

**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-003793**Date Inspected:** 13-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1430**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Yan Fei / Sun Bo**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:** OBG Sub Assembly**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) Inspector was present during the times noted above for observations relative to the work being performed.

**Bay 3 – New Tower Shop**

This QA Inspector randomly observed ZPMC welding and quality control personnel performing inspection, grinding, and Flux Core Arc Welding (FCAW) repairs of Orthotropic Box Girder (OBG) deck panel Partial Joint Penetration (PJP) welds.

**Visual Testing Before Repair**

This QA Inspector performed an initial visual confirmation of the extent of rejectable indications contained in deck panels designated as DP549-002 and DP559-001. This visual confirmation was performed in conjunction with ABF representative Kevin Chen and ZPMC representative Sun Bo.

**Magnetic Particle Testing**

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the QC MT completed Deck Panel repair. This QA Inspector generated a TL-6028 MT report on this date. The deck panel designation number is follows: DP109-002.

**Bay 2 - New Tower Shop**

This QA Inspector observed ZPMC welding personnel performing carbon arc gouging and grinding, of weld joint starts and stops connecting longitudinal stiffener plates to skin plate East-E. In process work appears to be

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progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector randomly observed ZPMC qualified welding personnel performing groove welding of weld joint ESD1-SA296A/E-8B filler passes. The personnel was observed welding in the 1G (flat) position utilizing a Submerged Arc Welding (SAW) process.

## Bay 1-New Tower Shop

This QA Inspector observed ZMPC welding personnel performing automated, in gantry, Flux Core Arc Welding (FCAW) of weld joints connecting longitudinal stiffener plates to skin plate South-E. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed ZMPC welding personnel performing carbon arc gouging and grinding, of weld joint starts and stops connecting longitudinal stiffener plates to skin plate South-A. In process work appears to be progressing in compliance with Caltrans Engineer Approved welding procedure.

This QA Inspector observed continued Shielded Metal Arc Welding (SMAW) multi-pass tack welding and fit-up of longitudinal stiffener plates to skin plate South-B.

## Bay 8 – OBG Sub Assembly

This QA randomly observed ZPMC welding personnel utilizing the FCAW Process in the 1G position to weld root pass on plate splice ESD1-SA301A/B-2. The QA Inspector randomly observed ZPMC Quality Control (QC) personnel monitoring preheat and weld parameters.

## Bay 7: OBG - Sub Assembly

This QA randomly observed ZPMC welding personnel utilizing the FCAW process in the 1G Position to weld fill pass on flange to web plate on floor beams designated as FB031-001, FB030-001, and FB003-025. The QA Inspector randomly observed ZPMC Quality Control (QC) personnel monitoring preheat and weld parameters.

## Bay 3 - OBG Sub Assembly

This QA randomly observed ZPMC welding personnel utilizing (SMAW) tack welding/fit-up of fillet weld connection of open rib stiffener to various panels SP408-001 and DP725-001 using TL-508 electrode.

## Bay 2 - OBG Sub Assembly

This QA Inspector randomly observed ZPMC personnel performing flame cutting of various 75mm thick plates.

## Tracking and Log Book

This QA Inspector reviewed the contract files and tracking logs for the Magnetic Particle Testing (MT), Ultrasonic Testing (UT), Welding Procedure Specifications (WPS), Procedure Qualification Records (PQR), and QC Inspector records for the deck panel repairs to date.

## Summary of Conversations:

No relevant conversations.

## 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 Ady Velasco, (858) 232-6799, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Clifford,William	Quality Assurance Inspector
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<b>Reviewed By:</b>	Cuellar,Robert	QA Reviewer
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