

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 #: 78.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-030044**Date Inspected:** 18-Sep-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Steward Machine Co.**Location:** Birmingham, AL**CWI Name:** Fred Hudson / Jimmy Brewer**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:** E2 Shear Key Anchorages**Summary of Items Observed:**

Quality Assurance Inspector (QAI) Andrew Webster was present on the date and times noted above in order to observe the fabrication and Quality Control (QC) functions performed by Steward Machine Company for the E2 Shear Key Anchorages for the SFOBB project. The following items were observed:

Steward Machine - Plant 1:

This QAI performed a walkthrough at the shop to verify plates on site and to observe Steward Machine personnel at work machining and welding. Work performed at the Steward Machine shop as noted below:

The following plates were noted staged throughout the shop in various stages of processing.

Bay 4 – Plates:

S3B-e3. Formed, stressed relieved, partially machined and stud welded.

S3C-a3. Formed, stressed relieved and partially machined.

S3C-b3. Formed, stressed relieved and partially machined.

S3C-c3. Formed, stressed relieved and partially machined.

S3C-d3. Formed, stressed relieved and partially machined.

S3C-e3. Formed, stressed relieved, partially machined and stud welded.

S3C-f3. Formed, stressed relieved and partially machined.

S3C-g3. Formed, stressed relieved and partially machined.

S3C-h3. Formed, stressed relieved and partially machined.

S4B-e4. Formed, stressed relieved, partially machined and stud welded.

S4C-e4. Formed, stressed relieved, partially machined and stud welded.

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Pallet of r3, m3, k3 and j3 plates.
p3 (x8). Cut, beveled and stud welded.

S3B assembly:

This QAI noted the welding of the above mentioned plates in the welding jig. The welding was done by qualified welders Benjamin Rhodes (481) and John Roy (469). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson. Welding was done on side A.

This QAI noted the welding of the above mentioned plates in the welding jig for night shift. The welding was done by qualified welder Jeffery Hennington (476). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. Welding was done on side A. After the welding was completed the part was moved and the root pass was welded on the east end. The welding was done by qualified welder Daniel Rowe (73). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. After the root pass was welded it was MPT by the QC Inspector and this QAI.

S4C assembly:

This QAI noted the welding of the above mentioned plates in the welding jig. The welding was done by qualified welder John Roy (469). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson. Welding was done on side A root pass.

This QAI noted the welding of the above mentioned plates in the welding jig for night shift. The welding was done by qualified welder Daniel Rowe (73). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. Welding was continued on the A side root pass. After the root pass was welded it was MPT by the QC Inspector and this QAI. Then the part was flipped and the root pass was welded on side B. After the root pass was welded it was MPT by the QC Inspector and this QAI.

S10C Assembly:

This QAI witnessed the QC Inspector MPT the S10C assembly. During their inspection six indications were marked for repair. Five of the indications were on side A and one was on side B. Then this QAI noted the four lugs were fit and roots welded by qualified welder Jeffery Hennington (476). All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. After the root pass was welded for each lug they were MPT by the QC Inspector and this QAI. The S10C assembly was then moved and the MPT indications on side A and B were repaired using approved repair procedure R-015-CT. The repairs were welded by qualified welder Jeffery Hennington (476). All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. After the repairs were made the assembly was moved and the four lugs were welded by qualified welder Jeffery Hennington (476). All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer.

NON-DESTRUCTIVE TESTING (NDT).

The QA performed NDT on the following.

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Assembly S10C (Final East End) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S10C (Final West End) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S10C Lugs (Root passes (x4)) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S10C repair excavations (excavations before weld repair) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S4C (Root pass side A) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S4C (Root pass side B) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

Assembly S3B (Root pass East End) at Steward Plant 1:

- Visual Testing (VT) & Magnetic Particle Testing (MPT) Accept. (See TL-6028 for detailed information.)

The Non Destructive Testing (NDT) listed above were observed performed and accepted by the QC Inspectors prior to the QA Inspector performing the tests. The QC Inspectors performed 100% NDT with the QA Inspector performing over 10% NDT.



Summary of Conversations:

Only general conversations with Steward Machine QC NDT personnel relevant to work and testing performed during 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 Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

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Inspected By:	Webster, Andrew	Quality Assurance Inspector
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Reviewed By:	Foerder, Mike	QA Reviewer
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