

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 #: 1.28**WELDING INSPECTION REPORT**

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

Report No: WIR-026991
Date Inspected: 05-Jan-2012

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: 1730
Location: Jobsite

CWI Name:	As noted 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 OBG	

Summary of Items Observed:

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. Crossbeam 19/FL3 Temporary Attachment Sites (Exterior)
2. 11E/PP101/E3 Lifting Lug Holes W1, W2 and W4 Repair (Exterior)
3. 12E/PP114/E4 Lifting Lug Hole W2 (Interior)
4. 12E/PP111/E3 Lifting Lug Hole W2 (Interior)
5. 13E/14E/D3 (Exterior)
6. FW Spencer South Shaft Tower (Exterior)

1. Crossbeam 19/FL3 Temporary Attachment Sites (Exterior)

This QA Inspector observed QC Inspector Sal Merino perform a magnetic particle inspection of the temporary attachment sites on crossbeam 19 and FL3. (The temporary attachments consisted of sixteen (16) plates utilized for the alignment of crossbeam 19 and FL3). This QA Inspector observed that Mr. Merino found rejectable indications on the 2nd plate from the top on the East Face of FL3. This QA Inspector observed that Mr. Merino found no rejectable indications on the plates listed below and appeared to be in general conformance with the contract specifications.

Crossbeam 19 East Face

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Crossbeam 19 West Face

FL3 West Face

This QA Inspector performed a Magnetic Particle (MT) Inspection of the temporary attachment sites on the locations listed above. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

2. 11E/PP101/E3 Lifting Lug Holes W1, W2 and W4 Repair (Exterior)

This QA Inspector randomly observed ABF welder Salvador Sandoval performing the back-gouge operation of ultrasonic rejectable indications on "A" deck Lifting Lug Holes W1, W2 and W4 located at 11E/PP101/E3. The dimensions of the excavation of W1 were located at "Y" 365 mm: (20 mm wide; 60 mm length; and 7 mm in depth). The dimensions of the excavation of W2 were located at "Y" 295 mm: (20 mm wide; 40 mm length; and 3 mm in depth). The dimensions of the excavation of W4 were located at "Y" 130 mm: (20 mm wide; 30 mm length; and 7 mm in depth). This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Salvador Sandoval (Welder ID 2202) performing the repair welding operation of three (3) ultrasonic indications as per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on "A" deck Lifting Lug Holes W1, W2 and W4 located at 11E/PP101/E3. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Sal Merino verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=135) were in accordance with WPS D1.5-1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date.

3. 12E/PP114/E4 Lifting Lug Hole W2 (Interior)

This QA Inspector randomly observed ABF welders Jorge Lopez perform back-gouge operations on face "B" on the interior of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff perform MT testing to ensure the soundness of the metal. This QA Inspector randomly observed the welder perform SMAW in the (4G) overhead position with the QC Inspector monitoring the welding to insure the parameters were in accordance with ABF-WPS-D15-1110A-Revision 1. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work is in progress and appeared to be in general accordance with the contract documents.

4. 12E/PP111/E3 Lifting Lug Hole W2 (Interior)

This QA Inspector randomly observed the in process welding of lifting lug hole W2 at 12E/PP111/E3. The SMAW process in the (4G) overhead position was performed by ABF welder Salvador Sandoval (ID 2202) utilizing E7018-H4R electrodes with amperage of 136. This QA Inspector observed the QC Inspector measure

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inter-pass temperatures and monitor the welding to insure the welding parameters were in accordance with ABF-WPS-D15-1110A-Revision 1. This QA Inspector made periodic observations to monitor quality and noted that the work was completed on this date and appeared to be in general conformance with the contract specifications.

5. 13E/14E/D3 (Exterior)

This QA Inspector randomly observed ABF welding operator Wai Kit Lai (ID 2953) performing the Flux Core Arc Welding with gas (FCAW-G) process utilizing a “Bug-O” motorized rail system with a magnetic base attached in the (4G) overhead position on face “B” of bottom plate “D3”, at 13E/14E of the OBG. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=270/V=23.8/TS=180/HI=2.15). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work is in progress and appears to be in general conformance to the contract requirements. This joint is a Seismic Performance Critical Member (SPCM).

6. FW Spencer South Shaft Tower (Exterior)

This QA Inspector observed F.W. Spencer welder Damian LLanos ID# 6645 performing Shielded Metal Arc Welding (SMAW) in the 2G horizontal position on domestic water and compressed air outlets located at the 136 m level of the south shaft of the tower. This QA Inspector verified the fit up of the joints and found it to be satisfactory. This QA Inspector observed QC Inspector Steve Jensen monitoring the welding to ensure the welding parameters were in compliance pertaining to WPS-1-12-1 Revision 2 (1.12). The welder was observed implementing E6010 electrodes in the root pass with the balance using E7018 electrodes. The QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work listed below was completed on this date and appeared to be in general conformance with the contract documents.

1/T2/DW1/136

1/T2/CA2/136

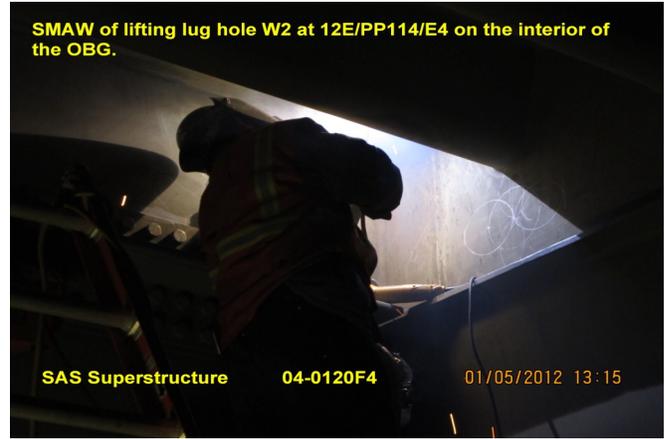
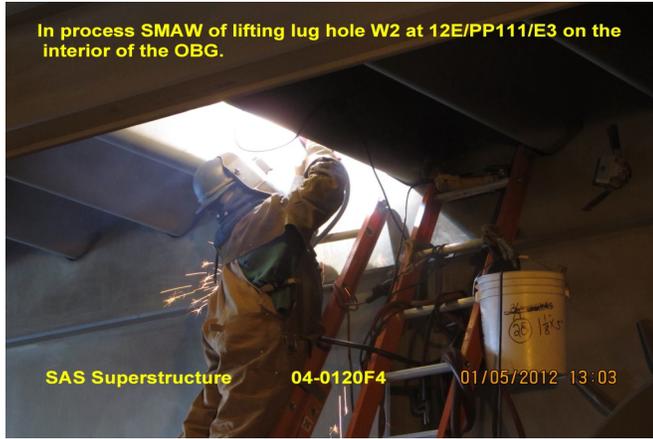
Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

Summary of Conversations:

The were no pertinent conversations to report.

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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: Frey,Doug

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer