

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: 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-028589**Date Inspected:** 13-Oct-2012**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:** William Sherwood**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 the request of Quality Control Field Supervisor, Bonifacio Daquinag, QA has randomly verified the QC VT/MT on the OBG corner drop-in floor beam splice and plate stiffener butt joints. 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. 12E-PP111.5-E2.1 BW1 – floor beam web splice butt joint weld cover QA verified.
2. 12E-PP111.5-E2.1 BW2 – floor beam web splice butt joint weld cover QA verified.
3. 12E-PP111.5-E2.1 BW3 – floor beam web splice butt joint weld cover QA verified.
4. 12E-PP111.5-E2.1 PS1 – floor beam plate stiffener splice butt joint weld cover QA verified.
5. 12E-PP111.5-E2.1 PS2 – floor beam plate stiffener splice butt joint weld cover QA verified.

At OBG 12E-PP117-E2.1 BW1 and BW2 corner drop-in floor beam web splice inside, QA randomly observed ABF/JV qualified welder James Zhen continuing to perform CJP groove welding second time repair on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder was noted using propylene gas torch to preheat the repair area and its vicinity to >150°F and as soon as the required temperature was attained the welder started performing the welding repair.

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Welder James Zhen was observed manually welding in 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1000 Repair Rev. 2. During welding, ABF QC William Sherwood was noted monitoring the welder's welding parameter with measured working current of 130 amperes on the 3.2mm diameter E7018H4R electrodes. During the shift, repair welding at the location listed below were noted;

Y-location	Length	Width	Depth	Remarks
1. 190mm BW1	80mm	30mm	9mm	R2 – completed.
2. 295mm BW1	80mm	25mm	8mm	R2 – completed.
3. 115mm BW2	80mm	25mm	8mm	R2 – completed.

At OBG 12E-PP116-E2.1 PS2 corner drop-in floor beam plate stiffener splice joint inside, QA randomly observed ABF/JV qualified welder Lou Xiao Hua continuing to perform CJP groove welding second time repair on a non-Seismic Performance Critical Member (SPCM) due to Ultrasonic Testing (UT) detected defect on welded splice butt joint. The welder was noted using propylene gas torch to preheat the repair area and its vicinity to >150°F and as soon as the required temperature was attained the welder started performing the welding repair. Welder James Zhen was observed manually welding in 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 3.2mm diameter E7018H4R electrode implementing Caltrans approved welding procedure ABF-WPS-D15-1000 Repair Rev. 2. During welding, ABF QC William Sherwood was noted monitoring the welder's welding parameter with measured working current of 130 amperes on the 3.2mm diameter E7018H4R electrodes. During the shift, repair welding at the location listed below were noted;

Y-location	Length	Width	Depth	Remarks
1. 15	50mm	25mm	6mm	R2 – completed.

All other welding related activity noted during the shift includes excavation of UT detected defects on welded splice butt joint at 12E-E2.1-C from Y=0mm to Y=1000mm. ABF welder Cris Bruce was noted performing the excavation using carbon air arc gouging. This activity was ongoing until the end of the shift and should remain Monday.

At OBG 12E-PP116-E2.1 PS2 plate stiffener inside, excavation profile of the second time repair was noted 50mm long x 25mm wide x 6mm deep.



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**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 Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Lizardo, Joselito	Quality Assurance Inspector
<b>Reviewed By:</b>	Reyes, Danny	QA Reviewer

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