

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-028530**Date Inspected:** 04-Oct-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**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:

12E PP115.5- BW1 (Interior)

This QA Inspector randomly observed the excavation operations of Ultrasonic rejectable indications on the Complete Joint Penetration (CJP) joint on the Deck Access Hole (DAH) at 12E PP116.5-E5-DAH on the interior of the OBG. This QA Inspector observed ABF/JV qualified welder Xiao Hua Luo #1291 performing the Carbon Arc Gouging (CAG) method to remove metal from the material. The welder was observed cleaning up the excavations utilizing a small disc grinder and a de-burring drill. Upon completion of the excavation, Quality Control (QC) Inspector Salvador Merino performed a Magnetic Particle Inspection (MT) of the site to determine soundness of the metal and observed no indications, QC then measured the dimensions of the excavations for length, width and depth. This QA Inspector recorded the dimensions of the excavations as:

Y=85mm; 90mm in length, 40mm wide and 8mm deep.

Prior to welding, QC Inspector Salvador Merino was observed monitoring and measuring the pre-heat temperatures and parameters as they pertain to ABF-WPS-D1.5-1000-Repair-Revision 2. This QA Inspector made random observations of SMAW in the 3G vertical position and noted no issues with the work at this location and at the time of this repair, no RWR was required for this first time weld repair. This QA Inspector made subsequent

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

observations throughout the shift to monitor quality and it was noted that the E7018-H4R electrodes were stored properly in a sealed container after being opened and they were drawing amperage of 134. The welder was observed continuing the in process repair welding and this QA Inspector noted that no issues were present at this location. QC Inspector Salvador Merino was also present to monitor the welding and the parameters in the later stages of the shift. This QA Inspector noted that the work at this location was completed on this date and appeared to be in general conformance with the contract specifications.

12E PP114.5-BW2/PS3 (Interior)

This QA Inspector randomly observed the excavation operations of Ultrasonic rejectable indications on the Complete Joint Penetration (CJP) joint on the longitudinal deck seam at 12E PP114.5-BW2/PS3 on the interior of the OBG. This QA Inspector observed ABF/JV qualified welder Alex Blanco #9650 performing the Carbon Arc Gouging (CAG) method to remove metal from the material. The welder was observed cleaning up the excavations utilizing a small disc grinder and a de-burring drill. Upon completion of the excavation, Quality Control (QC) Inspector Salvador Merino performed a Magnetic Particle Inspection (MT) of the site to determine soundness of the metal and observed no indications, QC then measured the dimensions of the excavations for length, width and depth. This QA Inspector recorded the dimensions of the excavations as:

Y=362mm; 70mm in length, 25mm wide and 11mm deep, PS3 - y=0mm; 50mm in length, 20mm wide and 5mm deep.

Prior to welding, QC Inspector Salvador Merino was observed monitoring and measuring the pre-heat temperatures and parameters as they pertain to ABF-WPS-D1.5-1000-Repair-Revision 2. This QA Inspector made random observations of SMAW in the 3G vertical position and noted no issues with the work at this location and at the time of this repair, no RWR was required for this first time weld repair. This QA Inspector made subsequent observations throughout the shift to monitor quality and it was noted that the E7018-H4R electrodes were stored properly in a sealed container after being opened and they were drawing amperage of 136. The welder was observed continuing the in process repair welding and this QA Inspector noted that no issues were present at this location. QC Inspector Salvador Merino was also present to monitor the welding and the parameters in the later stages of the shift. This QA Inspector noted that the work at this location was completed on this date and appeared to be in general conformance with the contract specifications.

QA NDT (Interior)

This QA Inspector performed Magnetic Particle (MT) testing on the welds listed below. This QA Inspector performed MT testing utilizing the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26.2.1. 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 an Ultrasonic (UT) inspection on 100% of the welds listed below. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed the indications listed below 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.

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

12E PP114-E2.1-BW1 – VT, MT, UT – acceptable
12E PP114-E2.1-BW2 - VT, MT, UT – acceptable
12E PP114-E2.1-PS1 - VT, MT, UT – acceptable
12E PP113-E2.1-BW1 - VT, MT, UT – acceptable
12E PP113-E2.1-BW2 - VT, MT, UT – acceptable
12E PP113-E2.1-PS1 - VT, MT, UT – acceptable
12E PP112-E2.1-BW1 - VT, MT, UT – acceptable
12E PP112-E2.1-BW2 - VT, MT, - acceptable UT – rejectable indication at y=700
12E PP112-E2.1-PS1 - VT, MT, UT - acceptable

12E PP116-BW1 (Interior)

This QA Inspector randomly observed the excavation operations of Ultrasonic rejectable indications on the Complete Joint Penetration (CJP) joint on the longitudinal deck seam at 12E PP116-BW1 on the interior of the OBG. This QA Inspector observed ABF/JV qualified welder Jose Torres #6235 performing the Carbon Arc Gouging (CAG) method to remove metal from the material. The welder was observed cleaning up the excavations utilizing a small disc grinder and a de-burring drill. Upon completion of the excavation, Quality Control (QC) Inspector Salvador Merino performed a Magnetic Particle Inspection (MT) of the site to determine soundness of the metal and observed no indications, QC then measured the dimensions of the excavations for length, width and depth. This QA Inspector recorded the dimensions of the excavations as:

Y=0mm; 390mm in length, 30mm wide and 7mm deep, 12E PP117-FP1 - y=20mm; 190mm in length, 40mm wide and 7mm deep, PS1 – y=80mm; 70mm in length, 20mm wide and 7mm deep.

Prior to welding, QC Inspector Salvador Merino was observed monitoring and measuring the pre-heat temperatures and parameters as they pertain to ABF-WPS-D1.5-1000-Repair-Revision 2. This QA Inspector made random observations of SMAW in the 3G vertical and 2G horizontal positions and noted no issues with the work at this location and at the time of this repair, no RWR was required for this first time weld repair. This QA Inspector made subsequent observations throughout the shift to monitor quality and it was noted that the E7018-H4R electrodes were stored properly in a sealed container after being opened and they were drawing amperage of 136. The welder was observed continuing the in process repair welding and this QA Inspector noted that no issues were present at this location. QC Inspector Salvador Merino was also present to monitor the welding and the parameters in the later stages of the shift. This QA Inspector noted that the work at this location was completed on this date and appeared to be in general conformance with the contract specifications.

Summary of Conversations:

Conversations relevant to work performed.

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.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Inspected By:	Frey,Doug	Quality Assurance Inspector
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Reviewed By:	Reyes,Danny	QA Reviewer
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