

**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-002954**Date Inspected:** 13-Jun-2008**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:** 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.

Fit-up and Shield Metal Arc Welding (SMAW) tack welding on splice weld of skin plate (Tower Bay#2): Caltrans QAI observed ZPMC welders in process of fit up on skin plate numbered P838 to P835 to P591 to P600 with 60mm and 90mm wall thickness, all of skin plates have 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 bevel by approved welder. 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.

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 numbered P708 to P223 with 60mm and 70mm wall thickness, weld # ESD1-SA216F/K-6B (Bay#2), skin plate P79 to P83 to P78 to P1271 to P2031 with 60mm to 90mm wall thickness, weld# SSD1-SA180B/E-24B, SSD1-SA180B/E-18, SSD1-SA180B/E-4B, SSD1-SA180B/E-20, SSD1-SA180B/E-15B, SSD1-SA180B/E-6, SSD1-SA180B/E-16B, SSD1-SA180B/E-22 (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.

Flux Cored Arc Welding (FCAW) welding process on longitudinal stiffener plate (Tower Bay#1): Caltrans QAI

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observed welders were performing FCAW process on splice weld of longitudinal stiffener plate numbered P236 to P185 with 60mm wall thickness, weld# SSD1-SA173H/K-3A (Bay#1) and longitudinal stiffener for numbered P190Ato P235 with 60mm wall thickness, weld# SSD1-SA173G/K-22B (Bay#1). The parameters used for FCAW process of splice welds were conducted in accordance with Caltrans approved WPS-B-T-2231-B-U3-F. The electrode being used is super cored 71.H with 0.14mm diameter made by China Company. The FCAW process was monitored and recorded by ZPMC QC Inspector and ABF CWI. Base on Caltrans observation, 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>	Cochran,Jim	QA Reviewer

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