

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-026749**Date Inspected:** 18-Nov-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:** Tony Sherwood**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 Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

SAS – Tower – F.W. Spencer:

This QA Inspector observed F.W. Spencer personnel fitting up and welding the 3-inch diameter piping to be used as an airline for the maintenance of the tower. This QA Inspector was informed by F.W. Spencer welding personnel Curtis Jump the weld joints numbers were assigned as follows: piping sequence number/pipe size/location (“T” = Tower)/location at tower elevation. An example would be as follows; 14/3/T/125.

This QA Inspector randomly observed during the fit up of the weld joints the ends of the piping appeared to be cleaned and beveled prior to the actual fit up operation. This QA Inspector observed the bevels appeared to be between 30 and 45 degrees. This QA Inspector observed what appeared to be a 3/32-inch diameter electrode, with the flux removed, positioned between the ends of the pipe at the weld joint, both ends were then positioned into a fitting aid and each pipe end was clamped. This QA Inspector observed a straight edge, approximately 1-meter in length, was used to verify the straightness of the pipe. This QA Inspector observed the straightness appeared to be checked at a minimum of twice, once at a zero location around the circumference and then again at approximately 90 degrees. This QA Inspector observed the two pipe ends were tack welded using a 1/8-inch diameter E6010 electrode at approximately 4 locations equally spaced around the circumference. This QA Inspector observed the

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tack welds were then ground and the straightness of the pipe re-verified with the straight edge.

This QA Inspector observed that QC Inspector Tony Sherwood was assigned to monitor and perform inspections for F.W. Spencer this shift. This QA Inspector randomly observed as QC Inspector Tony Sherwood visually inspected the weld joint fit ups and was informed that he had accepted the inspections. This QA Inspector performed a random visual verification and observed the fit ups appeared to comply with the Welding Procedure Specification (WPS) 1-12-1 Revision-2 being used by the QC Inspector.

This QA Inspector randomly observed during the Shielded Metal Arc Welding (SMAW) operation a 1/8-inch diameter E6010 electrode was used to weld the root pass and then a 3/32-inch diameter E7018 electrode was used to weld the fill and cover passes. This QA Inspector observed QC Inspector Tony Sherwood verify the following welding parameters; 75 amperes for the 1/8-inch diameter E6010 electrode and 92 amperes for the 3/32-inch diameter E7018 electrode. The welding observed by this QA Inspector appeared to comply with WPS-12-1-1 Revision-2, being used by the QC Inspector.

See below for the list of weld joints in which this QA Inspector performed a random verification inspection of the fit up and a final weld visual verification after QC inspection and acceptance: 20/3/T/93, 21/3/T/90, 28/3/T/78 and 31/3/T/66.

This QA Inspector observed the weather condition changed to rain and was informed by QC Inspector Tony Sherwood and F.W. Spencer welding personnel Curtis Jump they mutually agreed welding would be halted at approximately 1330 hours this shift. This QA Inspector checked with F.W. Spencer foreman Hector Garcia at approximately 1400 and was informed that welding was canceled for the remainder of the shift due to rain.

Tower – Splice Cover Plates:

This QA Inspector observed the cover plates at the 145 meter elevation on the tower were in various stages ranging from the 2 plates being in position and tack welded to not having the plates in position and the area being empty. See below for the status of the cover plates at each location at the 145 elevation splice; tacked = plates in position and tack welded, not tacked = plates in position and not tack welded, none = plates not in position

West Tower-

A-B - none

B-C- not tacked

C-D- not tacked

D-E- not tacked

E-A-tacked

North Tower-

A-B-tacked

B-C-welded

C-D-tacked

D-E-tacked

E-A-none

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South Tower-

A-B-none

B-C-none

C-D-1-plate in position

D-E-not tacked

E-A-tacked

East Tower-

A-B-tacked

B-C-tacked

C-D-tacked

D-E-not tacked

E-A-not tacked

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.

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.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
