

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-026556
Date Inspected: 22-Oct-2011

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

OSM Arrival Time: 700
OSM Departure Time: 1530
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:

13E/14E weld joint D-1, D-2 and D-3: This QA Inspector randomly observed ABF welding personnel marking out the locations to attach the fit up aids to the bottom of D-2 from outside the OBG section. See photo below. This QA Inspector randomly observed ABF welding personnel Wai Kitlai (#2953) using the Shielded Metal Arc Welding process to attach fitting aids. 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 Pat Swain at this location to monitor and verify the following welding parameters; 135 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 in the same direction as the OBG section and welded on one side only for approximately 25-30 mm in length. The attachment welds appeared to comply with RFI-1361 Rev-3. Later this shift the backing bar was installed and wedged into place. This QA Inspector randomly observed QC Inspector Pat Swain layout and mark weld section D-2, which is the center section and has a plate thickness of 22 mm. This QA Inspector had previously been informed by QC Inspector Bonifacio Daquinag Jr.

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that D-Deck had been divided into 3 areas, D-1 being the 30 mm plate thickness and on the bike path side, D-2 being the 22 mm thickness and center section and D-3 being the 16 mm thickness and on the crossbeam side. This QA Inspector was informed that D-2 was ready for a QA fit up verification by QC Inspector Pat Swain. This QA Inspector was currently performing a fit up verification (planar offset) on the A-Deck. This QA Inspector informed QA Inspector Scott Croff of the request and observed him working with QC Inspector Pat Swain to perform the verification. This QA Inspector did not observe production welding being performed at this location this date.

13E/14E weld joint A-2.2 thru A-5: This QA Inspector was informed by QC Inspector Bonifacio Daquinag Jr. that weld joint A-2 contained two reference points, A-2.1 and A-2.2 to reference the drop in plates for the cable access. This QA Inspector randomly observed ABF welding personnel Fred Kaddu (#2188) cleaning off various areas of the deck with a grinder to remove primer and use a hand held gas torch to preheat areas prior to using the SMAW process to attach fit up aids. See photo below. This QA Inspector observed QC Inspector Jesus Cayabyab was present and verified the preheat temperature and the following welding parameters; 140 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 and/or U-bars) were being welded in the same direction as the OBG section and welded on one side only with an approximate length of 25-30 mm. The attachment welds appeared to comply with RFI-1361 Rev-3. After the fit up aids had been attached QC Inspector Jesus Cayabyab started to perform a preliminary measurement of the planar offset. This QA Inspector randomly observed and performed a random verification of the measurements marked on the deck in soapstone. The vast majority of the measurements appeared to comply with the measurements taken by this QA Inspector. This QA Inspector observed fit up aids were added where needed by ABF welding personnel Fred Kaddu (#2188). Later this shift QC Inspector Jesus Cayabyab stated he was ready to start the final measurement of the deck from A-2.2 thru A-5 for engineering approval. This QA Inspector observed ABF personnel were below A-Deck still installing pins and bolts in the closed ribs and vertical stiffeners, this QA Inspector informed QC Inspectors Jesus Cayabyab and Bonifacio Daquinag Jr. of the observation stating these operations could affect the planar offset and root opening. QC Inspector Bonifacio Daquinag Jr. stated the measurements should not be taken until the applicable pins and/or bolts had been installed and informed ABF welding Supervisor Danny Ieraci and this QA Inspector. QC Inspector Bonifacio Daquinag Jr. informed this QA Inspector that he had been informed by ABF welding Supervisor Danny Ieraci that he had called QCM Jim Bowers and had been informed that the final measurements for Engineering approval were to be taken first thing Monday morning. This QA Inspector observed the following during a random verification of the preliminary measurements taken this date; 3 short areas with planar offset of 3 mm (longest being 300 mm) and 1 area with planar offset of 4 mm (approximately 200 mm long). This QA Inspector did not observe production welding at this location this date.

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.

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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