

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-020424**Date Inspected:** 31-Jan-2011**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:** 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:**

This 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

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

SAS-EB Traveler

This QA Inspector observed WMI production welder Mr. Charles Newton (WID # 3200) continuing to perform Flux Core Arc Welding (FCAW) activities in various positions on Tube Steel (TS) and connector plate material. This QA Inspector observed that the activities were being performed on what appeared to be the final assembly stage of the Fixed Stairs to Elevated Truss sections of the SAS-EB Traveler.

E2/E3-EB Traveler

This QA Inspector observed WMI production welder Mr. Jose Rodriguez (WID # 3031) continuing to perform Flux Core Arc Welding (FCAW) in various positions on Tube Steel (TS) and connector plate material. This QA Inspector observed that the FCAW was being performed on the frame assemblies identified as A316, A324, A325, A332 and B332, South Side section of the E2/E3-EB Traveler. Additionally, this QA Inspector observed WMI production personnel Mr. Raymundo Anaya (WID # 3196) performing fit up activities on material, for the above mentioned assemblies.

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This QA Inspector observed WMI production welder Mr. Cesar Canales (WID # 3195) performing Flux Core Arc Welding (FCAW) tacking and fitting activities on Tube Steel (TS) and connector plate material. This QA Inspector observed that the activities were being performed on the frame assemblies identified as A323, A316, A317, A314, A312, A327 and B327, North Side section of the E2/E3-EB Traveler.

SAS-WB and E2/E3-WB Traveler

This QA Inspector continued to observe throughout the shift, that 3 WMI production personnel appeared to be cutting Tube Steel and plate material for the SAS and E2/E3 WB Traveler. This QA Inspector observed that a stationary band saw, mechanical shear and automatic flame cutting torches, were being utilized to cut the material.

This QA Inspector randomly observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and fitting activities. During random observation, this 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. This 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. This 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.

This QA Inspector observed that the activities mentioned above, appeared to be in compliance with the contract requirements and this QA Inspector observed no non-conforming issues, on this date.

Summary of Conversations:

This QA Inspector continued conversation with WMI Quality Control (QC) representatives throughout the shift, regarding random issues with the Weekly Weld Report submittals. Regarding the WMI Weekly Weld Reports, this QA Inspector continued to perform courtesy preliminary reviews, prior to WMI formal submittal or re-submittal.

This QA Inspector met with and had general conversation with Smith Emery (SE) QC representatives Mr. Rick Morgan, Mr. Ruben Dominguez and Krautkramer (GE) representative Mr. Randy Jones. During conversation, this QA Inspector and the above mentioned SE representatives presented Mr. Jones with a previously fabricated weld mock up, consisting of a single bevel with backing Complete Joint Penetration (CJP) weld, tee joint. This QA Inspector observed that the mock up appeared to be 5 mm thick Tube Steel (TS) material Flux Core Arc Welded (FCAW) to a 5 mm plate and appeared to have 3 each 1.5 mm diameter holes drilled, in the weld. This QA Inspector observed that the holes appeared to be 2 each side drilled holes in the weld root area, one hole location at the bevel side to backing bar fusion zone and one hole location at the plate to backing bar fusion zone. This QA Inspector observed that the third hole appeared to be located in the weld at the radius corner and appeared to have been drilled perpendicular to the TS material. This QA Inspector noted that the above mentioned mock up had been previously fabricated to potentially qualify a SE Ultrasonic Testing (UT) procedure, applicable to material less than 6 mm thick.

After conversations, this QA Inspector then observed Mr. Jones utilizing a Ultrasonic Testing instrument and several diameters and frequencies of transducers, in an attempt to resolve the above mentioned drilled holes, in the mock up. After testing, Mr. Jones informed this QA Inspector and the above mentioned SE representatives that 2

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transducers which include a 5 MHz frequency, 6 mm diameter and a 10 MHz, 6mm diameter appear to resolve the above mentioned three holes, in the mock up. Mr. Jones further explained to SE representatives that the 2 mentioned transducers could possibly be utilized by Mr. Dominguez to further examine the mock up in the next couple of days and then SE representatives could then decide which of the two transducers, will best fit the applicable UT examination of completed weld joints, for the project.

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.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Edmondson,Fred	QA Reviewer
