

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-000746**Date Inspected:** 23-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Lee Chan Woo & Sha Zhi**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 Mockup**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fit up, 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.

Item	Description	WBS	Dwg No.	Status
1	Skin Plate C Mock-Up 89M, Skin Plate C (upper/lower): Caltrans QA Inspector observed shop worker performing air carbon arc backgouging at complete joint penetration (CJP) weld joint, joining the upper and lower plate sections, weld number 26, inside side.	NA	NA	Work in Progress
2	Strut Sub-Assemblies Mock-Up 89M, Strut Sub-Assembly: Caltrans QA Inspector observed shielded metal arc welding (SMAW) in progress at welding station, strut plate sub-assemblies SA24-4 to p913-4 and SA24-3 to p913-3 complete joint penetration (CJP), double bevel T-joint weld. The welders are observed welding cover pass weld in the flat position. The welder is identified as Mr. Wang Web, welder stamp 053753 and Mr. Dai Lu, welder stamp 048659. The welders are using welding procedure specification WPS-B-T-3211-TC-U5b, Revision 0. Caltrans QA Inspector observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Xu Le Feng and Bureau Veritas inspector, Mr. Hou Jingo Yao monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 200 amps and 120 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 160 Celsius (320 degree Fahrenheit) but less than 232 Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. SMAW consumable is verified and identified as Excalibur 9018M MR,	NA	NA	Work in Progress

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

classification E9018M-H4R, specification AWS A5.5, and diameter 4.0 mm (.157 inch). Following digital picture illustrates welding in progress in progress.



3 Skin Plate D NA NA Work in Progress

Mock-Up 89M, Skin Plate D: Caltrans QA Inspector observed shielded metal arc welding (SMAW) in progress. The welder is observed welding lifting aids to the assembly, identified as MA22-1, piecemark mp509-1 and mp506-1. The welder is observed applying multi-pass fillet welds in the horizontal position. The welder is identified as Mr. Wang Zhonghua, welder stamp 053753. The welder is using welding procedure specification WPS-B-P-2112, Revision 1. Caltrans QA Inspector observed ZPMC Quality Control (QC) Certified Welding Inspector (CWI) Mr. Xu Le feng and Bureau Veritas inspector, Mr. Li Gang monitoring welding activities at the workstation. Caltrans QA Inspector measured current welding parameters at approximately 200 amps and 110 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. SMAW consumable is verified and identified as TL-508, classification E7018, specification AWS A5.1, and diameter 5.0 mm (.196 inch). Following digital picture illustrates welding in progress.



Summary of Conversations:

As identified within the contents of this report.

Comments

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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
