

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT**

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-030076
Date Inspected: 26-Sep-2013

Project Name: SAS Superstructure **OSM Arrival Time:** 700
Prime Contractor: American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 1530
Contractor: Steward Machine Co. **Location:** Birmingham, AL

CWI Name:	Fred Hudson (Cert. #01061501)	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) Fritz Belford 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. Material Test Reports (MTRs) for all materials used have been reviewed and approved by others at the XKT shop in Vallejo California prior to shipping to Steward Machine Company. The following items were observed:

STEWARD MACHINE - PLANT 1:

The QA 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:

S4B Assembly:

Assembly was removed from CNC 231 to be Magnetic Particle Tested and prepped for blast and coat.

S3B Assembly:

The assembly was observed being fitted with J3, K4, M4 and P4 to R3 straps. After the straps were fitted they were tacked and welded by Jeff Hennington (#476) utilizing Welding Procedure Specifications (WPS) P2-W128-B and P2-W126-B for FCAW-G in the 1G position. The welding parameters were observed adjusted and monitored by Certified Welding Inspector (CWI) Fred Hudson (Cert. #01061501) who was onsite with the WPS as required by contract documents. The welding parameters were measured to be 30volts/300amps using 1/16" Class E70T-1 filler and 100% CO2 at 40cfm.

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S4C Assembly:

Steward shop personnel were observed applying the Belzona and Sikadur 35LV as per RFI 3414R0. Assembly was left to cure throughout the day.

S3C Assembly:

Assembly was mounted on CNC 230 for milling of sides.

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

Bay 4 – Plates:

S3C-e3. Milling complete.

S4C-e4. Milling complete.

COMPONENT RELEASES.

None

NON-DESTRUCTIVE TESTING (NDT).

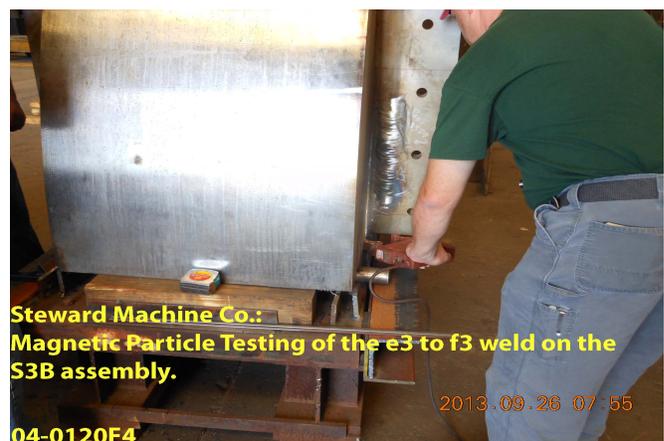
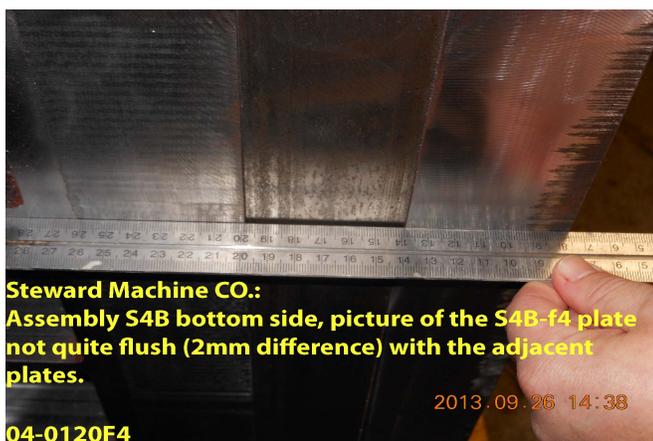
S3B Assembly Visual Testing (VT) and Magnetic Particle Testing (MPT):

- VT/MPT of e3 plate to f3 plate weld at Side A & B was acceptable.
- VT/MPT of Strap root pass on Side A acceptable.

S4B Assembly Visual Testing (VT) and Magnetic Particle Testing (MPT):

- VT/MPT of s3 round bar fillet welds on Sides A & B acceptable.
- VT/MPT of Strap welds on Sides A & B acceptable.

The QC Inspector was observed performing 100% Magnetic Particle Testing (MPT) and accepting of items noted above prior to QA Inspector's verification MPT. See TL-6028 for MT report.



Summary of Conversations:

While performing the Magnetic Particle Test on the S4B assembly the QA Inspector noted that welds for the strap to the e3 plate were not ground flush. The QAI asked the QCI if the welds were to be ground flush at a later time and was informed by the QCI that the welds will not be ground flush due to inaccessibility posed by the S3 round

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bars in the way. The QAI informed the QCI that an NCR will be submitted for the welds not ground flush as per drawings.

The QAI also noted that the f3 plate was not flush with the adjacent e3 and g3 plates of assembly S4B. The plate was recessed below the adjacent plates by 2mm. The QAI informed the QCI of the issue and was informed by QCI that he was aware of the issues and that an NCMR was being submitted for the assembly.

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.

Inspected By:	Belford,Fritz	Quality Assurance Inspector
Reviewed By:	Foerder,Mike	QA Reviewer
