation. The QA Inspector noted no relevant indications were located at the time of the testing. The QA Inspector performed dimensional measurements of the excavation and noted as follows: Y=485, L=940mm, D=17mm, W=25mm. The QA Inspector randomly observed the ABF welder preheat the excavated area and surrounding base metal to the minimum required 100F. The QA Inspector randomly observed the QC Inspector verify the preheat utilizing a temperature indicating laser. The QA Inspector noted the ABF welder began the SMAW repair utilizing 1/8" E7018 low hydrogen electrodes with 110 Amps. The QA Inspector noted the preheat and welding parameters did appear to be in general compliance with ABF-WPS-1001-Repair. The QA inspector noted the repair was not completed on this date. It was observed approximately 10% of the excavation was welded on today's shift.

13E/14E-D3/E1/E2

The QA Inspector randomly observed the ABF welder Wai Kit Lai set up the semi-automated plasma arc track system at the above identified weld joint. The QA Inspector noted the steel backing bar was still in place and was to be removed by the ABF welder. The QA Inspector randomly observed the ABF welder begin performing the plasma arc and removing the steel backing bar. The QA Inspector noted the steel backing bar was removed on the QA Inspectors shift.

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# WELDING INSPECTION REPORT

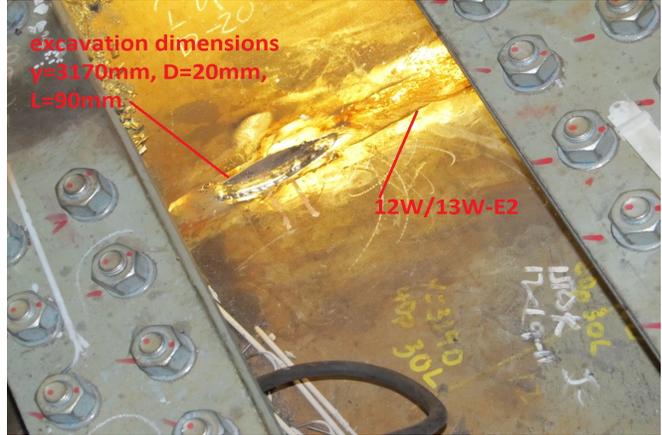
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## Summary of Conversations:

The QA Inspector observed a new SE QC Inspector was on site and was not on the approved list of inspectors. The QA Inspector called the Caltrans QA Representative Robert Mertz to confirm if the SE QC Inspector Harold Shrine was an approved Inspector. Mr. Mertz Informed the QA Inspector Rick Bettencourt, Mr. Shrine was approved yesterday and was ok to perform inspections on the project.



## 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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**Inspected By:** Bettencourt,Rick

Quality Assurance Inspector

**Reviewed By:** Levell,Bill

QA Reviewer