

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 82.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019224**Date Inspected:** 28-Dec-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Westmont Industries**Location:** Santa Fe Springs, CA.**CWI Name:** Ruben Dominguez**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:** Travelers**Summary of Items Observed:**

The Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding, QC inspection and non-destructive testing of the Travelers.

Upon the arrival of the QA Inspector, the following observations were made:

**Traveler Test Rack**

On this date, the QA Inspector randomly observed WMI production personnel performing fitting, welding and cutting activities on various assemblies for the Traveler Test Rack.

**Trolleys**

On this date, the QA Inspector observed WMI production welder, Mr. Richard Fuentes (WID # 3201) performing Flux Core Arc Welding (FCAW) activities on the Trolley link plates and assemblies. The QA Inspector observed that the welds appeared to be designated as fillet and that Mr. Fuentes appeared to be performing the FCAW in all positions, throughout the shift.

**SAS-EB Traveler****Fixed Stairs Section**

On this date, the QA Inspector performed random Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) welds, for the suspension arm cover plates, Frame Assemblies identified as 10-A237 and 11-B237. Prior to performing the testing, the QA Inspector noted that the weld joint preparation appeared to be designated as a single bevel butt joint, with backing and material thickness appeared to be 10 mm and 12 mm. The QA Inspector also noted that SE QC Inspector Ruben Dominguez had previously performed Ultrasonic Testing (UT) on the welds

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and had found no rejectable indications. Initially, the QA Inspector performed a straight or longitudinal beam scan on the base metal areas, to verify that laminar defects were not present in the base metal area, through which subsequent angle beam inspection will be performed. After performing the straight beam scan, the QA Inspector noted that no laminar defects were present in the base metal. The QA Inspector utilized a GE USN 60 testing instrument and a 25 mm diameter, 2.25 MHz transducer to perform the longitudinal beam scan. The QA Inspector then proceeded to perform the shear wave inspection utilizing the above mentioned testing instrument and a 19 mm x 16 mm square transducer coupled to a 70 degree angle Lucite wedge. The QA Inspector performed the above mentioned testing on a total of 16 welds and found a total of 3 Class A rejectable indications, per AWS D1.1 Table 6.2, in the weld joints designated as # 165, # 183 and # 173. The QA Inspector performed the above mentioned testing in accordance to AWS D1.1 2002 and the applicable procedure, SE-UT-CT-D1.1-104. After the shear wave inspection was complete, the QA Inspector then informed SE QC Inspector Ruben Dominguez, of the testing results. During conversation, the QA Inspector suggested to Mr. Dominguez that he verify that the indications are present, utilizing his personal testing instrument. Mr. Dominguez then agreed that he will verify the rejectable indications are present and the QA Inspector then observed Mr. Dominguez leave the area. After approximately 15 minutes, the QA Inspector observed Mr. Dominguez arriving once again and Mr. Dominguez appeared to have his personal testing instrument present. The QA Inspector then observed Mr. Dominguez utilizing a 70 degree angle, 2.25 MHz transducer, to verify that the rejectable indications are present on the three weld joints. After observing Mr. Dominguez perform the testing, Mr. Dominguez explained that the rejectable indications are indeed present. Mr. Dominguez further explained that the indications were rated as Class A, per AWS D1.1 Table 6.2 and Mr. Dominguez appeared to have located the indications in the identical area and depth of the weld joints, as the QA Inspector had previously marked. Mr. Dominguez then explained that he will notify production lead of the rejectable indications and that weld repairs will be required. Near the end of the shift, the QA Inspector observed production welder Mr. Eutimo Lopez (WID # 3035) backgouging the above mentioned weld joints, utilizing the carbon arc process.

See attached picture below and completed TL6027, for additional details.

## Lower Truss Section

On this date, the QA Inspector performed random Ultrasonic Testing (UT) on the previously tested and accepted Complete Joint Penetration (CJP) welds, for the suspension arm cover plates, Frame Assemblies 12-A240 and 13-B240.

The QA Inspector performed the testing in the same manner as mentioned above and after testing, the QA Inspector found no rejectable indications.

See completed TL6027 for additional details.

## E2/E3-EB Traveler.

On this date, the QA Inspector observed WMI production welder Mr. Juan Jimenez (WID # 3059) continuing to perform Flux Core Arc Welding (FCAW) welding activities on the Frame Assembly identified as 9-A332, per the shop drawings. The QA Inspector observed throughout the shift, that the FCAW was being performed in various positions, on the connector plate and Tube Steel (TS) material fillet and flare groove welds.

On this date, the QA Inspector observed WMI production welder Mr. Eutimo Lopez (WID # 3035) continuing to perform Flux Core Arc Welding (FCAW) welding activities on the Frame Assembly identified as 8-B327, per the

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shop drawings.

The QA Inspector observed throughout the shift, that the FCAW was being performed in various positions, on the connector plate and Tube Steel (TS) material fillet and flare groove welds.

The QA Inspector randomly observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and fitting activities. During random observation, the QA Inspector observed that the applicable WPS's and copies of the shop drawings, appeared to be located near each work station, where the above mentioned welding and fitting activities were being performed. The QA Inspector randomly verified that the consumable material, utilized during the welding appeared to be in compliance with the applicable WPS and that the above mentioned welders were currently qualified for the applicable process and position of welding. The QA Inspector randomly observed QC Inspector Dominguez verifying the in-process welding parameters, including voltage, amperage, pre-heat and travel speed and the parameters appeared to be in compliance to the applicable WPS.



### Summary of Conversations:

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

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<b>Inspected By:</b>	Vance, Sean	Quality Assurance Inspector
<b>Reviewed By:</b>	Edmondson, Fred	QA Reviewer

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