

**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-003402**Date Inspected:** 20-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** See below**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:** Skin plates**Summary of Items Observed:**

The name of ABF Certified Welding Inspector (CWI) are Mr. Wang Cheng Jun, Mr. Wei Jian Bo, Miss. Xie Yan and Mr. Yang Yi Heng.

Submerged Arc Welding (SAW) process on longitudinal stiffener plate and skin plate (Tower Bay#1 and Bay#2): Caltrans QAI observed ZPMC welding operators performed semi-automatic SAW on the splice weld of ASTM 709 345 longitudinal stiffener plate P287A to P287B with 60mm wall thickness, weld# SSD1-SA159A/F-34A (Bay#1), longitudinal stiffener plate P324A to P324B with 60mm wall thickness, weld# SSD1-SA159A/F-33A (Bay#1), longitudinal stiffener plate P352A to P352B with 65mm wall thickness, weld# ESD1-SA237A/F-23B (Bay#2), longitudinal stiffener plate P324A to P324B with 60mm wall thickness, weld# SSD1-SA237A/F-254A (Bay#2), skin plate P210 to P197 to P212 to P71 to P76 to P70 with 60mm to 90mm wall thickness, weld# SSD1-SA179D/E-22, SSD1-SA179D/E-18, SSD1-SA179D/E-30A, SSD1-SA179D/E-28A, SSD1-SA179D/E-31A, SSD1-SA179E/E-3A, SSD1-SA179E/E-13, SSD1-SA179E/E-2A, SSD1-SA179E/E-11, SSD1-SA179E/E-7 (Bay#1), skin plate P56 to P1269 with 90mm wall thickness, weld# NSD1-SA159D/J-3A (Bay#1), skin plate P68 to P84 to P68 to P1272 to P197 to P21 with 60mm to 70mm wall thickness, weld# SSD1-SA179D/E-20, SSD1-SA179D/E-15, SSD1-SA179D/E-29A, SSD1-SA179D/E-27A, SSD1-SA179D/E-26A, SSD1-SA179E/E-4A, SSD1-SA179E/E-16, SSD1-SA179E/E-1A, SSD1-SA179E/E-9 and SSD1-SA179E/E-5 (Bay#1). The weld designed is a double -V-groove with welding conducted in the in flat position (1G) with proper 4.8mm diameter wire feed electrode JW3 and flux/J1-B, made by China Company and completed with approximate five pass. The parameters used for SAW welding of splice weld was conducted in accordance with Caltrans approved WPS-B-T-2221-B-U3. The semi-automatic SAW was monitored and recorded by ZPMC QC and ABF Certified Welding Inspector (CWI). Based on Caltrans QAI observations, no discrepancies were noted.

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## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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Fit-up and Shield Metal Arc Welding (SMAW) tack welding on splice weld of skin plate (Tower Bay#1): Caltrans QAI observed ZPMC welders in process of fit up on skin plate numbered P503A to P503B with 65mm wall thickness (Bay #1). The skin plate has been connected and secured with the clamps after fit up process was completed and inspected by ZPMC QC inspector and ABF CWI inspector. Numerous 150mm length SMAW tack welds are evenly spaced around the skin plates. The parameters used for the SMAW tacks welding of the skins were conducted in accordance with Caltrans approved WPS. Based on Caltrans QAI observations, no discrepancies were noted

Witness PMT welding test (Bay#1): Caltrans QAI monitored ZPMC welders performed GMAW and SAW welding on three U-ribs of PMT sample for deck panel DP-169-001. Three U- ribs of welding test were accepted visually by ZPMC QC, ABF QA and Caltrans QAI after welding completed. It was then UT and found acceptable by ZPMC NDT technician. Based on Caltrans QAI observations, no discrepancies were noted.

### **Summary of Conversations:**

As Note within the report above.

### **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 Wahbeh Mazen (818)292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Pau,Wai	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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