

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-023757**Date Inspected:** 19-May-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 Report 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:** Orthotropic Box Girders & Tower**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of the weld joints and the Complete Joint Penetration (CJP) groove welds on the East and West Orthotropic Box Girders (OBG's) and the Tower. The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) and the Flux Cored Arc Welding (FCAW-G) processes as per the Welding Procedure Specifications (WPS's).

A). Tower @ 9 Meter Elevation

The QAI observed the PJP welding of the diaphragm plates to the south and east tower shaft skin plates identified as WN: 053 and 054. The welding was performed by Xiao Jian Wan ID-9677, Hua Qiang Hwang ID-2930, Wai Kitlai ID-2953 and James Zhen ID-6001 utilizing the WPS identified as ABF-WPS-D15-3160-1, Rev. 0. The WPS was also used by the QC inspector Pat Swain to verify the welding parameters and monitor the in process welding. The welding and the inspection appeared to comply with the contract specifications.

B). Lifting Lug Holes

The QAI observed the CJP welding of the lifting lug holes identified as WN:8E-PP68-E3-W2 and W4, WN: 8W-PP64-E3 & W4 and 9W-PP80-W3-W1 & W3. The welding was performed by Jason Collins- ID-8128, Mike Jiminez ID-4671 and Darcel Jackson ID-9967 utilizing the WPS's identified as ABF-WPS-D15-1050A-CU, Rev.0. The QAI also observed the QC inspector perform the visual inspection and verify the welding parameters during

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

the production welding. The welding and the inspection performed by Fred Von Hoff and John Pagliero appeared to comply with the contract specifications.

C). Pipe Supports

The QAI observed the Magnetic Particle Testing (MPT) performed by the QC inspector Mike Johnson on the pipe supports identified as WN: 110512-01 through 03, WN: 110513-02 & 03 and WN: 110516-01 . The testing was performed by the QC inspector utilizing the MPT procedure identified as SE-MT-D1.5-CT-100 Rev.4. At the conclusion of the testing no rejectable indications were noted by Mr. Johnson.

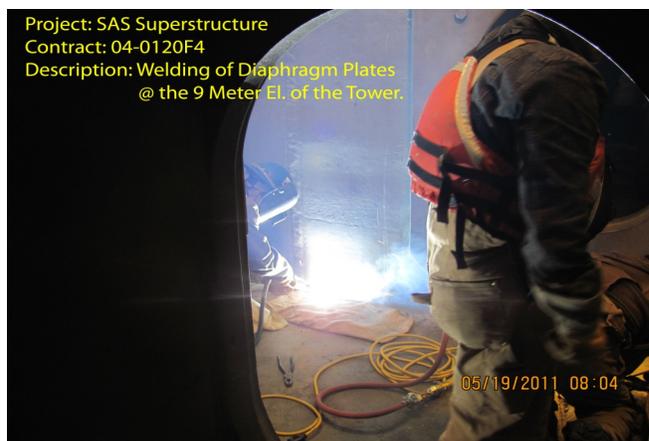
At this time the QAI performed a random visual inspection and a magnetic particle test to verify the weld and the testing performed by QC meet the contract specifications. At the conclusion of the inspection and testing, QAI concurs with QC assessment.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the vertical and overhead positions utilizing the E7018-H4R low hydrogen and the E71T-1M consumables. The 3.2 mm and 2.4 mm electrodes were stored in electrically heated, thermostatically controlled oven after 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 WPS's were also utilized by the QC inspector's as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs below illustrate some of the related work observed during this shift.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

There were general conversations with Quality Control Lead inspector, Bonifacio Daquinag, Jr., and Tom Columbo, FW Spencer Field Supervisor, at the start of the shift regarding the location of welding, inspection and N.D.E. testing 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.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
----------------------	-------------	-----------------------------

Reviewed By:	Levell,Bill	QA Reviewer
---------------------	-------------	-------------