

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028284**Date Inspected:** 14-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**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:** OBG and Tower**Summary of Items Observed:**

At the start of the shift this Quality Assurance Lead Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) Quality Control (QC) personnel. The observations and inspections were performed as noted below:

A). This Quality Assurance Lead Inspector (QALI) assigned the QA Inspectors to the following, but not limited to the work station(s) listed, to observe the welding and the QC inspection of the following:

Rodney Patterson-OBG E13 (Observation of excavations, repair welding, QC inspection and testing of deck field splices) and performed QA/UT verifications. Also, there were one (1) issue noted in regards to Deck Stiffener Flanges (DSF). See Summary of Conversations.

Fritz Belford-OBG W12 Drop-In Assembly (Observation of welding, QC inspection and testing of floor beams and deck splices), OBG W13 (Observation of welding, QC inspection and testing of floor beams) and QA/MPT verification.

Joselito Lizardo-Tower, Shear Plates/ESW (Observation of excavations of UT repairs located at shear plates "T" & "G").

Matt Daggett-OBG W13/W14 (Observation of welding, QC inspection and testing of G1 edge plate) and OBG W12 (Observation of welding, QC inspection and testing of deck access hole).

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William Clifford-Tower Shear Plates/ESW "N" & "W" (Performed QA/QC joint UT).

Doug Frey-OBG E12 (Observation of welding, QC inspection and testing of deck access hole), OBG E13, Drop-In Panel (Observation of QC inspection and testing of floor beams) and observation of QC/MPT and UT of longitudinal stiffeners and edge plate located at 12E-13E field splice.

Scott Croff-OBG W13 (Observation of welding, QC inspection and testing of floor beams, longitudinal stiffeners and repairs welding of floor beams).

NOTE: See QA daily Weld Inspection Reports (WIR) and NDE reports for additional information and details.

Quality Assurance Lead Inspector (QALI) Summary

This QA Lead Inspector (QALI) observed the QA Inspector's Joselito Lizardo, William Clifford, Scott Croff, Rodney Patterson, Fritz Belford, Doug Frey and Matt Daggett monitor the work performed by the QC inspectors at random intervals and also observed the QA Inspectors verify the welding parameters, the minimum preheat and the maximum interpass temperatures for compliance with the contract specifications. The QAI's utilized a Fluke 337 clamp meter to measure the electrical welding parameters, Tempil Heat Indicators and/or a Fluke 63 IR Thermometer for verifying the preheat and interpass temperatures. At the conclusion of the shift, this QA Lead Inspector discussed and reviewed the work performed by the QAI's in regards to the various observations and the verifications of the WPS's, consumables, welding parameters, preheat and interpass temperatures. The QAI observations of the QC inspection and verification of the welding parameters performed on this date appeared to comply with the contract specifications and no issues were noted during this shift.

OBG W13, Deck Stiffener Flange (DSF)

This QALI observed the Shielded Metal Arc Welding (SMAW) of the DSF to the "A" deck longitudinal stiffener identified as Weld Number (WN): 13W-PP122.2-LS3. The Partial Joint Penetration(PJP) groove welding was performed by ABF personnel Gue Wu Chen ID-1556 utilizing the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-1162-4, Rev. 0. The WPS was also used by the Quality Control (QC) Inspector William Sherwood to verify the welding parameters and to monitor the Complete Joint Penetration (CJP) welding. This QALI observed the QC inspector verifying the welding parameters which appeared to comply with the contract specifications. The minimum preheat temperature of 100 degrees Celsius and the maximum interpass temperature of 230 degrees Celsius appeared to comply with contract documents. The E9018-H4R electrode was utilized with the welding performed in the flat (1G) and overhead (4G) position. The QA inspector assigned to this work station was, Scott Croff.

This QA Lead Inspector commence the review of NDT reports, tracking of welding and developing and generating weld maps for W13 drop-in panels, E12 and W12 corner drop-in assemblies. This QA Lead Inspector also reviewed RWR documents for tracking purposes.

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 personnel scheduled for this shift.

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There were also, other pertinent conversations with QA Supervisor, William Levell, throughout the course of this shift in regards to scheduling of QA personnel, work progress and related structural steel and weld issues. There was one (1) significant issue noted below on this date.

Issue

Mr. Patterson informed this QALI at that request of the QC inspection department Mr. Patterson performed a visual inspection of the Deck Stiffener Flanges (DSF) located at the E13/E14 field splice. At the conclusion of the QA verification Mr. Patterson noted a misalignment of the DSF measuring from 5 mm to 22 mm. For additional information see Mr. Patterson's daily Weld Inspection Report (WIR) generated on this date. At the conclusion of this discussion, this QALI directed Mr. Patterson to generate and submit an Incident Report (IR) to the QA Task Leader, William Levell, for his review and disposition.

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 SMR Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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