

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-028779**Date Inspected:** 15-Nov-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:** Bernard Docena**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:

The QAI observed ABF/JV welder Eric Sparks #3040 performing Carbon Arc Gouging (CAG) for the repair of the deck access hole splice designated as DAH-12E-PP116.5-E5. The ABF/JV QC inspector Bernard Docena was observed performing magnetic particle testing (MT) in way of the repair excavations at the following locations,

DAH-12E-PP116.5-E5

Y=3110 Depth 13, Width 20mm, Length 90mm

The ABF welder Eric Sparks was observed later in the shift performing Shielded Metal Arc Welding (SMAW) in the 1G 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 induction heaters and maintained throughout the welding process. A post weld heat treatment at this location was of 450°F for one hour was observed at the completion of welding. The repair at this location was performed in accordance with request for repair document RWR201211-023

The QAI witnessed the ABF QC inspector Patrick Swain perform UCI (Ultrasonic Contact Impedance) hardness tests on the base material, theoretical heat affected zone and weld metal on the deck panel drop-in splice between lift 13W and 14W and the deck access hole longitudinal stiffener splice for lift 8E. The hardness measurements

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taken by ABF QC on this date were recorded in Brinell hardness values at 3mm intervals at the following locations.

Lift 13W/14W transverse field splice (Weld No. 13W/14W/A0)

Y=515 Hardness measurements taken prior to fifth time repair.

Y=640 Baseline hardness measurements taken for comparison.

Lift 8E Deck Access Hole Stiffener (Weld No. DAH-8E-PP61.5-E5-LSW)

Y=85 Hardness measurements taken prior to fifth time repair.

Y=170 Baseline hardness measurements taken for comparison.

The QAI, along with QA inspector William Clifford proceeded to take confirmation hardness measurements no less than 3mm adjacent to those taken by ABF QC inspectors.

The average of the hardness values taken by both QC and QA on this date appeared to below the maximum levels provided by the Caltrans Structural Materials Representative (SMR). The SMR was provided a list of the measurements taken on this date for further evaluation.

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

Summary of Conversations:

Conversations relevant to the work being 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.

Inspected By:	Patterson,Rodney	Quality Assurance Inspector
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Reviewed By:	Reyes,Danny	QA Reviewer
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