

**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-017489**Date Inspected:** 12-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Westmont Industries**Location:** Santa Fe Springs, CA.**CWI Name:** R. Rodriguez, R. 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 of the Travelers. The QA Inspector arrived on site to randomly observe the WMI Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

**Traveler Test Rack**

The QA Inspector observed WMI production fitter, Mr. Jesse Araya and WID # 3059, Mr. Juan Jimenez performing grinding, dimensional layout and Flux Core Arc Welding (FCAW) activities, for the Traveler Test Rack. The QA Inspector observed that the piece marks were identified as Vertical Post Assemblies 9-D14, 11-C14 and 7-A14, base plate to Tube Steel (TS) material.

Later in the shift, the QA Inspector observed Smith Emery QC Inspector Ruben Dominguez performing Visual and Magnetic Particle Testing (VT/MT), on the above mentioned assemblies. The QA Inspector observed that the testing was being performed on the completed 8mm and 10 mm fillet welds, Tube Steel (TS) to plate material and the welds had cooled to ambient temperature.

The QA Inspector then spoke with QC Inspector Dominguez and Mr. Dominguez explained that he was performing the testing, in accordance to AWS D1.1 2002 and the approved MT Procedure SE-MT-CT.D1.1-105, Rev. # 1. Mr. Dominguez explained that 100 % visual testing and 10 % random MT is being performed. The QA Inspector was later informed by QC Inspector Dominguez that no rejectable indications were found after testing and that an applicable Visual and Magnetic testing report will be completed, per the contract requirements. The QA Inspector observed that the above mentioned testing appeared to be in compliance with the contract

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# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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requirements.

## Trolley Test Stand

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Jose Rodriguez (WID # 3031) performing Gas Metal Arc welding (GMAW) activities, for the Trolley Test Stand. The QA Inspector observed that Mr. Rodriguez was performing the FCAW in the 1G (flat) position and the fit up appeared to be designated as an AWS D1.1 B-U3-GF, Complete Joint Penetration, 30 degree bevel prep angle (60 degree included). The QA Inspector observed that the GMAW was being performed on the piece mark identified as Rail Y flange to flange splice, per the shop drawing # WMI-TTC-4 and that the fit up appeared to have been previously verified, as noted next to the weld joint, by Smith Emery QC Inspector Ruben Dominguez.

## SAS-EB Traveler

### Elevated Truss Section

On this date, the QA Inspector observed Westmont Industries (WMI) production Daniel Grayum (WID # 3049) continuing to perform FCAW and grinding activities on the Traveler Elevated Truss Section Assembly. The QA Inspector observed that the activities were being performed on completed Fillet and Flare Groove welds and were previously marked areas by QC Inspector Ruben Dominguez, during the Visual Testing of the welds. The QA Inspector observed that the marked areas included excessive undercut, underfill, excessive weld spatter and weld profiles which appeared to be not in conformance to the requirements of AWS D1.1 2002, Visual Testing Criteria. The QA Inspector observed that Mr. Grayum continued these activities throughout the shift.

## Fixed Stars Section

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Raymundo Anaya and production fitter, Cesar Canales performing fitting activities for the fabrication of the Fixed Stairs Section Assembly.

The QA Inspector observed Mr. Anaya and Mr. Canales cutting and Flux Core Arc Welding (FCAW) tack welding temporary pieces of angle iron material. The QA Inspector observed that the angle material was being utilized to stabilize and support the frames identified as A237 and B237. The QA Inspector spoke with Mr. Anaya and he explained that this material will be removed, once the Frames are stabilized.

## Frame Assemblies

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Eutimo Lopez (WID # 3035), continuing to perform Flux Core Arc Welding (FCAW) activities for the E2/E3-EB Traveler frames. The QA Inspector observed Mr. Lopez performing the FCAW on previously fit and tack welded Tube Steel (TS) and plate material, for the Frame Assembly identified as B240, per the shop drawings. The QA Inspector observed Mr. Lopez perform the FCAW in various positions and observed that Mr. Lopez was performing the FCAW on the fillet and flare groove welds, throughout the shift.

See attached picture below.

The QA Inspector observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and tacking activities and QC Inspector Dominguez explained that approved Welding Procedure Specifications (WPS's) were being utilized. The QA Inspector randomly observed that the applicable WPS's and copies of the shop drawings, were located near each work station, where the above mentioned FCAW

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# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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and fitting activities were being performed. The QA Inspector randomly verified that the consumable material, utilized during the welding was in compliance to 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.

On this date, the QA Inspector observed Westmont Industries (WMI) production personnel Mr. Tim Hartnett, continuing to cut material which will be utilized, for the Traveler Frame Assemblies. The QA Inspector observed that Mr. Hartnett was continuing to utilize a Marvel® 15 A series horizontal band saw, to perform the cutting operations and observed that the material being cut, is identified as 1.5" x 1.5" x .250" (38 mm x 38 mm x 6 mm) rectangular Tube Steel (TS). The QA Inspector spoke with Mr. Hartnett and he explained that WMI shop supervisor, Mr. George Grayum, had provided a list of TS material, with specific dimensions, per the shop drawing bill of materials. Mr. Hartnett further explained that he was cutting the material to these specific lengths and marking the material with a white paint stick marker, to identify the individual cut pieces of material. After the material was cut and marked, the QA Inspector observed Mr. Hartnett utilize the overhead bay crane, chain and hook to lift and place the material into neatly stacked piles, nearby the cutting area. The QA Inspector noted that the Mill Test Reports (MTR's) had been previously provided and the QA Inspector had previously written "OK to Cut" on the material.



### 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 |
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| <b>Reviewed By:</b> | Edmondson,Fred | QA Reviewer |
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