

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-026822**Date Inspected:** 06-Dec-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:** Bernard Decena**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 on the Self Anchored Suspension (SAS) Tower and Orthotropic Box Girder (OBG) sections. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

SAS – Tower – F.W. Spencer:

This QA Inspector observed F.W. Spencer personnel were on site this shift and working. This QA Inspector spoke with F.W. Spencer Foreman Hector Garcia and was informed that personnel were working on getting set up to start the 2-inch water line, attach some temporary mechanical dampeners and that no production welding would be performed this shift.

West Jacking Saddle – Repair: This QA Inspector was provided a copy of Request for Weld Repair Approval # 201111-003 and was informed by Lead QC Inspector Bonifacio Daquinag Jr. it had been approved by Structural Material Representative (SMR) Kittric Guest. This QA Inspector reviewed a copy of an email which appeared to be from SMR Kittric Guest approving the procedure. This QA Inspector arrived at the West Jacking Saddle and observed ABF personnel Ian Murphy using a portable drill motor to drill a pilot hole in the weld face adjacent to the previous excavation area. This QA Inspector observed as QC Inspector Bernard Decena used a depth gauge to verify the depth of the hole as 17 mm. This QA Inspector observed the drill bit was increased to what appeared to be a 10 mm (3/8-inch) diameter and drill using the larger diameter bit. This QA Inspector observed as QC

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Inspector Bernard Decena verified the depth of the hole to be 17 mm. This QA Inspector performed a visual verification and observed the center of the hole appeared to be approximately 20 mm to the left of the previous excavation area. This QA Inspector observed as QC Inspector Bernard Decena measured and marked the depth of the previous excavation at various intervals and informed ABF welding personnel Rick Clayborn (#2773) the depth of the excavation needed to be 17 mm. This QA Inspector observed ABF welding personnel Rick Clayborn (#2773) using the carbon arc process to excavate the areas, a grinder and/or power wire brush to clean the base metal. This QA Inspector observed QC Inspector Bernard Decena use a depth gauge to verify the required depth of 17 mm had been obtained. This QA Inspector observed Bernard Decena perform a visual and Magnetic Particle Testing (MT) on the excavation area including the drilled hole. QC Inspector Bernard Decena informed this QA Inspector he had accepted the inspections. This QA Inspector performed a visual verification and the work appeared to meet the contract requirements. See photo below of drilled hole after MT. This QA Inspector observed a hand held gas torch was used to preheat the excavations. This QA Inspector observed QC Inspector Bernard Decena use an electronic temperature gauge to verify the preheat was greater than the minimum required on the Welding Procedure Specification (WPS). This QA Inspector observed the minimum preheat temperatures used by the QC inspector were as follows; 350°F for the 80 mm thick vertical cover plate and 200°F for the remainder of the 40 mm thick plates. This QA Inspector observed QC Inspector Bernard Decena verify the following Shielded metal Arc Welding (SMAW) parameters for ABF welding personnel Rick Clayborn (#2773); 130 amperes. This QA Inspector observed the electrodes were removed from a new sealed container and were identified as being a E9018 electrode. This QA Inspector was informed by ABF personnel Ian Murphy the remaining electrodes were placed into a heated storage container until needed. This QA Inspector observed the welding and cleaning between passes as work progressed. This QA Inspector observed QC Inspector Bernard Decena perform a visual and MT inspection on what appeared to be the completed weld. This QA Inspector observed QC Inspector Bernard Decena mark the area indicating the visual and MT inspection were completed at this time. This QA Inspector reminded QC Inspector Bernard Decena the contract requirements required a 48 hour waiting period prior to the final inspections, QC Inspector Bernard Decena concurred and stated this would be a preliminary inspection and the weld would re-inspected for the final inspection after 48 hours.

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.

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