

**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-017224**Date Inspected:** 24-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1330**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**

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Alberto Cortes (WID # 3141) performing Flux Core Arc Welding (FCAW) activities, for the Traveler Test Rack.

The QA Inspector observed that Mr. Cortes was utilizing a Miller brand machine and wire feeder, to perform the FCAW tacking and that Ultracore 71A85 (.045?) diameter wire was being utilized, for the filler metal.

The QA Inspector observed that the FCAW Tacking and grinding activities were being performed on the vertical support columns and bases. Reference drawing # WMI-TTR-7.

**E2/E3-EB Traveler**

On this Date, the QA Inspector observed Smith Emery QC Inspector Ruben Dominguez performing Magnetic Particle Testing (MT) on the previously completed fillet and Flare Groove welds. The QA Inspector observed that the testing was being performed on the E2/E3-EB Traveler Frame Assembly, identified as A235.

QC Inspector Dominguez explained that he was performing the testing in accordance to the approved MT Procedure SE-MT-CT.D1.1-105, Rev. # 1 and the testing is being performed on 10% of the completed welds. QC Inspector Dominguez explained that he had previously performed Visual Testing on the welds and the welds were previously accepted.

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The QA Inspector was later informed by QC Inspector Dominguez that no rejectable indications were found after testing and that an applicable 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 requirements.

See attached picture below.

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Raymundo Anaya, continuing to perform Flux Core Arc Welding (FCAW) fitting activities, for the Traveler Frames. The QA Inspector observed that Mr. Anaya was currently fitting rectangular and square Tube Steel (TS) material for the Traveler Frame identified as A237, reference shop drawing WMI-SAS-237. The QA Inspector observed that the TS material had been previously cut to length and was identified as diagonal bracing, per the shop drawings.

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) on the Frame Assembly, identified as A237, per the shop drawings.

The QA Inspector observed that Mr. Lopez was utilizing a Miller brand machine and wire feeder, to perform the FCAW and that Ultracore 71A85 (.045?) diameter wire was being utilized, for the filler metal. The QA Inspector observed that Mr. Lopez was currently qualified and continued the FCAW, throughout the shift.

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Larry Swanson, continuing to perform Flux Core Arc Welding (FCAW) fitting, tacking and grinding activities for the Traveler Frames. The QA Inspector observed that Mr. Swanson continued to perform these activities on the backing bars, which will be utilized for the Complete Joint Penetration (CJP) Traveler Frame splices, identified as A240 and B240, reference drawing # WMI-SAS-240.

The QA Inspector observed Mr. Swanson continue to cut and bevel 4 each pieces of backing bar material. After the material was cut and beveled, the QA Inspector observed the pieces of material being placed or fit into the end of the TS material. After the pieces were fit, the QA Inspector then observed Mr. Swanson FCAW tack weld the 4 pieces of material and then remove the tack welded backing bar. The QA Inspector then observed Mr. Swanson FCAW the 4 each ends of the backing bar. After the FCAW was complete, the QA Inspector then observed Mr. Swanson grind flush the 4 each welds and then contour or ?round off? the corners of the backing bar.

The QA Inspector observed the grinding continued until the completed backing bar, achieved a tight fit on the interior of the TS end. The QA Inspector observed that the backing bar material being utilized was A572 Gr. 50 and listed in the same group as the base metal, per the applicable Welding Procedure Specification (WPS) requirements.

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. QC Inspector Dominguez explained that the in-process welding parameters were randomly verified including voltage, amperage, pre-heat and travel speed and explained that the parameters were in compliance to the applicable WPS. The QA Inspector randomly verified these parameters and concurred with QC Inspector Dominguez.

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## Summary of Conversations:

On this date, the QA Inspector was informed by WMI QCM Rick Rodriguez that Smith Emery QC Inspector Ruben Dominguez, will be arriving later in the am. Mr. Rodriguez explained that no welding activities will be performed on the project, until Mr. Dominguez arrives.

At approximately 0630, the QA Inspector observed that Mr. Dominguez had arrived at WMI and observed that no production welding activities had been performed, up until this time.

After arrival of Mr. Dominguez, the QA Inspector was contacted by WMI Quality Control Representative Curt Bell. Mr. Bell explained that due to QC Inspector Dominguez not being present at the start of the shift, that WMI had ?Halted any and all welding during this time? on the project. Mr. Bell explained that it had been too early in the am., to reach Smith Emery contacts. Mr. Bell further explained that this was a relatively minor issue and requested suggestions on how to handle this, if future instances related to this, should arise.

The QA Inspector later suggested to Mr. Bell that if an approved Smith Emery QC Inspector cannot be present at the time of welding, that other activities related to the project, Eg. fitting, cutting, drilling, may be performed. Mr. Bell then explained that he had spoken with QC Inspector Dominguez and ABF QCM Jim Bowers, regarding this instance. Mr. Bell explained that ?We (WMI) will be able to shift workload & have improved contacts to mitigate any possible future issues that arise".

## 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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