

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-027174**Date Inspected:** 14-Feb-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**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:

13E PP118.5 E4 Lifting Lug Hole #1 (Exterior)

This QA Inspector randomly observed ABF welder Salvador Sandoval grind the edges of lifting lug hole #1 utilizing a small disc grinder as part of fit-up operations at 13E PP118.5 E4 on the exterior of the OBG. The welder was observed pre-heating the hole prior to placing the 20mm thick insert making up the B-U4a CJP joint. QC Inspector Fred Von Hoff measured the planar offset between the insert and "A" deck with a Bridge Cam gauge and found it to be acceptable. The welder was then observed employing a propane burner to heat the joint to 66° C and this QA Inspector verified the temperature with a 150° F (66° C) Tempilstik as well as the E7018-H4R electrodes which were secured from a baking oven. The welder was observed performing the Shielded Metal Arc Welding (SMAW) process in the 1G flat position with 3.2mm electrodes at 126 amperes and between passes, it was noted that the QC Inspector measured the inter-pass temperatures as the welder ground and blended the stop/start edges of the work. The QC Inspector was observed monitoring the welding and the parameters to ensure compliance with ABF-WPS-D1.5-1050A-CU. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general compliance with the contract specifications. This joint is a Seismic performance Critical Member (SPCM).

12E/13E-Longitudinal Stiffener #4 (Interior)

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

This QA Inspector randomly observed ABF welder Xiao Jian Wan (ID 9677) performing the back-gouge operation of an R3 ultrasonic rejectable indication on "A" deck Longitudinal Stiffener #4 located at y+50mm: (225mm's in length, 30mm's wide and 20mm's deep). This QA Inspector observed QC Inspector Fred Von Hoff 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.

Note: RWR 201111002 was referenced prior to welding.

This QA Inspector randomly observed ABF welder Xiao Jian Wan performing the repair welding operation of an R3 indication as per the SMAW process in the (3G) vertical position on LS #4 at 12E/13E on the interior of the OBG. This QA Inspector observed the welder employ E9018-MR electrodes from a remote baking oven and the QC Inspector verify that the preheat temperature was at the minimum of 200 degrees F. The QC Inspector was observed monitoring the welding and the parameters for conformance with ABF-WPS-D1.5-1002- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications. This QA Inspector noted that the work was completed on this date.

QA NDT (Exterior)

This QA Inspector performed a Magnetic Particle (MT) Inspection at 13E/14E-A4 on the exterior of the OBG. 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.

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of the welds at 13E/14E-A4 located from 4200mm to 5500mm and from 0mm to 1500mm on A5 on the exterior of the OBG. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

13E PP119.5 E4 Lifting Lug Hole #4 (Interior)

This QA Inspector randomly observed ABF welder Rick Clayborn performing the back-gouge operation of an ultrasonic rejectable indication on "A" deck Lifting Lug Hole #4 at 13E PP119.5 E4 located at y+ 150 mm: (90mm's in length, 25mm's wide and 7mm's deep). This QA Inspector observed QC Inspector Fred Von Hoff perform an MT inspection 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 Rick Clayborn (Welder ID 2773) performing the repair welding operation of an ultrasonic indication as per the SMAW process in the (4G) overhead position on "A" deck lifting lug hole #4 at 13E PP119.5 E4. This QA Inspector observed the welder utilize E7018-H4R electrodes and QC Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 325° degrees F and that the welding parameters (Amps=135) were in accordance with WPS D1.5-1004- Repair. The welding

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications. Upon completion of the repair, a thermal induction blanket was placed over the area for Post Weld Heat Treatment (PWHT) at 450 degrees F for 1 hour.

13W PP117.5 W5 Traveler Rail Support System (Exterior)

This QA Inspector randomly observed ABF welder Eric Sparks perform SMAW in all positions on the traveler rail support system located at 13W PP117.5 W5 on the exterior of the OBG. The welder was observed placing a 6mm bead utilizing 3.2mm E7018 electrodes drawing 130 amperes. Upon completion of the work QC Inspector Sal Merino performed an MT inspection and it was noted that Mr. Merino found no rejectable indications. This QA Inspector noted that the work was completed on this date and appeared to be in general conformance with ABF-WPS-D1.5-F1200A and the contract specifications.

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. No 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.



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
