

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001422**Date Inspected:** 04-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

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|------------------------------------|--------------|----------------------------------|-----------------|----|
| CWI Name: | Shen Xue Jun | 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: | 89 Meter Mockup | |

Summary of Items Observed:

Caltrans Quality Assurance (QA) Inspector Joe Lanz arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions during second shift. While on site the QA Inspector observed and/or discovered the following.

New Tower Shop

89 Meter Mockup diaphragms, MU58-MA-27:

At the start of the shift, the QA inspector observed ZPMC personnel rotate the 89meter Mockup 180 degrees to allow fit up and tack welding the corner stiffeners piece mark MA-27. The QA inspector observed that the corner stiffeners have a complete joint penetration weld that requires welding prior to fit up in the Mockup. This weld has not been completed at this time. This was brought to the attention of ZPMC QC personnel Mr. Xu Jin, Mr. Ken Zhang and Mr. Shen Xue Jun. This complete joint penetration weld with noncontinuous backing is shown on the approved shop drawing MU58 SA184, but is not shown on ZPMC weld map drawings for the 89 meter Mockup. Mr. Jun reported that the noncontinuous backing bars would be removed after welding was complete.

The QA inspector returned to the 89 meter Mockup at 1230 hours and observed the ZPMC NDT technician, Xue Hai Rang perform ultrasonic testing of Skin A to Skin B and Skin B to Skin C complete joint penetration welds. The ultrasonic testing (UT) was stopped when the QA inspector approached the Mockup and Mr. Rang left the area. Mr. Shen Xue Jun informed the QA inspector that the ultrasonic testing was completed and relevant indications were marked for repair on each weld. The QA inspector noted that the QC NDT personnel did not

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mark the piece marks and the Y and X locations on the pieces tested as required by AWS D1.5-2002 paragraph 6.19.2 and the rejectable indications were not marked as required by AWS D1.5-2002 paragraph 6.19.9. This issue was brought to the attention of Caltrans METS Task Leader Mr. James Cochran. An Incident Report (TL-15) was issued.

Cutting Facility

The QA inspector periodically observed ZPMC personnel cutting 23 meter Mockup diaphragm plates, piece mark P306 and P414. The cutting was performed using automatic oxygen fuel gas equipment. After the cutting was complete the cut edges were ground to remove slag and notches. The work was not completed on this date and appears to meet the minimum requirements of the contract documents. The previously cut plate was stored on wood dunnage and appeared to be properly marked in accordance with contract requirements.

The QA inspector observed that completed floor plates for the orthotropic box girders were stored immediately outside the cutting facility. The floor beams were stored off the ground on wood and were covered with tarps.

See the digital images below for detail.



Summary of Conversations:

Relevant conversations on this date are referenced 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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| Inspected By: | Lanz,Joe | Quality Assurance Inspector |
| Reviewed By: | Cochran,Jim | QA Reviewer |
