

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-027248**Date Inspected:** 28-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:

5W PP29 W2 Deck Access Hole (Interior)

This QA Inspector randomly observed ABF welder Jason Collins (ID 8128) pre-heat the B-U7 Complete Penetration Joint (CJP) to 66° C prior to performing Shielded Metal Arc Welding (SMAW) in the 4G overhead position. The welder was observed utilizing 3.2mm E7018 electrodes and between passes employed a small disc grinder to blend the start/stop edges of the work for a smooth transition. QC Inspector Steve Jensen was observed monitoring the welding and the parameters and recorded amperage of 125. This QA Inspector made subsequent observations throughout the shift and noted that the parameters at this location appeared to be in general conformance to ABF-WPS-D1.5-1110A-Revision 1.

13W PP122.5 W4 Lifting Lug Hole #2 (Interior)

ABF welder Rick Clayborn (ID 2773) was observed at random intervals, performing repair operations on lifting lug hole (LLH) #2 on the interior of the OBG at 13W PP122.5 W4. The welder was observed performing the Air Carbon Arc technique to excavate ultrasonic rejectable indications from the weld in two (2) locations. Upon completion of the excavations QC Inspector Sal Merino inspected the excavations by use of the Magnetic Particle (MT) method to ensure soundness of the metal. It was noted that Mr. Merino found no rejectable

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indications and recorded the dimensions of the excavations as; y+0mm-50mm's in length, 20mm's wide and 8mm's deep, y+70mm-60mm's in length, 25mm's wide and 9mm's deep.

This QA Inspector randomly observed ABF welder Rick Clayborn perform repair welding operations on LLH #2 utilizing the SMAW process in the 4G overhead position. QC Inspector Sal Merino monitored the welding and the parameters for compliance with ABF-WPS-D1.5-1004-Repair. Upon completion of the welding, thermal heat blankets were placed over the repairs on the exterior side (face A), for Post Weld Heat Treatment (PWHT) at 450-600° F for a period of one hour. This QA Inspector made subsequent observations and noted that the work was completed on this date and appeared to be in general conformance with the contract documents.

13W PP122.5 W3 Lifting Lug Holes #1 and 2 (Interior)

This QA Inspector randomly observed ABF welder Rick Clayborn performing back-gouge operations on face B of LLH's #1 and 2 on the interior of the OBG at 13W PP122.5 W3. This QA Inspector observed QC Inspector Sal Merino test the back-gouge utilizing the MT method to ensure soundness of the metal and this QA Inspector noted that Mr. Merino found no rejectable indications.

This QA Inspector randomly observed ABF welder Rick Clayborn (ID 2773) performing the SMAW process in the (4G) overhead position on "A" deck lifting lug holes #1 and 2 at 13W PP122.5 W3. This QA Inspector observed QC Inspector Sal Merino verify that the pre-heat temperature was at a minimum of 66° degrees C and that the welding parameters (Amps=128) were in accordance with ABF-WPS-D1.5-1110A-Revision 1. 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.

FW Spencer Pipe Welding (Exterior)

This QA Inspector randomly observed FW Spencer welder Damian Llanos performing SMAW in all positions on schedule 80, 2.5" Domestic Water (DWI) and 4" Compressed Air (CA2) pipe and outlets as listed below. The welder was observed employing 6010 electrodes in the root passes and the balance completed with 7018 electrodes. QC Inspector Steve Jensen was observed monitoring the welding and the parameters to ensure compliance with ABF-WPS-D1.5-1-12-1 Revision 2 (1.12). This QA Inspector noted that the work was in progress and appeared to be in general conformance with the contract documents.

1/DW1/78/NW, 1/CA2/78/NW - Outlets
42/2.5/81/NW, 42/4/81/NW – Schedule 80 Pipe
43/2.5/83/NW, 43/4/83/NW - Schedule 80 Pipe

13W PP121.5 W4 Lifting Lug Hole #1 and 4 (Interior)

This QA Inspector randomly observed ABF welder Rick Clayborn performing the back-gouge operation of ultrasonic rejectable indications on "A" deck LLH #1 at 13W PP121.5 W4 on the interior of the OBG. The dimensions of the excavations were recorded as; y+340mm-45mm's in length, 20mm's wide and 6mm's deep, y+430mm-100mm's in length, 25mm's wide and 7mm's deep . On LLH #4 the dimensions were recorded as; y+335mm-60mm's in length, 20mm's wide and 8mm's deep, y+430mm-65mm's in length, 20mm's wide and

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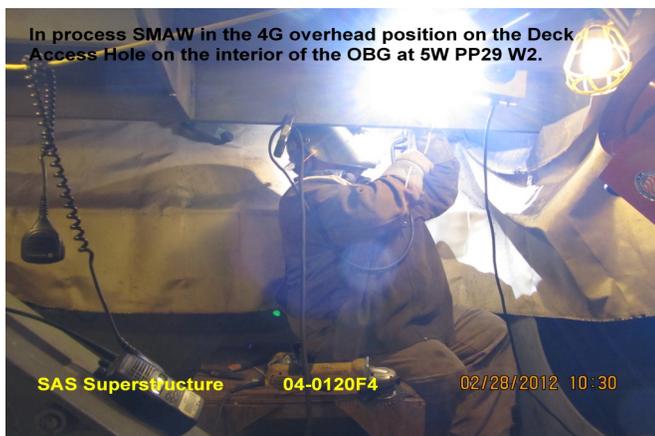
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7mm's deep. This QA Inspector observed QC Inspector Sal Merino perform a MT inspection of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector noted that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Rick Clayborn (ID 2773) performing the repair welding operation of four (4) ultrasonic indications as per the SMAW process in the (4G) overhead position on "A" deck LLH's #1 and 4 at 13W PP121.5 W4. 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 66 degrees C and that the welding parameters (Amps=128) were in accordance with WPS D1.5-1004- Repair. The welding 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.

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
