

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-027388**Date Inspected:** 29-Mar-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:** Job Site

CWI Name:	As noted below		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	Yes	No	N/A
Verified Joint Fit-up:	Yes	No	N/A
Approved WPS:	Yes	No	N/A
Delayed / Cancelled:	Yes	No	N/A
Component:	SAS OBG		

Bridge No: 34-0006**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:

9E PP84.5 E5-LSE (Interior)

This QA Inspector made random observations of ongoing Shielded Metal Arc Welding (SMAW) in the 3G vertical position on the East Longitudinal Stiffener (LSE) located at 9E PP84.5 E5 on the interior of the OBG. ABF welder Todd Jackson (ID 4639) was observed employing E9018-H4R electrodes drawing 125 amperes. QC Inspector Steve Jensen was present monitoring the welding and the parameters as they applied to ABF-WPS-D1.5-1012-3. In a conversation with Mr. Jensen, it was stated that pre-heat temperatures were verified and the electrodes were obtained from a baking oven. This QA Inspector noted that the heat induction blankets were in use and covered the length of the weld surface. On a subsequent observation, the welder was noted as cleaning the work between passes utilizing a small disc grinder, brushes and compressed air. This QA Inspector observed the work for quality throughout the shift and noted that the work is in progress and appeared to be in general conformance with the contract documents. This QA Inspector observed QC Inspector Jesse Cayabyab conduct an ultrasonic inspection (UT) of the DAH at this location on the exterior of the OBG. Mr. Cayabyab scanned four (4) areas rated as R1 indications repaired twenty four (24) hours prior. It was noted that Mr. Cayabyab found no rejectable indications. This QA Inspector performed a Magnetic Particle (MT) inspection on the DAH at 9E PP84.5 E5 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

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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 a UT inspection on approximately 10% of the welds on the DAH located at 9E PP84.5 E5 on the exterior of the OBG. These welds were accepted by QC Ultrasonic technician Jesse Cayabyab 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.

12E PP109.5 E5-DAH (Exterior)

This QA Inspector randomly observed ABF welder Salvador Sandoval (ID 2202) perform the Flux Core Arc Welding with Gas (FCAW-G) process in the 1 and 2G flat and horizontal positions on the Deck Access Hole (DAH) located at 12E PP109.5 E5 on the exterior of the OBG. This QA Inspector observed the welder utilizing a small disc grinder to smooth the start/stop edges of the work for a smooth transition prior to commencing consecutive passes. QC Inspector John Pagliero verified inter-pass temperatures between passes by employing an infra-red temperature gun. Mr. Pagliero also monitored the welding parameters and recorded as such; 295 amperes at 25 volts while traveling 333mm/min equaling a heat input of 1.32 joules/mm. Mr. Sandoval completed the work on the exterior of the DAH on this date and made preparations to transfer equipment to the interior at this same location. It was noted by this QA Inspector that the set-up operations were still in progress by the end of the shift.

8W PP70.5 W2-LSE (Interior)

ABF welder Eric Sparks (ID 3040) was observed at random intervals, performing the ongoing SMAW of the East Longitudinal Stiffener (LSE) on the DAH located at 8W PP70.5 W2 on the interior of the OBG. Mr. Sparks was observed utilizing the E9018-H4R electrodes approved for use as pertaining to ABF-WPS-D1.5-1012-3 as well as a heat induction blanket which this QA Inspector verified. QC Inspector Steve Jensen was on hand to monitor the welding and the parameters and commented that the welder was drawing amperage of 120. On a subsequent observation, the welder was observed grinding and cleaning the weld and this QA Inspector noted a small disc grinder and compressed air were utilized. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was in progress and appeared to be in general conformance with the contract specifications.

8W PP61.5 W2-DAH (Interior)

This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) perform the SMAW process in the 4G overhead position on the DAH located at 8W PP61.5 W2 on the interior of the OBG. Prior to welding Mr. Jimenez was observed pre-heating the B-U2a CJP joint to a minimum temperature of 20°C which was verified by the QC Inspector. This QA Inspector randomly observed the welder employing 3.2mm E7018-H4R electrodes drawing amperage of 132.5. QC Inspector Steve Jensen was observed monitoring the welding to insure the parameters were in accordance with ABF-WPS-D15-1010-Revision 1. The welder was also observed cleaning the work utilizing a small disc grinder, brushes and compressed air to clean to shiny metal so as to not introduce additional indications. 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.

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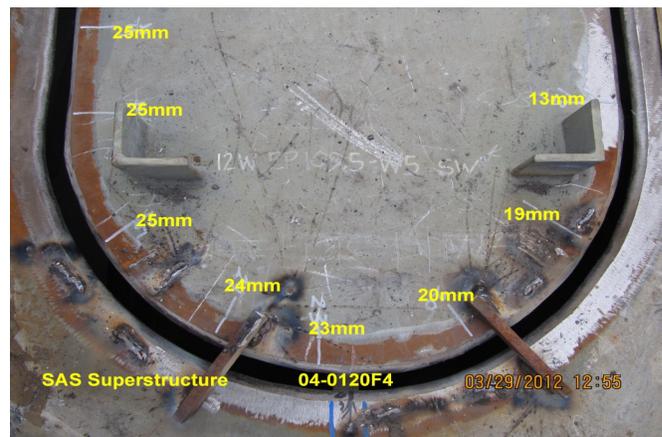
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12W PP109.5 W5-DAH (Exterior)

This QA Inspector randomly observed ABF welding personnel conducting fit operations of the DAH located at 12W PP109.5 W5 on the exterior of the OBG. ABF welder Rick Clayborn was observed tack welding alignment tabs to the hole plate and upon completion of the fit-up process, QC Inspector Jesse Cayabyab performed layout dimensioning of the joint. Mr. Cayabyab recoded the measurements of the root opening adjacent of the deck and it was noted by this QA Inspector from y+950mm to y+3450mm, that the maximum allowable width of the root opening exceeds WPS-1040-C and the code requirements of AWS D1.5. The maximum allowable is 20mm. QC Manager Bonefacio Daquinag will submit a Request for Weld Repair (RWR) on this date. This QA generated an Incident Report (IR) on this date.

9W PP84.5 W2-DAH (Exterior)

This QA Inspector performed a MT Inspection on the DAH at 9W PP84.5 W2 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 a UT inspection on approximately 10% of the welds on the DAH located at 9W PP84.5 W2 on the exterior of the OBG. These welds were accepted by QC Ultrasonic technician Jesse Cayabyab 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.



Summary of Conversations:

This QA inspector met with QC inspectors John Pagliero, Jesse Cayabyab and Sal Merino to coordinate inspections required and welder assignments.

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.

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Inspected By:	Frey,Doug	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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