

**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-002272**Date Inspected:** 09-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island

<b>CWI Name:</b>	See below	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
		<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006	<b>Component:</b>	Skin plates	

**Summary of Items Observed:**

CWI Name Wang Cheng Jun, Yang Yi Heng, Xie Yan

Submerged Arc Welding (SAW) process on skin plate (Tower bay#1): Caltrans Quality Assurance Inspector (QAI) observed three Zhenhua Port Machinery Co (ZPMC) welding operators performed semi-automatic SAW on the splice weld of ASTM 709 345 skin plate numbered P1272 to P212 with 60mm wall thickness, weld# SSD1-SA179A/E-4A; skin plate numbered P262 to P263 with 45mm wall thickness, weld# SSD1-SA17A/G-17A; skin plate numbered P327B to P322B with 45mm wall thickness; weld# SSD1-SA159F/J-10B and SSD1-SA159G/J-13B and skin plate numbered P146 to P144 with 100mm wall thickness; weld# SS01-SA173B/K-7. 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 ABF Certified Welding Inspector (CWI) Miss. Xie Yan and Mr. Wei Jiam Bo. Based on Caltrans QAI observations, no discrepancies were noted.

"Push down" Heat straightening on skin plate (Tower bay#1) Caltrans QAI observed few ZPMC heat straightening operators performed heat straightening with ZPMC Heat Straightening Report (HSR) on plate numbered. P222A, P527 and P376. The heating temperature is maximum 650 C (1200 F) and cool in still air. All the plates have been inspected and recorded by ZPMC QC within from 0.5mm to 1mm off set (Caltrans requirement Max 3mm) after heat straightening. Based on Caltrans QAI observation, no discrepancies were noted.

SAW process on skin plate (Tower bay#2): Caltrans QAI observed two ZPMC welding operators performed semi-automatic SAW on the splice weld of ASTM 709 345 skin plate numbered P36 to P91C with 65mm wall thickness; weld# ESD1-SA216J/K-2; ESD1-SA216J/K-10B, ESD1-SA216J/K-5B and ESD1-SA216J/K-4. The

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

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 ABF CWI Mr. Wang Cheng Jun and Mr. Yang Yi Heng 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.

---

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

---