

**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-000635**Date Inspected:** 13-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1300**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shangahi, China**CWI Name:** Zhu Zhong Hai**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 & 114 Meter Mock-up**Summary of Items Observed:**

This Quality Assurance (QA) Inspector observed ZPMC Ultrasonic Technicians Li Li Ming and E Shui Qin performing ultrasonic testing (UT) on the 114 Meter Mock-Up Face "C" Skin Plate Sub-Assembly Lower longitudinal stiffener welds to base plate. UT was being carried out from face C of the weld on complete joint penetration (CJP) welds 5, 8 & 11. The areas tested were a total of 500 millimeters (mm) in length on each weld. UT was also carried out on the 89 Meter Mock-Up on weld face A & B of CJP welds 33 & 35 located between plates mp511-1 to mp512-1 and mp512-1 to mp510-1 of Skin D. The areas tested were a total of 400 mm in length on each weld. All welds tested were found acceptable in conjunction by Li Li Ming who used a 45 degree transducer and E Shui Qin who used a 70 degree transducer. It was further observed that the angle of the transducers are still being calculated by the use of various measurements off of the International Institute Welding (IIW) block instead of using an IIW Block which has the markings for taking direct reading of the transducer angles.

This QA Inspector observed ZPMC welder Han Cheng Hao, welder identification 059464 welding in the flat groove weld position (1G) on the 89 Meter Mock-Up, MUSB MA-38-1 to mp 502-1 of Skin Plate Sub-Assembly Face "E". Welding was being carried out to welding procedure specification (WPS) WPS-B-T-2311-b-P3 using the submerged arc welding process (SAW). The weld number was 15 for the cover passes of the CJP weld. The essential variables were checked by the quality control inspector (QC) and the voltage was found to be 34.6, the amperage 645 and the travel speed 600 mm per minute. Preheat was measured and found to be 166 degrees Celsius (C).

This QA Inspector observed ZPMC welder Han Xiaofeng, welder identification 054467 tack welding in the flat

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groove weld position (1G) on the 89 Meter Mock-Up between plate numbers mp517-1 and mp1114-1.

**Summary of Conversations:**

No significant conversation today.

**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>	Berger, Bruce	Quality Assurance Inspector
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<b>Reviewed By:</b>	Cochran, Jim	QA Reviewer
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