

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011994**Date Inspected:** 11-Feb-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Mike Johnson, Steve McConnell, CWI at Project	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 1E/2E				

Summary of Items Observed:

QA Inspector noted the Caltrans Structures Representatives Jason Wilcox, Sami Daouk the Quality Assurance (QA) Inspector, Rick Bettencourt was on site at berth 7 between the times noted above. The QA Inspector was on site to perform random inspections of the steel backing bar welding and installation of Orthotropic Box Girder (OBG) 1E/2E. In addition the post arrival inspection of the OBG 4E was completed on this date. The following observations were made:

- 1.) OBG 4E post arrival inspection
- 2.) Complete Joint Penetration (CJP) steel backing bar welding

OBG 4E post arrival inspection

The QA Inspector assisted the Caltrans QA Inspector Mike Foerder and the Caltrans Structures Sami Daouk on the post arrival inspection of the top deck of the above identified OBG. The QA Inspector noted the multiple QC Inspectors from Smith Emery (SE) and Caltrans Structures representatives were on site to perform the pre assigned inspection of various areas of the above identified OBG. The QA Inspector was informed by the QA Inspector Mike Foerder will be performing the visual inspections to determine if any damage had occurred to the OBG during the shipping process. Mr. Foerder, Mr. Daouk and the QA Inspector performed visual inspections of the top deck including the lifting lugs. It was noted no shipping damage other than minor coating damage was noted. Mr. Foerder included all findings from the visual inspection in the OBG 4E post arrival inspection report.

OBG 1E/2E

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Weld Joint 1/E/2E-A

The American Bridge/Fluor (ABF) Welding Quality Control Manager (WQCM) Jim Bowers informed the QA Inspector, ABF welding representatives would be on site performing welding. Mr. Bowers informed the QA Inspector ABF welding representatives would be performing complete joint penetration (CJP) splice welding of the steel backing bar to be installed at the above identified weld joint. Upon the arrival of the QA Inspector it was observed the ABF approved welders identified as Mitch Sittinger and Jordan Hazelaar were on site performing fit tasks of the steel backing bar to splice welded with a CJP groove weld and installed in the above identified groove. The QA Inspector randomly verified the steel backing was ½ x 1-1/2” A709/A36 dual certified material and appeared to be in general compliance with the contract requirements.

The QA Inspector randomly observed the two identified OBG’s “A” face appeared to be approximately 75mm apart. The QA Inspector randomly observed the ABF welding representatives identified above had previously cut and ground bevels in 5 total sections of the 1-1/2” steel backing (pictured below). The QA Inspector noted the steel backing was being fit up in accordance with pre qualified weld joint designated Bu46. The QA Inspector verified a 45° single bevel for a total of 4 CJP weld splices in the steel backing. The QA Inspector randomly observed and noted the Smith Emery Quality Control (QC) representatives Steve McConnell, Mike Johnson and Leonard Cross were on site performing visual testing (VT) of the fit up of steel backing prior to welding.

After the fit up of the steel backing was accepted by the QC Inspectors, the QA Inspector randomly observed the ABF welder Jordan Hazelaar perform shielded metal arc welding (SMAW) root passes in all 4 of the fit up grooves after preheating to 100°F with a rosebud torch (pictured below). The QA Inspector randomly observed the SE QC Inspector Mike Johnson performing preheat verifications utilizing a digital heat gun.

The QA Inspector randomly observed the ABF welders to be utilizing a new box of Lincoln E7018 H4R low hydrogen electrodes. The QA Inspector randomly observed the SE QC Inspector Mike Johnson set the SMAW machine to 125 Amps, which appeared to be in general compliance with ABF-WPS-D1.5-1070 Rev.1. The QA Inspector randomly observed the ABF welders install weld tabs to either side of the joints to perform the CJP groove welds. The QA Inspector randomly observed the ABF welders complete 3 of the 4 steel backing bar splices from the front side of the joint prior to the end of the QA Inspectors shift at 1530. The QA Inspector noted the QA Inspector Danny Reyes arrived on the job site at 1530 to relieve the QA Inspector of the Caltrans QA Inspection duties for the remainder of the contractors shift. The, Thanh Le and Lelit Mature were on site during the above identified welding.



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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 Mohammad Fatemi (916)-813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Bettencourt,Rick	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
