

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-026554**Date Inspected:** 21-Oct-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:** Jesus Cayabyab**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.

Orthotropic Bridge Girder (OBG) Sections:

12E/13E weld joint D-1, D-2 and D-3: This QA Inspector randomly observed ABF welding personnel Wai Kitlai (#2953) using the plasma arc torch to remove the backing bar and back gouge the weld, see photo below. This QA Inspector observed later in the shift that grinding had been performed on the majority of the back gouged weld. This QA Inspector performed a random visual inspection at several short areas to determine the depth of back gouge and to see if the weld contained any visual defects. This QA Inspector observed a 60 mm long slag line at a back gouged depth of approximately 11-12 mm deep, see photo below, there were two other small indications adjacent to the slag line. At a short distance from this location this QA Inspector observed what appeared to be a large slag pocket about 4-5 mm long but had a depth of 3-4 mm. Note this was an in process observation; grinding had been started and the areas observed had been back gouged to approximately 10-12 mm deep and ground to bright metal, but grinding was still in process to remove defects such as the ones noted above.

This QA Inspector observed the status of back gouging from the bottom side of 12E/13E OBG as follows: weld joint C – the backing bar was still in place, weld joint E-1 and E-2 had been back gouged and ground and was waiting for QC inspections.

WELDING INSPECTION REPORT

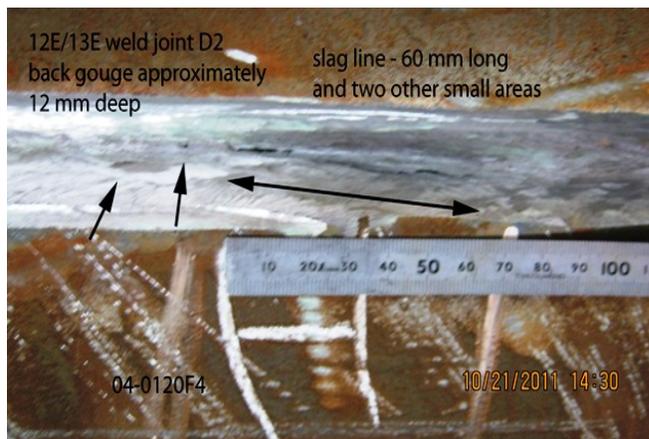
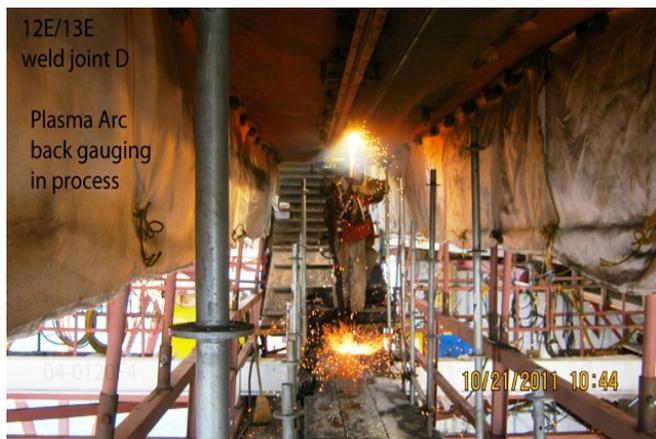
(Continued Page 2 of 3)

13E/14E weld joint D-1, D-2 and D-3: This QA Inspector various ABF personnel in the process of installing temporary blots in the closed ribs and splice plates at the A-Deck and D-Deck locations this morning. Later this shift, at approximately 1330 hours this QA Inspector observed ABF welding personnel Wai Kitlai (#2953) using the Shielded Metal Arc Welding process to attach fitting aids on the bottom of D-2. This QA Inspector observed a hand held gas fired torch was being used to preheat the base metal, this QA Inspector observed an electronic temperature gauge was being used to verify the temperature was greater than 200°F by the welding personnel. This QA Inspector observed QC Inspector Jesus Cayabyab at this location within several minutes after the start of welding. This QA Inspector observed QC Inspector Jesus Cayabyab verify the following welding parameters; 145 amperes. This QA Inspector observed a 3.2 mm diameter E7018H4R electrode was being used from an electrode container. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F1200A. This QA Inspector observed the fit up aids (nuts) were being welded with the welds progressing the same direction as the OBG section, welded on one side only and approximately 25-30 mm in length. The attachment welds appeared to comply with RFI-1361 Rev-3.

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

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Reviewed By: Levell,Bill

QA Reviewer