

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-028335**Date Inspected:** 05-Sep-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job site**CWI Name:** Salvador Merino**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:** OBG**Summary of Items Observed:**

Quality Assurance Inspector (QAI) Rodney Patterson 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:

Ultrasonic Testing OBG

This QA performed verification Ultrasonic Testing (UT) on Complete Joint Penetration (CJP) deck drop-in deck weld connections for lift 12E and 13W. The welds were previously tested and accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. The QAI's findings are as follows;

Lift 12E Deck plate field splice (Weld No. 12E-PP111.1-A1)

The QAI performed 50% verification of this weld. No rejectable indications were observed at the time of inspection.

Lift 13W Deck plate drop-in splice (Weld No. 13W-W2.5)

The QAI performed verification of this weld in way of repairs for a location rejected by the QAI on 08-29-2012 at Y=4360. An additional 5% of testing was performed on this weld with no rejectable indications found at the time of inspection.

Lift 13W Deck plate drop-in flange splice (Weld No. 13W-PP122.5-W2.5-BF2)

The QAI performed verification of this weld in way of repairs for a location rejected by the QAI on 08-24-2012 at Y=210. An additional 50% of testing was performed on this weld with no rejectable indications found at the time

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of inspection.

The QAI noted and periodically observed ABF welder Richard Garcia #5892 continuing to utilize Flux Cored Arc Welding (FCAW) in the 4G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-3110-4. The repairs are located on deck panel drop-in splice transverse weld designated as 13E-PP122. The weld and surrounding area was brought to a temperature by the use of induction heaters and the Quality Control (QC) inspector Fred Michaels was observed monitoring the welding parameters at the beginning of welding. After review of the request for weld repair document RWR201208-105 on 08-29-2012, the QAI confirmed that the ABF QC disregarded the approved document and performed critical weld repairs with a welding procedure not specified in the approved document. The QA task leader was notified in writing on 08-29-2012 of the non-compliant issue for further discussion with the Caltrans Structural Materials Representative (SMR) and ABF Management.

The QAI observed ABF/JV qualified welder Richard Chouinard performing Carbon Arc Gouging (CAG) for the repair of the corner assembly drop-in side plate designated as 12E/13E-C1. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavations at the following locations,

Weld 12E/13E-C1

Y=325 Depth 10, Width 35mm, Length 400mm

The ABF welder Richard Chouinard was observed later in the shift performing Shielded Metal Arc Welding (SMAW) in the 4G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-1004-Repair at the locations previously noted. The weld and surrounding area was brought to a temperature of 325°F by the use of inductions heaters and maintained throughout the welding process. The repairs were performed in accordance with approval for repair document RWR201208-053 due to the length of the repair at this location.

The QA inspector observed at random intervals; ABF/JV qualified welder Richard Garcia #5892 performing Shielded Metal Arc Welding (SMAW) in the 3G position utilizing the Caltrans approved Welding Procedure Specification ABF-WPS-D1.5-1002-Repair for the repair of the HPS-485 longitudinal deck stiffener splice at panel point 120.6. The weld is designated as 13E-PP120.6-LS2. The weld surface and surrounding area was brought to temperature by the use of a gas torch. The ABF QC inspector Salvador Merino was observed monitoring the welding parameters at the beginning of the shift. The third time repair at this location was performed without the prior approval of the engineer. The QA task leader was notified in writing of the non-compliant issue for further discussion with the Caltrans Structural Materials Representative (SMR) and ABF Management. All other noted locations were non-critical repairs and do not require approval.

Magnetic Particle Testing (OBG 13W)

This QA Inspector performed a minimum of 15% verification Magnetic Particle Testing (MT) of the lift 13W Longitudinal Deck drop-in Splice. This QA Inspector generated a TL-6028 MT report on this date. The results of the inspection are as follows;

Lift 13W Longitudinal Deck-drop-in Splice (Weld No. 13W-W2.5)

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The QAI performed a minimum of 15% verification of this weld from face A/B. No rejectable indications were observed at the time of inspection however minor repair by grinding was performed to rectify excessive reinforcement on both face A and B.

The QAI observed ABF/JV qualified welder Eric Sparks #3040 performing Carbon Arc Gouging (CAG) for the repair of the corner assembly drop-in side plate designated as 12E/13E-B1. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavations at the following locations,

Weld 12E/13E-B1

Y=1720 Depth 11, Width 20mm, Length 105mm

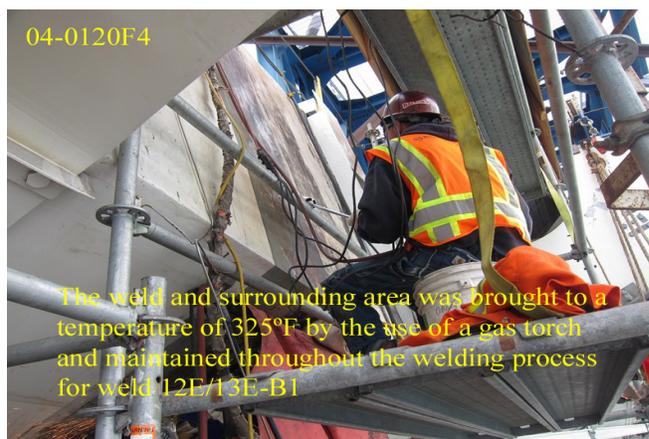
The ABF welder Eric Sparks was observed later in the shift performing Shielded Metal Arc Welding (SMAW) in the 4G position utilizing the Caltrans approved Welding Procedure Specifications ABF-WPS-D1.5-1004-Repair at the locations previously noted. The weld and surrounding area was brought to a temperature of 325°F by the use of a gas torch and maintained throughout the welding process. The post weld heat treatment of this location was accomplished with a gas torch and monitored by the use of a 450°F tempilstik. Due to the first time repair at this location approval for repair (RWR) of this weld was not required.

The QAI spent a portion of this shift reviewing and documenting the status and completion of various production welding tracking logs for lift 13E-14E drop-in deck work currently in-process. The QA recorded the information on the OBG tracking log.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

As noted above



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

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your project.

Inspected By:	Patterson,Rodney	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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