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

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021330
Date Inspected: 01-Mar-2011

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

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name:	John Pagliero and Steve Jensen			**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 welder Rory Hogan continuing to perform CJP groove (splice) back welding fill pass on Orthotropic Box Girder (OBG) 8W/9W side plate ‘E2’ outside. The welder was observed back 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-D15-3110-4. The welder was using a track mounted welder holder assembly that was remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located on top of the plate prior welding and by moving the blanket to the side of the weld being welded during welding. The vicinity was also properly protected from wind and other climatic conditions. ABF Quality Control (QC) Steve Jensen was noted monitoring the welding parameters of the welder. At the end of the shift, fill pass welding was still continuing and should remain tomorrow.

At OBG 8W-PP70.5-W5-SE deck access hole to top deck plate outside/inside, QA randomly observed ABF/JV qualified welder Jorge Lopez perform CJP repair welding. The welder was noted welding in 1G (flat) position utilizing SMAW with 1/8” diameter E7018H4R electrode implementing Caltrans approved Welding Procedure

Specification (WPS) ABF-WPS-D15-1001 Repair. The first time welding repairs were excavated to a boat shape profile and were tested with Magnetic Particle Testing (MT) prior welding. During welding, ABF QC John Pagliero was noted monitoring the welder and his welding parameters. QA noted parameter during welding was 135 amperes which appears in compliance to the WPS. At the end of the shift, welding repair at the following locations was completed. The locations of the repairs were noted below;

Location	Y-dimension	Length	Width	Depth	Remarks
1.	490mm	90mm	20mm	17mm	Outside-Completed
2.	580mm	90mm	20mm	18mm	Outside- Completed
3.	700mm	90mm	20mm	14mm	Outside- Completed
4.	3110mm	110mm	25mm	18mm	Outside- Completed

At OBG 6E-PP37.5-E5-N deck access hole infill plate to top deck plate inside, QA randomly observed ABF/JV qualified welder Han Wen Yu continuing to perform CJP groove fill pass to cover pass welding. The welder was observed welding in the 4G (overhead) position utilizing SMAW with 1/8” diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1010 Revision 1. The joint being welded has a double V-groove butt joint with open root. ABF Quality Control (QC) Steve Mc Connell was noted monitoring the welding parameters of the welder. At the end of the shift, cover pass welding of the butt joint at location mentioned above was still continuing and should remain tomorrow.

At the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT of the Complete Joint Penetration (CJP) welding of one deck access hole, two deck access hole transverse stiffeners and six lifting lug deck access holes butt joint. The QA verification was performed to verify that the welding and the VT/MT inspection performed by the QC inspector meet the requirements of the contract documents. At the conclusion of the QA verification it appeared that the welds and the QC inspection complied with the contract documents.

1. 8W-PP61.5-W5-SW deck access hole outside – QA VT/MT verified
2. 8W-PP61.5-W5-TS transverse stiffener inside – QA VT/MT verified
3. 8W-PP70.5-W5-TS transverse stiffener inside – QA VT/MT verified
4. 3W-PP25-W3-#2 & #4 lifting lug access holes inside – QA VT verified
5. 3W-PP25-W4-#1 & #3 lifting lug access holes inside – QA VT verified
6. 7W-PP52-E4-#1, #2 & #3 lifting lug access holes inside – QA VT verified

WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation ocurred today.

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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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