

**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-028200**Date Inspected:** 17-Aug-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:

This QA observed at random intervals ABF/JV QC inspector Jesus Cayabyab performing final Magnetic Particle Testing (MT) of the longitudinal diaphragm stiffener splices at panel point 122.65. The welds are designated as 13E-PP122.65-E3-A and 13E-PP122.65-E3-B. No indications were observed by the QC at the time of inspection. The ABF/JV QC inspector Jesus Cayabyab then proceeded to perform Ultrasonic Testing of the stiffener connections with no rejectable indications observed.

The QAI observed ABF/JV qualified welder Wai Kitlai #2953 performing Carbon Arc Gouging (CAG) for the repair of the deck panel drop-in splice designated as 13E-E2.1. The ABF/JV QC inspector Salvador Merino was observed performing magnetic particle testing (MT) in way of the repair excavations at the following location, Y=1540 Depth 11mm, Width 35mm, Length 230mm

The ABF welder Wai Kitlai 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. Due to the first time repair at these locations approval for repair (RWR) of this weld was not required.

Magnetic Particle Testing (OBG 13E)

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This QA Inspector performed 100% verification Magnetic Particle Testing (MT) of the longitudinal diaphragm stiffener splices at panel point 122.65. This QA observed no rejectable indications at the time of testing. This QA Inspector generated a TL-6028 MT report on this date.

### Ultrasonic Testing (OBG 13E)

This QA performed verification Ultrasonic Testing (UT) on Complete Joint Penetration (CJP) Longitudinal Diaphragm stiffener connections for lift 13E. The welds were previously rejected by the QAI on 08-09-2012, were repaired and have been 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 13E Longitudinal Diaphragm Stiffener Splice (Weld No. 13E-PP122.65-A/B)

The QAI performed a minimum of 10% random verification of this weld. No rejectable indications were observed at the time of inspection.

#### Lift 13E Longitudinal Diaphragm Stiffener Splice (Weld No. 13E-PP122.65-C/D)

The QAI performed a minimum of 10% random verification of this weld. No rejectable indications were observed at the time of inspection.

The QAI performed a minimum of 10% verification and was directed by the QA lead to scan the weld utilizing scanning pattern D only for the detection of indications oriented transverse to the weld axis. Due to contract requirements the weld was ground flush after being previously accepted by ABF QC. No rejectable indications were observed by the QAI at the time of inspection. The weld is a Complete Joint Penetration (CJP) transverse splice at panel point 121.2. The following weld was tested utilizing scanning pattern D only;  
13E-PP121.2

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:

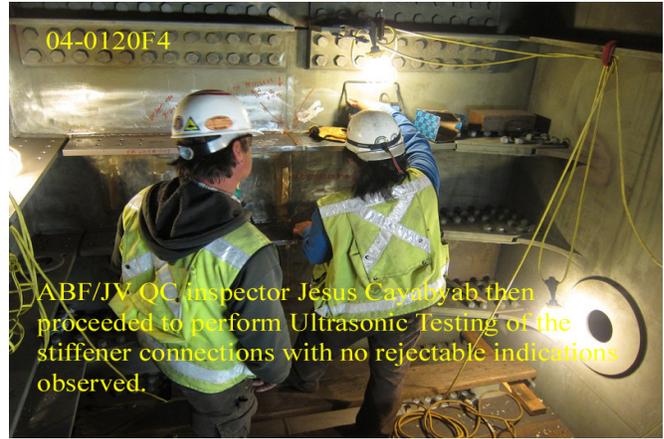
As noted above

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## 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:** Patterson,Rodney

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer