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/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-025216
Date Inspected: 15-Jul-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: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP). The welding was performed utilizing the Shielded Metal Arc Welding (SMAW) Process.

A). Pipe and Pipe Supports

The QAI observed the continued CJP Welding of the 2.5" domestic water and 4.0" compressed air line systems field splices along gridline W5 at Orthotropic Box Girder (OBG) W2. The welding was performed by Rick Kiikvee ID-5319 utilizing the SMAW process as per the WPS identified as 1-12-1.

The QAI also observed the continued fit-up of the pipe supports identified as PS-5,PS-11, PS-16 and PS-20 which were located at the Cross Beam No.12 at Panel Point (PP) 81 . The tack welding and field welding was performed by David Garcia ID-8789 utilizing a 3.2 mm electrode as per the Welding Procedure Specification (WPS) identified as Fillet Murex. The fillet welding was performed in the flat (1F), vertical)3F) and the overhead (4F) position. The inspection was performed by the QC inspector, Steve Jensen, utilizing the WPS's to monitor the welding and to verify the amperage. The welding and inspection of the pipe field splices and pipe supports was not completed during this shift. This work was performed by the sub-contractor F.W. Spencer.

B). OBG E6/E7

The QAI observed the QC inspector John Pagliero perform the the Magnetic Particle Testing and the Ultrasonic Testing accordingly of the "A" field splice. The coordinances of the area was Y=1230 mm and 300 mm in length. At the conclusion of the testing no linear indications and no rejectable internal reflectors were noted by the QC technician, Mr. Pagliero. This QAI concurs with the QC assessment at this time.

C). QC Ultrasonic Testing

The QAI observed the Ultrasonic Testing (UT) of the shear plate identified as WN: W-042. The testing was performed by the QC technician John Pagliero utilizing a G.E./Krautkramer USM 35X. The examination of the ESW was conducted utilizing UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 and the applicable contract documents. The QC technician performed the required longitudinal wave technique, utilizing a 25.4 mm diameter transducer, to perform the examination for base metal soundness and the shear wave technique for the examination of weld soundness which was performed utilizing a 16 mm x 19 mm rectangular transducer. At the conclusion of the testing the QC technician noted nine (9) areas that did not exhibit rejectable internal reflectors but were noted by the QC technician due to the length of the indications exceeding 50 mm.

The QAI also observed the UT of the "A" deck field splice identified as 11W-12W-A. The testing was performed by the QC technician Jesse Cayabyab utilizing a G.E./Krautkramer USM 35X. The examination of the field splice was conducted utilizing UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 and the applicable contract documents. The QC technician performed the required longitudinal wave technique, utilizing a 25.4 mm diameter transducer, to perform the examination for base metal soundness and the shear wave technique for the examination of weld soundness which was performed utilizing a 16 mm x 19 mm rectangular transducer. At the conclusion of the testing the QAI noted six (6) rejects noted by the QC technician.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the flat and horizontal positions utilizing the low hydrogen H4R electrodes. The 3. 2 mm and electrodes were stored in electrically heated, thermostatically controlled oven after the removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs on page 3 of this report illustrate some of the work observed during this scheduled work date.

WELDING INSPECTION REPORT

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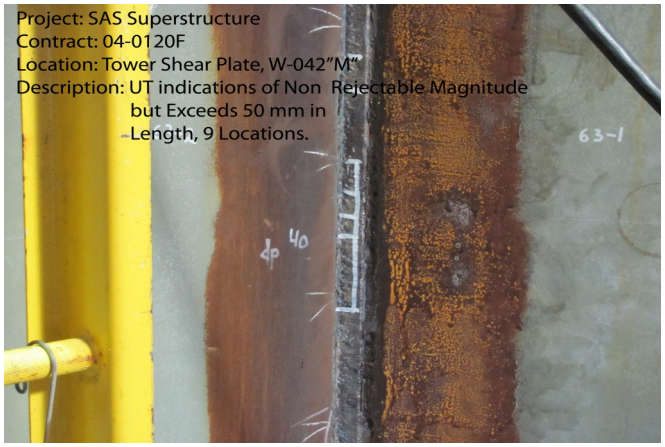

Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

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:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer