

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: 13.9/14.3,0.0/1.6File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000842**Date Inspected:** 11-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 2300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Lefeng & Li Gang**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:** Caltrans Mock-Up**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77M, 89M, 114M and U-Rib Trial Assembly, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

ZPMC Quality Control (QC) Inspector, Mr. Zhang Jiadi Ken informed Caltrans QA Inspector that ZPMC would be welding on Mock-Up 114M, Interior Skin Plate A and grinding backgouge on Skin Plate D in building #2.

Caltrans QA Inspector performed the following observations.

Item Description	WBS	Dwg No.	Status
1 Skin Plate A	NA	NA	Welding in Progress

Mock-Up 114M, Interior Skin Plate A: Caltrans QA Inspector observed flux cored arc welding (FCAW), complete joint penetration (CJP) weld, longitudinal stiffeners (p264-1 & p268-2) joining skin plate A58, fill pass weld in the flat position. The welders are identified as Mr. Bai Wenming, welder stamp 040434 and Mr. Jang Zhou, welder stamp #040261. The welders are using welding procedure specification WPS-B-T-2231-TC-U5-F, Revision 1. Caltrans QA observed ZPMC Quality Control inspector, Mr. Xu Lefeng and Bureau Veritas (BV) inspector, Mr. Li Gang, monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 300 amps, 31.1 volts and 302 millimeters per minute (mm/min) travel speed. Preheat and interpass temperatures were verified during welding activities. The preheat temperature prior to the start of welding measures more than 110 Celsius (230 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. FCAW welding consumable is verified and identified as Supercored 71H, classification E71T-1, diameter 1.4 mm (.055 inches). The welding being performed appeared to be in conformance with contract specifications. The following digital picture illustrates welding in progress.

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- 2 Skin Plate D NA NA Weld Joint Backgouge
- Mock-Up 114M, Interior Skin Plate D; Caltrans QA Inspector was informed by ZPMC QC inspector, Mr. Zhang Jiadi Ken that the weld backgouge, material preparation has been completed at stiffener plate p920-2, joining skin plate A75. Caltrans QA Inspector visual inspection and observed that the backgouged area is ground to bright metal, smooth and free of gouges. The weld joint material preparation appeared to be in conformance with contact specifications. The following digital picture illustrates ground backgouge.



- 3 OBG Closed Rib NA NA Work in Progress
- OBG Closed Rib, Welding Trial Mock-Up: Caltrans QA Inspector observed ZPMC shop personnel performing fixture adjustments to the 1.7 meter long closed rib assembly in Building #1. No welding was performed. Caltrans QA Inspector asked ZPMC inspector, Mr. Zhang Jiadi Ken if he was aware that ZPMC was working on the closed rib assembly. Mr. Zhang Jiadi Ken stated that he was not informed that ZPMC would be working in Building #1 on the closed rib trial assembly. The following digital picture illustrates the 1.7 meter closed rib assembly.

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Summary of Conversations:

As identified within the contents of this report.

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.

Inspected By:	Hasler, Mike	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
