

**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-029075**Date Inspected:** 24-Jan-2013**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:** OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Fritz Belford was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island 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:

**Welder Chris Bruce #8901:**

The welder was observed performing weld repairs on excavations on Electro Slag Weld ESW S-043 "T" Face B; on indications rejected with Ultrasonic Testing Shear Wave and excavated at Y locations 8245. The welder was observed preheating the weld to 300 degrees Fahrenheit prior to welding and utilizing Welding Procedure Specification (WPS) ABF-WPS-D15-1000-Repair Rev.3 for Shield Metal Arc Welding (SMAW) as per Request for Weld Repair or RWR 201301-034. The welding parameters were verified by QC Inspector William Sherwood throughout the day and appear to be in compliance with the WPS noted above. See details below.

**Weld ESW S-043 T (Face B):**

Y location: 8245, Excavation: 150 x 45 x 39 RWR: 201301-034.

**Welder Eric Sparks #3040:**

The welder was observed performing weld repairs to weld ESW S-041 "S" at Face A, by excavating the weld at Y location 8520 to 190 x 14 x 10 deep. The welder preheated the weld to 300 degrees Fahrenheit with the Miller Pro Heat induction blankets prior to Carbon Arc Gouging (CAG). After the excavation was ground to bright bare metal and Magnetic Particle Tested by QC Inspector William Sherwood and this QA, the welder then proceeded to prepare the excavation for welding. The welder utilized Welding Procedure Specification (WPS)

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ABF-WPS-D15-1000-Repair Rev.3 for Shield Metal Arc Welding (SMAW) as per Request for Weld Repair or RWR 201301-037. The welding parameters as verified by QC Inspector William Sherwood appear to be in compliance with the WPS noted above.

At the completion of the welding above, the welder then relocated to weld ESW N-041 "N" at Face A to excavate the weld at Y location 9140 as per RWR 201301-026. The proper preheat (300 degrees Fahrenheit) by the welder was applied to the area to be excavated prior to any excavation. While excavating the weld a linear indication at 32mm deep was noted in the weld excavation and was photographed by the QC Inspector and this QA. The weld was then carbon arc gouged until the indication was visually absent and the welder then proceeded to grind the excavation to bright metal in preparation for a Magnetic Particle Testing and welding on the following the shift.

Welder James Zhen #6001:

The welder was observed excavating weld ESW E-045 "F" Face A in 1mm increments at Y location 9620. Each 1mm excavation was performed with a grinder and was Magnetic Particle Tested (MPT) and photographed by QC Inspector Steve Jensen or William Sherwood as their work scope allows. The excavation was continued at 36mm deep from the previous shift until a depth of 40mm was reached. The welder was then relocated to Y locations 6870, 7110, 7265, 7380 & 7440 where they will be combined and excavated in 3mm and 1mm increments. The welder was observed grinding the whole shift.

Non-Destructive Testing (NDT)

This QA performed non-destructive testing on the following:

Weld ESW W-043 "V" (Face A) :

- o Repairs at Y locations 8150, 8630 & 8810 (MPT Accept).

Weld ESW S-043 "T" (Face B) :

- o Repair Excavation at Y location 8245 (MPT Accept).

- o Repair Excavation at Y location 8435 (MPT Accept).

- o Repair Excavation at Y location 8785 (MPT Accept).

Weld ESW S-041 "S" (Face A) :

- o Repair Excavation at Y location 8520 (MPT Accept).

This QA Inspector completed report form TL-6028 on this date noting items acceptance or rejection as per applicable code. The completed and accepted work observed at this location appeared to be in compliance with the contract specifications.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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**Weld ESW N-041 "N" (Fc A):  
Welder Foreman Eric Sparks performing Carbon  
Arc Gouging (CAG) on Ultrasonic rejected  
indications noted by QC Inspectors at Y location  
8140.**



**Weld ESW S-041 "S" (Fc A):  
Welder Foreman Eric Sparks performing Carbon  
Arc Gouging (CAG) on Ultrasonic rejected  
indications noted by QC Inspectors at Y location  
8520.**

## Summary of Conversations:

Conversations this day as required for scope of work.

## 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.

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<b>Inspected By:</b>	Belford,Fritz	Quality Assurance Inspector
<b>Reviewed By:</b>	Reyes,Danny	QA Reviewer

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