

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 #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012801**Date Inspected:** 24-Mar-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:	Bernie Docena and Jim Cunningham			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:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) and Jeremy Dolman perform CJP groove (splice) welding fill 1st pass on Orthotropic Box Girder (OBG) L1E/L2E plate 'D'. The welders were observed welding in the 4G (overhead) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3040A-4. The welder was using a track mounted welder holder assembly that is remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The splice joint was preheated to greater than 200 degree Fahrenheit prior welding and the vicinity was properly protected from wind. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. The parameter readings taken during welding were 262 amperes, 22.8 volts with travel speed of 180 mm per minute travel speed which are deemed acceptable to contract specifications. The 1st pass that the welder completed was generally good except for two areas that have cluster porosity. As soon as the welder noted the porosity, he stopped welding and informed the QC. QA was informed by QC that he instructed the welder to grind remove the affected areas.

At OBG L2E/L3E plate 'B', QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 perform CJP groove (splice) welding fill pass. The welder was observed manually welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and

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implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3040B-3. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The splice joint was preheated to greater than 150 degree Fahrenheit prior welding. During welding, ABF Quality Control (QC) Jim Cunningham was noted monitoring the welding parameters of the welder. The parameter readings taken during welding were 218 amperes, 22.8 volts which are deemed acceptable to contract specifications.

QAI also randomly observed ABF personnel perform back gouging of backing bar at OBG L2E/L3E plate 'D' using a track mounted Esab plasma arc machine. After completing the gouging of the backing bar, the depth of the groove of the splice butt joint (after the plasma arc gouging) was measured greater than 5.0mm. ABF personnel were noted grinding the gouged groove joint after gouging.



Summary of Conversations:

As stated 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 SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

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Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer