

**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-026295**Date Inspected:** 17-Sep-2011**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:** 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:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to Pier 7 to observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed as noted below:

## A). OBG W13

This QAI observed the welding of the doubler plates at two (2) hole penetrations on the bottom plate located at approximately at gridline W4 of the Orthotropic Box Girder. The welding was performed by the welder Gilbert Peralta ID-9453 utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-F1202. The welding was performed in the horizontal (2F) position with the work placed so that filler metal appeared to be deposited on the upper side of the horizontal surface and against the vertical surface. Later in the shift and at the conclusion of the welding of the plate in the horizontal position this QAI observed Mr. Peralta performing the welding in the overhead (4F) position with the work placed so that it appeared the filler metal was deposited from the underside of the horizontal surface and against the vertical surface. This QAI also observed the QC inspector, Mike Johnson, monitor the welding and verify the welding parameters utilizing the WPS as mentioned above. The welding parameters were measured and noted as 191 amps by Mr. Johnson. The minimum preheat temperature of 60 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with the contract documents. The welding of the doubler plates was completed during this shift.

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## B). Document Control Review

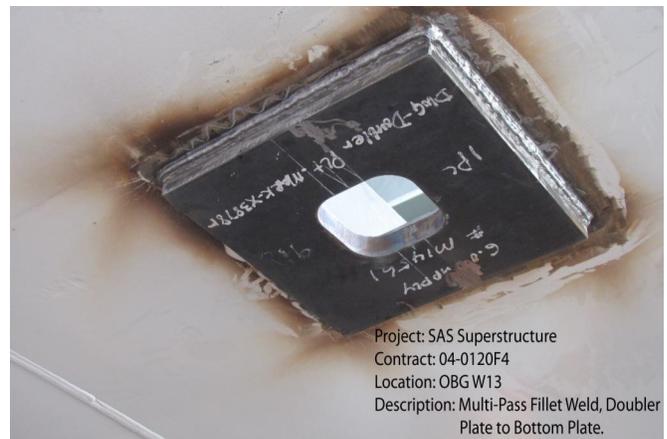
This QA Inspector continued the daily review of field inspection reports and update of the field document control tracking records regarding the Orthotropic Box Girders (OBG, Longitudinal and Transverse "A" Deck Stiffeners, Deck Access Holes and the Tower Shear plates. The QAI also updated the tracking records for the pipe welds and the pipe supports.

On this date the QAI continued the review of the tracking documents for the OBG's identified as W1, W2, W3 and W4.

## QA Summary

The welding was performed in the vertical position utilizing the E7018-H4R consumable. The 4.0 mm H4R electrodes were stored in a electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures.

The digital photographs below illustrate some of the work observed during this scheduled work date.



## Summary of Conversations:

There were general conversations with Quality Control Inspector, Mike Johnson, at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift. This QAI during a conversation and as a courtesy reminder informed Mr. Johnson of the N.D.E. required by the contract specifications.

## 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:**      Reyes,Danny

Quality Assurance Inspector

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**Reviewed By:**      Levell,Bill

QA Reviewer