

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-026572**Date Inspected:** 18-Oct-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**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 and Tower**Summary of Items Observed:**

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

## A). OBG W12/W13

FW Spencer (Piping Systems)

QAI: Doug Frey

1). The QAI, Doug Frey, was assigned to this designated work station to observe the Complete Joint Penetration (CJP) welding, the QC inspection and other related work of the field splice identified as 12W-13W-F. The welding was performed by Fred Kaddu ID-2188 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) process identified as ABF-WPS-D15-3040B-3, Rev.0. The QC inspector William Sherwood performed the inspection and verifying the welding parameters utilizing the WPS as a reference. No issues were noted by the QC inspector. The welding was performed at this work station was not completed during this shift on this date

2). The QAI also observed the Complete Joint Penetration (CJP) groove welding of the field splice identified as 12W-13W-E1. The welding was performed by Rory Hogan ID-3186 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-3040B-3, Rev. 0. The QC inspector William Sherwood performed the inspection and verifying the welding parameters utilizing the WPS as a reference. No issues were noted by the QC inspector. The welding was performed at this work station was not completed during this shift on this date.

3). Later in the shift, the QAI also observed the Complete Joint Penetration (CJP) groove welding of the field

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splice identified as 12W-13W-C.1 and C2. The welding was performed by Jeremy Dolman ID-5042 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1, Rev. 0. The QC inspector William Sherwood performed the inspection and verifying the welding parameters utilizing the WPS as a reference. No issues were noted by the QC inspector. The welding was performed at this work station was not completed during this shift on this date.

4). The QAI, Doug Frey, also observed the continued welding and the QC inspection of the piping systems identified as the compressed air and domestic water. The CJP welding was performed by Curtis Jump utilizing the WPS identified as 1-12-1, Rev. 2 (1.12) which was also utilized by the QC inspector, Steve Jensen, to monitor and verify the welding parameters.

### B). OBG W12/W13

Deck Access Hole(DAH), QA Verification  
Lifting Lug Holes (LLH), QA Verification  
FW Spencer, QA Verification (Piping System)  
QAI: Joselito Lizardo

1). The QAI, Joselito Lizardo, was assigned to this designated work station to observe the Complete Joint Penetration (CJP) welding, the QC inspection and other related field work of the splice identified as 12W-13W-F. The welding was performed by Fred Kaddu ID-2188 utilizing the Shielded Metal Arc Welding (SMAW) process identified as ABF-WPS-D15-1040B-1, Rev.1. The QC inspector William Sherwood was observed performing the inspection and verifying the welding parameters utilizing the WPS as a reference. No issues were noted by the QC inspector. The welding was performed at this work station was not completed during this shift on this date.

3). The QAI observed the excavation and repair welding of the lifting lug holes located on the Wast Orthotropic Box Girders (OBG) and identified as WN: 10W-PP92-W4-W1. The welding was performed by Mike Jiminez ID-4671 utilizing the WPS identified as (WPS) ABF-WPS-D15-1000 Repair, Rev.2. At the conclusion of the excavation, the QAI observed the QC inspector, Patrick Swain, perform the visual inspection and Magnetic Particle Testing (MPT) utilizing an DA400 Yoke. The testing was performed by Mr. Swain and at the completion of the testing no rejectable discontinuities were noted. At this time the repair welding commence and was completed during this shift and appeared to comply with the contract specifications.

Later in the shift, the QAI observed the excavations, MPT testing, repair welding and inspection performed by Mr. Swain.

### C). OBG 12E/13E

QAI: Craig Hager

1). The QAI, Craig Hager, was assigned to this designated work station to observe the continued Complete Joint Penetration (CJP) welding and the QC inspection of the field splice identified as 12E-13E-E1 and E2. The welding was performed by Wai Kitlai ID-2953 and James Zhen ID-6001 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1, Rev. 0.

2).The QAI also observed the continued Complete Joint Penetration (CJP) groove welding of the field splice identified as 12E-13E-E2. The welding was performed by Xiao Jian Wan ID-9677 utilizing the Flux Cored Arc Welding w/gas (FCAW-G) process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1, Rev. 0.

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The QC inspection was performed by Fred Von Hoff utilizing the WPS's a reference appeared to comply with the contract specifications. The QAI observation of the QC inspector's work performed during this shift also appeared to comply with the contract specifications.

## QA Lead Inspector (QALI) Summary

Later in the shift, this QA Lead Inspector (QALI) also observed the QAI's, Joselito Lizardo, Doug Frey and Craig Hager monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures as described above. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications with no issues noted on this date. The welding performed at the various work areas were not completed during this shift except as noted above.

This report was generated upon the discussions with the QA Inspectors, random visual observations and review of the QA field reports.

## Review of QA Tracking Plan

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 commence the review of QA tracking documents for the OBG's identified as E3, E4 and E5.

## Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift.

## 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>	Reyes,Danny	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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