

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-000735**Date Inspected:** 27-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sha Zhi / Xu Lefeng**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 Mock-Up/Orthotropic Box Girder**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) Inspector Roscoe Dixon 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. While on site the QA Inspector observed and/or discovered the following: The Caltrans Quality Assurance (QA) Inspector Roscoe Dixon was present at the time requested by ZPMC Personnel Mr. Fu Yuong and Mr. Le Xiu Yang to randomly observe welding being performed for the fabrication of the Mock Up.

**89 Meter Mock-Up:**

This QA Inspector randomly observed welding being performed for the fabrication of the Elevation 89 Meter Mock-Up and witnessed ZPMC qualified welder Mr. Lei Lichao ID Number 053619, utilizing the Flux Cored Arc Welding (FCAW) process with approved ZPMC Weld Procedure Specification (WPS) WPS-B-T-2231-B-U3-F, to place two fill passes in weld joint WJ MUSB-MA22A/B-1 between longitudinal plate Face D piece marked mp537-1 to mp537B-1.

This QA Inspector Dixon witnessed the Certified Welding Inspector Mr. Sha Zhi monitoring the welding machine parameters. This QA Inspector also performed a random verification of weld parameters and documented them as follows: Welding Amperage 315, welding voltage 31.3 with a travel speed of 281mm per minute. The Weld parameters appeared to comply with the above-approved ZPMC WPS.

This QA Inspector randomly observed ZPMC qualified welder Mr. Gu Cahong ID Number 053748, utilizing the Submerged Arc Welding (SAW) process to place the fill pass # 13 on side (25) of Complete Joint Penetration

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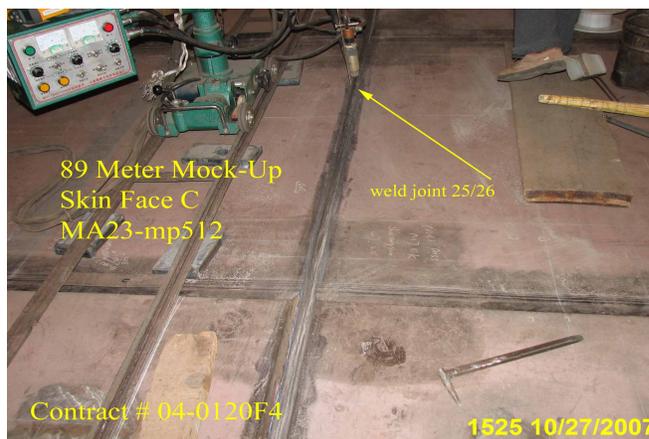
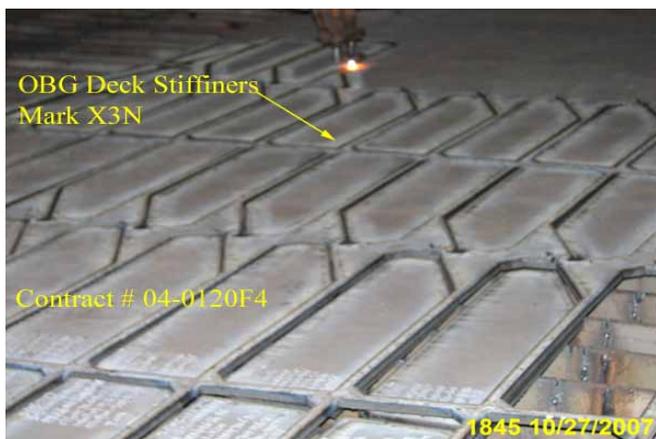
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(CJP) Weld Joint (WJ) Number 25/26 on Skin Plate C, Sub-Assembly MUSB-MA23-mp512.

Mr. Gu Caihong was utilizing ZPMC approved Weld Procedure Specification (WPS) WPS-B-T-2221-B-U3C-S. The QA Inspector observed ZPMC CWI Xu Lefeng monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 638 amps, welding voltage 33.6 volts with a travel speed of 610 millimeters per minute. Weld parameters appeared to comply with the above-approved ZPMC WPS. The attached photograph provides additional detail.

Orthotropic Box Girder (OBG):

This QA Inspector observed the flame cutting of plate material into shapes identified by (ZPMC) QC Personnel Wang Chuang Xin as stiffeners for the OBG deck. The pieces are shown the approved plans for this contract as piece mark X3N.



## Summary of Conversations:

As noted above and basic communication between QC Inspector and QA inspector when and where welding inspections are to be performed.

## 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

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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>	Dixon,Roscoe	Quality Assurance Inspector
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<b>Reviewed By:</b>	Cochran,Jim	QA Reviewer
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