

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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027426**Date Inspected:** 11-Apr-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:** As noted below**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:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

Tower 13M Elevation

This QA Inspector randomly observed ABF welder James Zhen (ID 6001) performing the Shielded Metal Arc Welding (SMAW) process in the 1G flat position between the weld access holes of weld #113 at the 13M level of the Tower. Prior to the commencement of welding the pre-heat temperature of 225°F was recorded and verified by QC Inspector Fred Von Hoff who was present to monitor the welding and the parameters and ensure compliance with ABF-WPS-D1.5-1160. Mr. Zhen was observed operating with 4.0mm E7018-H4R electrodes drawing amperage of 165. This QA Inspector verified the temperature of the electrodes and noted the baking oven on site. On a subsequent observation, the welder was observed cleaning the work between passes utilizing a pneumatic chipping tool and compressed air. The welder completed the work at this location and began preparing the set-up operations for weld #125 at 13M on the West side of the East shaft. ABF welding personnel employed a small disc grinder with a wire wheel to clean weld #125 to shiny metal to allow QC to conduct Magnetic Particle (MT) Testing on the root pass of the single bevel partial penetration weld (PJP). This QA Inspector randomly observed Quality Control Inspector Fred Von Hoff perform a MT inspection of the root pass of weld #125 at the 13M level of the Tower. It was noted that Mr. Von Hoff found no rejectable indications. This QA Inspector performed an MT Inspection on 10% of the root of weld #125 at the same location as noted above. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA

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Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications. Upon completion of the testing, ABF welding personnel proceeded to place heat induction blankets over the area to be welded. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location is in progress and appeared to be in general conformance with the contract documents and ABF-WPS-D1.5-4260-1.

Tower 9M Elevation

This QA Inspector made random observations of repair operations on Electroslag Weld (ESW) J below the 9M level of the Tower at 0 – 2150mm. ABF welder Richard Garcia (ID 5892) employed a small disc grinder to smooth and blend surface indications prior to performing SMAW in the 3G vertical position. The welder was observed operating with 3.2mm E7018-H4R electrodes obtained from a baking oven within the general vicinity. Mr. Garcia utilized a chipping hammer to remove the slag from the weld between passes (see photo below) and upon completion of the repair operations, employed a small disc grinder to remove excessive weld reinforcement to bring the repaired area to a flush surface condition. This QA Inspector made subsequent observations of the work at this location to monitor quality and noted that the work was in progress and appeared to be in general conformance with the contract specifications.

Summary of Conversations:

This QA Inspector conducted a turnover concerning the status and operations at the 13m elevation of the Tower with QAI Lead Daniel Reyes.



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: Frey,Doug

Quality Assurance Inspector

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Reviewed By: Levell,Bill

QA Reviewer