

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: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027500
Date Inspected: 24-Apr-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 900
OSM Departure Time: 1730
Location: jobsite

CWI Name: Steve McConnell
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: Yes No N/A
Approved WPS: Yes No N/A
Delayed / Cancelled: Yes No N/A

Bridge No: 34-0006**Component:** SAS project**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 /or monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Self Anchored Suspension (SAS) Tower: This QA Inspector observed work and/or performed QA verifications at the locations noted below.

3-meter elevation, Bearing Plate # 007: This QA Inspector randomly observed ABF welding personnel Richard Garcia (#5892) using the Shielded Metal Arc Welding (SMAW) process to perform production welding. This QA Inspector randomly observed QC Inspector Jesus Cayabyab verify the following welding parameters; 156 amperes.

This QA Inspector observed a 4.0 mm diameter E7018 electrode was being used. During the shift this QA Inspector periodically verified the preheat using an electronic gauge to be greater than the minimum of 225°F. This QA Inspector reviewed Welding Procedure Specification (WPS) ABF-WPS-D15-1160, being used by QC and observed the parameters noted above appeared to be within the ranges in the WPS. This QA Inspector observed towards the end of the shift the welding at this location was approximately 50% complete. This QA Inspector periodically observed QC Inspector Jesus Cayabyab monitoring the work at this location.

3-meter elevation, Bearing Plates # 005 and #006: This QA Inspector randomly observed ABF welding personnel Jeremy Dolman (#5042) fitting up the 60 mm thick plates at these locations. The work observed appeared to comply with the joint detailed in ABF-WPS-D15-1600, being used by QC personnel. This QA Inspector welding,

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

other than tack welding, was performed this date. This QA Inspector periodically observed QC Inspector Steve McConnell monitoring the work at this location.

9-meter elevation: This QA Inspector randomly observed ABF welding personnel Jin Pei Wang (#7299) using the SMAW process to weld doubler plate (#937-2) to shear plate A-28. The welding observed was in process and QC Inspector Steve McConnell informed this QA Inspector he had verified the welding parameters to be 125 amperes. This QA Inspector observed a 3.2 mm diameter E7018 electrode was being used. This QA Inspector reviewed ABF-WPS-D15-1200A Rev-2, being used by QC for fillet welds and the parameters appeared to comply with the WPS. This QA Inspector periodically observed QC Inspector Steve McConnell monitoring the work at this location. See photo below of welding in progress.

9-meter elevation: This QA Inspector randomly observed ABF welding personnel Xiao Jian Wan (#7299) using the SMAW process to weld the perimeter C-channel at weld joint #129-1. This QA Inspector randomly observed QC Inspector Steve McConnell monitoring the work at this location and verify the following welding parameters; 133 amperes. This QA Inspector reviewed ABF-WPS-D15-1200A Rev-2 and observed the parameters were within the range specified.

13 meter elevation: This QA Inspector randomly observed ABF welding personnel James Zhen using the Submerged Arc Welding (SAW) process to fill in the low areas between weld joints #104 and #105, welding was being performed on the top of the shear plate at this location. This QA Inspector had been informed by QA Inspector Jojo Lizardo additional welding was to be performed to prevent pooling of water between the diaphragm weld joints. This QA Inspector observed the following welding parameters; 553 amperes and 32.3 volts at a travel speed of 382 mm per minute. This QA Inspector reviewed ABF-WPS-D15-4042B-1, being used by QC personnel and the parameters appeared to be within the ranges specified. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the work at this location.

13 meter elevation: This QA Inspector randomly observed the backing bars which had been welded behind the shear plate at weld joint #W-1012 were being removed by ABF personnel. This QA Inspector had been informed by QC Inspector Fred Von Hoff the root opening for this Partial Joint Penetration (PJP) weld exceeded the maximum allowed (8 mm) and was approximately 12 mm at multiple areas. QC Inspector Fred Von Hoff informed this QA Inspector the root openings with locations had been mapped out and submitted to Lead QC Inspector Bonifacio Daquinag Jr. This QA Inspector did not observed welding being performed at this location.

QC Inspector Steve McConnell informed this QA Inspector he was going to perform Magnetic Particle Testing (MT) on the repair welding performed at the weld access hole on Electro Slag Weld (ESW) weld joint K, from face-B. This QA Inspector randomly observed the MT face-B, at the weld access holes. This QA Inspector randomly observed QC Inspector Steve McConnell perform the MT and was informed the welding was accepted. This QA Inspector performed a MT verification and the work appeared to comply with the contract requirements. See Magnetic Particle Testing Report (TL-6028) this date for further details.

Summary of Conversations:

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

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



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