

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-001131**Date Inspected:** 03-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** ZPMC- Xu Bing**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:** 114m Lower section Mock-up**Summary of Items Observed:**

On this date, the Caltrans Quality Assurance (QA) representative, John P. Tracy, conducted assessments while on site at Zhenhua Port Machinery Company (ZPMC) for Caltrans Project 04-0120F4-SAS. The following is the detailed review of the following observations:

Bay 1: Submerged Arc Weld (SAW) gantry welder is inactive. The #1 deck mock-up is inactive.

Bay 2 operations: The 77m mock-up has ongoing thermal operations for root and fill passes on plate to plate attachment welds. No welding parameters, Welding Procedure Specification (WPS) data or Certified Welding Inspector (CWI) reports were observed by the Caltrans representative.

89m mock-up has Skin D fit-up and tack welding in process. No joint configurations, welding parameters, WPS data or CWI reports were observed by the Caltrans representative.

89m MUSB-MA29 Cross Brace has had heat straightening operations performed and stiffener components that have been tack welded and have root passes already in place however, the component remains incomplete and inactive.

114m Upper Section mock-up has two separate Critical Weld Repair (CWR) procedures in process. ZPMC worker is mapping out the eight separate rejected Ultrasonic Testing (UT) inspection areas on Plate B to Plate C attachment weld (MUC-MA106 B/C-3B). CWR(CT)035 has been issued and carbon arc gouging operations will begin at a later date. Plate A to B (MUC-MA106 B/C-4B) attachment weld, has four separate rejected Ultrasonic

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Testing (UT) inspection defects which are also awaiting carbon arc gouging for CWR(CT)034.

114m Lower Section mock-up was active with carbon arc gouging and clean-up operations but no Quality Control (QC) or Bureau Veritas (BV) representatives were present when the Caltrans representative initially arrived on site.

Carbon arc gouged excavating, for the two separate CWR procedures, was in process at the same time.

CWR(CT)033 for plate A to B attachment weld had one of the three areas completed. This area appeared to conform to the CWR criteria as observed by the Caltrans representative.

CWR(CT)032 had two areas that were excavated, on weld joint number MUC-MA107 B/C-2B for plate C to D attachment weld, by carbon arc gouging but had not been clean-up. The first excavation was from X+ 0 to 1900mm in length and had significant depth throughout its entire length. The average depth was approximately 55-60mm. The ZPMC worker had taken liberal action with the arc gouging instrument and removed approximately 25-30mm of the plate D wall (base material) from X+ 1200 to 1900mm.

The second area was from X+ 2070 to 2300mm and had significant depth throughout its entire length. The average depth was approximately 55-60mm. The ZPMC worker had taken liberal actions with the arc gouging instrument, for the entire excavation length, and removed approximately 25-30mm of the plate D wall (base material).

There were two non conforming issues that related to the active CWR(CT)032 procedure:

- 1) The ZPMC worker went beyond the excavation depth, for both locations, as specified per the procedure and,
- 2) the ZPMC worker excavated the base material in excess of 6% of the base material thickness, which is 90mm at that location.

The Caltrans representative notified his task leader of the findings who in turn made American Bridge Fabricator (ABF) inspector, Mr. Warren Buehler, aware of the situation. Mr. Warren Buehler met the ZPMC CWI, Xu Bing, and ABF inspectors, Mr. Mike Williams and Mr. Danny McDonald, at the 114m mock-up where they discussed the situation and a remedy for the noted discrepancies.

The Caltrans representative, per his task leader, generated incident report number 000023 to document his account of the situation.

Included below are digital pictures that support the observations recorded within this report.



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## Summary of Conversations:

At the completion of the above stated operations, the ZPMC Certified Welding Inspector, Xu Bing, reported that the parameters followed and their noted results were found to be in accordance with the criteria set forth within the contractual documents.

American Bridge Fabricator inspectors Mr. Warren Buehler, Mr. Mike Williams and Mr. Danny McDonald were all part of the discussions, with Mr. Albert Carreon and the Caltrans representative relating to the excavation issues surrounding CWR(CT)032 on the 114m lower section mock-up.

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Mr. Warren Buehler told ZPMC CWI, Xu Bing, and Li Xiu Yang, in front of this Caltrans representative, that code dictated holding off on further work due to the current issues. Further action is pending.

**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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<b>Inspected By:</b>	Tracy,John	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer

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