

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4
Cty: SF Rte: 80 PM: 13.2/13.9
File #: 1x.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-000990
Date Inspected: 10-Dec-2007

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

OSM Arrival Time: 615
OSM Departure Time: 1400
Location: Benica, CA

CWI Name:	William Norris	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:** Procedure Qualification Record (PQR) test

Summary of Items Observed:

The Quality Assurance (QA) Inspector arrived at the Ironworkers Apprenticeship Training Facility and met with Smith-Emery Company Quality Control (QC) Inspector William Norris to observe QC functions during the welding of the Procedure Qualification Record (PQR) test plate listed below.

ABF-PQR-003-2-B.

1. The QA Inspector observed QC Inspector William Norris perform Ultrasonic Testing (UT) on complete joint penetration butt weld of the PQR test plate identified as ABF-PQR-003-2-B. The QA Inspector observed the UT test was performed on 100% of the weld length. QC Inspector William Norris informed the QA Inspector the testing was being performed for information only to see if there were major welding discontinuities on the weld prior to send test plate to laboratory for Non Destructive Testing. William Norris informed the QA Inspector he observed rejectable indications located at the root area of test plate weld. William Norris notified the QA Inspector he used Tensile Stress Criteria in Table 6.3 of AWS D1.5, 2002 to evaluate indications during UT.

ABF-PQR-003-2-B and ABF-PQR-023-2.

2. The QA Inspector periodically observed American Bridge Floor (ABF) welding personnel Rick Clayborn perform air carbon arc cutting (gouging) and grinding on test plates identified as ABF-PQR-003-2-B and ABF-PQR-023-2. The cutting was being performed to remove run off weld tabs and the grinding to remove the weld reinforcement to a smooth and flush finish to prepare test plates for final inspection and future Non Destructive Testing.

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a) After cutting and grinding were completed the PQR test plates were visually inspected by QC Inspector William Norris. William Norris notified the QA Inspector the test plates were visually acceptable in accordance with AWS D1.5-2002. The QA Inspector performed visual verification and observed test plates appeared to be in general compliance with the project plans and specifications.

b) QA Inspector assigned a Caltrans Index Lot Number to test plates for tracking purposes and a Welding Witness Report (TL-6032) was generated on this date. Please see digital images below.

ABF-PQR-026-2-A.

3. Prior to starting welding PQR test plate QC Inspector William Norris informed the QA Inspector he had accepted the fit up of the weld joint. The QA Inspector verified the weld joint to be a standard butt joint B-U2a-GF intended to be a CJP groove weld. The QA Inspector performed a random visual verification of the fit up of the plate and observed the joint to be in accordance with figure 2.4 of the AWS D1.5, 2002.

a) QA Inspector periodically observed American Bridge Floor (ABF) welding personnel Rick Clayborn and Daniel Gordon perform base material preheating prior to starting welding per the Flux Cored Arc Welding Self Shielded (FCAW-S) process to make Complete Joint Penetration (CJP) groove weld of the PQR test plate identified as ABF-PQR-026-2-A. The welding was being performed using Electrode Hobart Fabshield XLR-8, E71T-8, and 1.8 millimeter diameter. The welding was being conducted using track guided "Bug-O-System self propel wire feeder" in the 3G vertical position.

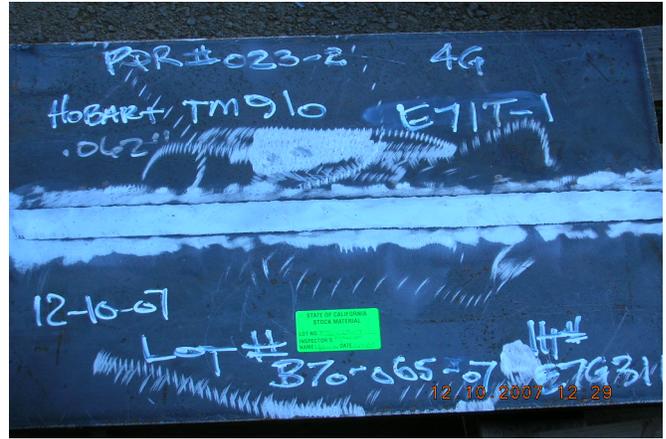
b) Prior to the start of welding the QA Inspector observed QC Inspector William Norris verify base material preheating temperature, electrical welding parameters and the travel speed to be approximately 160 degrees Celsius, 243 amperes, 21.2 volts and 123.5 millimeters/minute travel speed for the root weld pass. QC Inspector notified the QA Inspector the welding of the test plate will be done using variables to produce the lower calculated welding heat input.

c) During welding QA Inspector periodically observed the QC Inspector William Norris verifying and documenting base material temperature, amperage, voltage and the travel speed of each welding pass. QA Inspector observed ABF welding personnel Rick Clayborn performing air carbon arc cutting (gouging) to remove filler metal to open up groove to accommodate subsequent weld passes. Cutting was performed prior to apply the weld pass number 3 at full length of test plate.

The QA Inspector observed the welding performed at this location appeared to be in general compliance with the project plan and specifications. The welding operation was not completed on test plate on this date.

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Summary of Conversations:

As noted in the body of the report above. Other basic communication was performed between QA Inspector and the QC Inspector William Norris during observations.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Medina,Ricardo

Quality Assurance Inspector

Reviewed By: Mertz,Robert

QA Reviewer