

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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-028249**Date Inspected:** 24-Aug-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Scott Kourtum**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**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 13W-PP122.5-W2.8 BF2 drop-in floor beam inside, ABF welder Lin E Yun was observed continuing to perform repair welding. The welder was noted excavating two (2) UT detected defect using carbon air arc gouging then ground smooth the groove of the excavation. ABF QC Scott Kourtum was noted performing the Magnetic Particle Testing (MT) on the defect removal with no relevant defect noted during the test. The first, first time repair was located at Y=120 and was having boat shape excavation profile of 110mm deep x 22mm wide x 10mm deep and the second first time repair was located at Y=265mm and was having excavation profile of 150mm long x 32mm wide x 13mm deep. After the completion of the MT, welder Lin E Yun was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. During the shift, ABF QC Scott Kourtum was noted monitoring the welder with measured working current of 122 amperes on the 3.2mm E7018H4R electrode. During the shift, repair welding at locations mentioned above was completed and the welder has called the same QC to give preliminary UT on the just concluded welding repair. During QC UT, the repair at Y=120mm was rejected whereas the repair at Y=265mm was accepted by ABF QC. The repair which was rejected by same QC was excavated again from the bottom using grinder and after the completion of the excavation ABF QC Scott Kourtum performed MT with no relevant indication noted. The boat shape excavation located at Y=120mm was having new excavation dimensions of 100mm long x 30mm wide x 15mm deep. The welder was noted welding at 4G (overhead) position utilizing the same process and implementing the same procedure. During the shift, the said

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second time welding repair was completed and the welder has moved to another location BW1 of the same floor beam. The welder was noted excavating the UT detected defect using grinder that was located at Y=215mm and having boat shape excavation of 62mm long x 20mm wide x 6mm deep. After its completion ABF QC Scott Kourtum performed the MT on the excavation with no relevant indication noted. The welder performed the 3G (vertical) position using the same process and procedure where he completed the repair at the end of the shift. Listed below are the first time repairs that were noted excavated and welded during the shift;

Y-location	Length	Width	Depth	Remarks
1. 120mm	110mm	22mm	10mm	BF1- completed.
2. 265mm	150mm	32mm	13mm	BF1- completed.
3. 215mm	62mm	20mm	6mm	BW1- completed.

At OBG 13W/14W edge plate 'G' outside, QA randomly observed ABF/JV qualified welder Richard Garcia continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) welded splice butt joint. The welder was observed manually welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. The first time repair excavations ere preheated to more than 225 degree Fahrenheit using propylene gas torch. During the shift, ABF QC Bernie Docena was noted monitoring the welder with measured working current of 128 amperes on the 3.2mm E7018H4R electrode. The welder preheated the repair area to > 325°F using the same torch prior welding. The welder completed the weld repairs mentioned above during the shift and performed the Post Weld Heat Treatment (PWHT) of 450°F and held it for one (1) hour after welding as required. Listed below are the first time repairs that were noted excavated and welded during the shift;

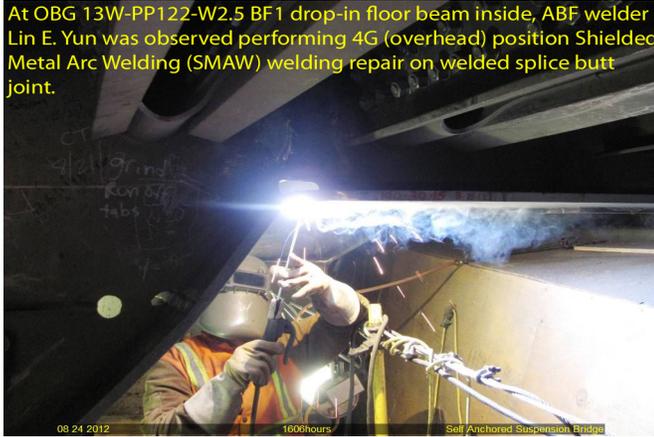
Y-location	Length	Width	Depth	Remarks
1. 570mm	90mm	30mm	12mm	Completed.
2. 680mm	80mm	35mm	12mm	Completed.

At OBG 13W/14W edge plate 'G' outside, QA randomly observed ABF/JV qualified welder Mike Jimenez continuing to perform CJP groove welding repair on a Seismic Performance Critical Member (SPCM) welded splice butt joint. The welder was observed manually welding in the 1G (flat) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1004 Repair. The boat shape repair excavation was located at Y=745mm and was having excavation profile of 60mm long x 12mm wide x 8mm deep. This is being repaired through Caltrans approved Request for Weld Repair (RWR) #201208-077. The second time repair excavation was preheated to more than 225 degree Fahrenheit using Miller Proheat 35 Induction Heating System. During the shift, ABF QC William Sherwood was noted monitoring the welder with measured working current of 125 amperes on the 3.2mm E7018H4R electrode. The welder preheated the repair area to > 325°F using the same heating machine prior welding. After the welding completion, the welder performed the Post Weld Heat Treatment (PWHT) of 450°F using Miller Proheat 35 Induction Heating System and held it for one (1) hour after welding as required.

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At OBG 13W-PP122-W2.5 BF1 drop-in floor beam inside, ABF welder Lin E. Yun was observed performing 4G (overhead) position Shielded Metal Arc Welding (SMAW) welding repair on welded splice butt joint.



At OBG 13W/14W edge plate 'G' outside, ABF-welder Richard Garcia was noted preheating the plates to required temperature of 325 degrees Fahrenheit prior SMAW welding.



Summary of Conversations:

No significant conversation occurred 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