

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018711**Date Inspected:** 18-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted in Summary**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:** Orthotropic Box Girder**Summary of Items Observed:**

This Quality Assurance Inspector (QAI) was present at the Self Anchored Suspension (SAS) job site. The following items were observed.

The Quality Assurance Inspector (QAI) observed the NDT technicians John Pagliero and Jesse Cayabyab perform ultrasonic testing of the complete joint penetration (CJP) groove weld of field splice 6E/7E –longitudinal stiffener welds and weld repairs. The welds and repairs were scanned utilizing GE USM-35 instruments. The testing was performed in accordance with the approved procedure SE-UT-D1.5-CT-100 Rev.4 and AWS D1.5-2002 in the longitudinal and transverse direction from face A and B. The following indication was marked on the A face of the weld LS-1. Testing of LS-2 was not completed on this date.

Weld LS-1 Indication Y=25mm, D=16mm, with a +10 indication rating.

The QAI performed ultrasonic verification testing of the complete joint penetration (CJP) groove weld 6E/7E –longitudinal stiffener welds LS-3, LS-4, LS-5 and LS-6. The ultrasonic testing (UT) was performed to verify the weld meets the requirements of the contract documents and AWS D1.5-2002. The weld and base metal were scanned utilizing a Krautkramer Branson USN 60 for the following scans. The base metal lamination check was performed with a 1.0" dia. round 2.25 MHz transducer. The shear wave scan was performed with a 0.75" x 0.625" 2.25 MHz transducer on a 70-degree angle wedge from face A. Scanning patterns A, B, C, and E were utilized. The welds examined were found acceptable in accordance with AWS D1.5- 2002 table 6.3 and the contract documents. The QA inspector concurred with the NDT level II technician's assessment. An Ultrasonic Test Report (TL-6027) for the welds that were tested was generated for this date.

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The QAI periodically observed NDT technicians John Pagliero and Jesse Cayabyab performing Magnetic Particle Testing (MT) of the of the complete joint penetration (CJP) groove weld of field splice 6E/7E –longitudinal stiffener welds. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. Mr. Pagliero reported that no relevant indications were observed and the welds were visually acceptable. The QAI performed MT verification on longitudinal stiffeners LS-3, LS-4, LS-5 and LS-6. No relevant indications were observed. See Magnetic Particle Test Report (TL-6028) for details.

Performance Qualification Test Plate

On this date, the QA inspector observed American Bridge welding personnel Rick Clayborn removing the weld reinforcement by grinding to a smooth flush profile of ASTM – A709 485W HPS Procedure Qualification (PQR) test plate designated ABF-PQR-038-3 that was welded using shielded metal arc welding (SMAW) using Lincoln Excalibur E9018-M-H4R electrode. The Smith Emery QC Inspector Michael Johnson reported that the test plate was visually acceptable. Mr. Johnson requested that test plate be released to Construction Materials Testing for Radiographic testing. The actual welding of the test plate was performed on Friday Dec 17 2010 and was witnessed by QAIs Fred Edmondson and Joselito Lizardo. Mr. Lizardo found the completed weld to have underfill in accordance with AWS D1.5 requirements.

The Caltrans QA inspector assigned a Structures Materials Representative (SMR) Lot Number S014-001 as directed by Pat Lowry and the plate will be shipped to Construction Materials Testing for Radiographic testing. Caltrans lot number B31-037-10A was assigned for tracking purposes. See METS TL-6032 for more information.



Summary of Conversations:

General conversations with QC personnel regarding NDT testing locations and schedule.

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:	Lanz,Joe	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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