

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026061**Date Inspected:** 13-Aug-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:** See Below**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:** SAS Tower**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). Tower Shear Plates

The QAI observed the ESW repair welding located at joint "E" identified as WN: N-045, repair cycle # 2. The welding was performed by Jorge Lopez ID-6149 utilizing the SMAW as per the WPS identified as ABF-WPS-D15-1000-Repair, Rev. 2. The welding was performed in the vertical (3G) position placed in an approximate vertical plane with the groove approximately vertical. The minimum preheat of 140 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with the contract specifications. The QAI also observed the QC inspector, Pat Swain, monitor the welding and verify the welding parameters utilizing the WPS as a reference to perform this task. The welding parameters of 122 amps were noted by the QC inspector and verified by the QAI. The welding was completed during this shift.

The QAI observed the Ultrasonic Testing (UT) of the ESW skewed T-Joints identified as WN: S-042 and WN: W-042 located at joints "L" and "M" accordingly. The testing was performed by the QC technician Steve McConnell utilizing a G.E./Krautkramer USM 35X. The examination was also conducted utilizing UT Procedure identified as SE-UT-D1.5-CT-108 Rev.4 and the applicable contract documents. QAI Note: This UT procedure has not been submitted to the Department for review as of this date. The QC technician performed the required

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longitudinal wave technique, utilizing a 1.0" 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 16mm x 19mm rectangular transducer. At the conclusion of testing the welds no rejectable indications were noted by the QC technician. The areas tested was 300 mm in length starting from the top of the shear plate. The QAI also verified the testing of the ESW and concurs with the QC inspector. For location and additional information see the TL-6027 generated on this date.

This QA Inspector also performed a daily review of field inspection reports 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 vertical position utilizing the E7018-H4R . The 3.2 mm H4R electrodes were stored in a 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.

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
