DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1x.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-012856
Date Inspected: 01-Apr-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 1100
OSM Departure Time: 1930
Location: Job Site

CWI Name: Jesus Cayabyab 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.

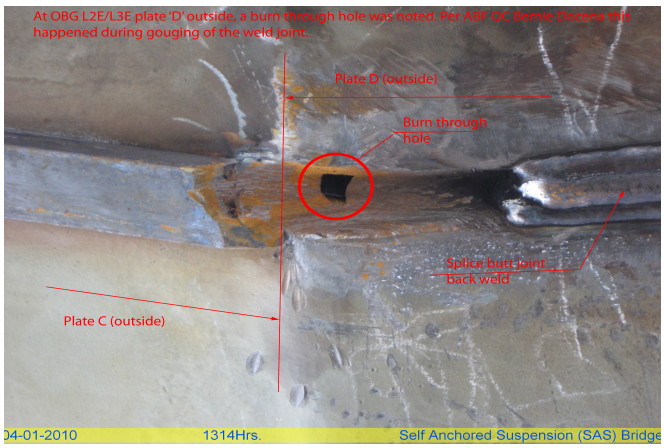
At OBG L2E/L3E plate ‘C1’ (800 to 2700mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 perform CJP groove (splice) welding cover pass. The welder was observed manually welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degree Fahrenheit using electric resistance heating bands prior welding. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. QA performed parameter readings during welding with the following results; 280 amperes, 24.6 volts and 252mm per minute travel speed which are deemed acceptable to contract specifications.

After welding the plate at C1 location, the ABF welders moved to C2 location (7500mm to 10000mm) where ABF welder Mitch Sittinger was noted performing the task. QA observed welder Mitch Sittinger welding the root pass then the fill passes. The welder was welding in the 3G (vertical) position utilizing the same process mentioned above but using the Bug-o track mounted machine. QA noted preheat was increased to >200 degree Fahrenheit due to the increase in plate thickness. Welding parameters measured during the root pass were 270 amperes, 24.0 volts and 190mm per minute travel speed which appear acceptable to contract specifications. At the end of their shift, welding of the splice butt joint at C2 location was not complete but the welders intend to

continue tomorrow.

At OBG L1E/L2E plate C1, QA observed ABF QC Bonifacio Daquinag and Jim Cunningham perform Magnetic Particle Testing (MT) on the back gouged and ground backing bar removal of the splice joint. The QC was noted using a Magnaflux electromagnetic yoke with red magnetic powder as detecting media. Plate C2 of the same OBG location was not MT'd due to still remaining backing bar on some part of plate C2 that needs to be gouged. Another ABF QC was noted performing Ultrasonic Testing (UT) in same OBG but in another plate. QA observed QC Jesse Cayabyab perform UT on the splice butt joint of plate D.

QA also observed ABF welder Rick Clayborn perform tack welding of fitting gear/temporary attachment to OBG L3E/L4E plate C (outside) that will hold the backing bar for the splice butt joint. The welder was welding in 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with E7018H4R, 3.2mm diameter electrode implementing Caltrans approved ABF-WPS-D15-F1200A. ABF QC Bonifacio Daquinag was noted monitoring the welder and its welding parameters. Other ABF activities QA observed include flush grinding of back weld reinforcement at OBG L2E/L3E plate D and transfer and preparation of welding equipment to OBG L2E/L3E plate E.



Summary of Conversations:
As stated above.

WELDING INSPECTION REPORT

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

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer