

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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000528**Date Inspected:** 26-Sep-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Benicia, CA**CWI Name:** Michael Johnson**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:**

Caltrans Quality Assurance (QA) Inspector Danny C. White (B89) is present at the Ironworkers Apprenticeship Training Facility as requested by American Bridge/Flour (ABF) for the purpose of witnessing Procedure Qualification Record (PQR) tests. On this date, the QA Inspector observed the following personnel present: Smith-Emery Company Quality Control (QC) Representative Certified Welding Inspector (CWI) Mr. Michael Johnson, ABF Representatives Mr. Tommy Gibson, Mr. Rick Clayborn and welder Mr. Dan Gordon.

At the beginning of the shift the QA Inspector observed the welding operators deposit (3) weld passes onto the PQR test plate known as ABF-PQR-016-1B-CR in the 1G position. The welders are using 1/16 inch diameter (1.6mm) ESAB Dual Shield 70 Ultra Plus E71T-1M/9-M (FCAW-G) welding wire and 90% Argon / 10% Carbon Dioxide gas. The welding operators discovered significant porosity through-out the third weld pass. See photo below for additional information. ABF informed the QA Inspector that the above mentioned test plate will not undergo further welding and that this test plate will be considered as practice.

Later in the shift the QA Inspector observed that an additional set of test plates were fabricated and placed in the 1G position. The QA Inspector was informed that this set of test plates will have designation ABF-PQR-016-1B-CR. This is the fourth attempt to weld this PQR test plate.

Welder Dan Gordon deposited (11) sequential weld passes utilizing a Bug-O Systems mechanical device that travels on a magnetic track. Mr. Johnson and the QA Inspector monitored welding amperage, voltage and travel speed parameters. The welders are using the same welding wire and gas as mentioned above. For specific welding parameters recorded during this PQR see Caltrans Welding Witness Report, TL-6032 generated this date.

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Summary of Conversations:

The QA Inspector was informed that this PQR test plate has the designation 1B although this is actually the fourth effort to weld this PQR test plate. The QA Inspector was informed that the CR designation in ABF-PQR-016-1B-CR and is being welded specifically for reproducing the Charpy V Notch retest. The QA Inspector observed that this PQR test plate is being welded with approximately the same welding parameters as ABF-PQR-016-1B. The QA Inspector was informed that the Charpy V Notch test on the PQR test plate known as ABF-PQR-016-1B was performed at 0 degrees F instead of -20F qualification for Fracture Critical requirements.

The QA Inspector was informed by ABF that PQR test plate ABF-PQR-016-1B-CR will undergo informational Ultrasonic Testing (UT) and informational Radiographic Testing (RT) prior to the Charpy V Notch samples being removed from the test plate.

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:	White,Danny	Quality Assurance Inspector
Reviewed By:	Mertz,Robert	QA Reviewer
