

**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-002841**Date Inspected:** 28-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:** Shanghai, China**CWI Name:** Fu Yu Hong**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:** Tower**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

**Skin A South lift 1**

The QA inspector observed ZPMC performing welding operations with the submerged arc welding (SAW) process using the WPS-BT2221-U3 c-S-1 in the flat (1G) position at the junction of section SSD1-SA-15 and SA-159, weld joint # SSD1-SA-159-A/J 11A skin A. The QA inspector performed welding parameter verification and the QA inspector found that the welding parameters appeared to be in compliance with the contract documents.

Welding operator was Xu Yang and the Certified Welder Inspector was Xu LeFeng.

**Skin E South lift 1**

The QA inspector observed ZPMC performing welding operations with the submerged arc welding (SAW) process using the WPS-BT2221-U3 c-S-1 in the flat (1G) position at the weld joint # SSD1-SA-173-K/K -13B skin E. The QA inspector performed welding parameter verification and the QA inspector found that the welding parameters appeared to be in compliance with the contract documents. Welding operator was Yun Chuan Jin and the Certified Welder Inspector was Le Xu Feng.

**Skin A East lift 1**

The QA inspector observed ZPMC performing welding operations with the submerged arc welding (SAW) process using the WPS-BT2221-U3 c-S-1 in the flat (1G) position at the junction of section ESD1-SA-237- A/F -26A skin A. The QA inspector performed welding parameter verification and the QA inspector found that the

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welding parameters appeared to be in compliance with the contract documents. Welding operator Cao Xiao Hua and the Certified Welder Inspector was ArQing Xiang (07120651).

## Skin A East lift 1

The QA inspector observed ZPMC performing welding operations with the submerged arc welding (SAW) process. Welding operator Xu Xiu Shui was using the WPS-BT2221-U3 c-S-1 in the flat (1G) position at the junction of section ESD1-SA-15- A/F -15A skin A. The QA inspector performed welding parameter verification and the QA inspector found that the interpass temperature exceeded the maximum (230°C) listed on the welding procedure specification (WPS). The QA inspector informed the QC inspector located within close proximity. The QC representative arrived when the QA inspector used a 232 °C crayon temperature indicator and it melted. The QA inspector informed the Certified Welder Inspector Le Xu Feng and ABF representative Chung Keung Chan that the QA inspector was going to recommend that an incident report be written.

## Heat Straightening Operations

The QA inspector observed ZPMC performing heat straightening operations at the Tower Assembly shop # 1. ZPMC was using the internal heat straightening request HSR1(T).2090 on plate p397 and HSR1(T)2030 on p326 (E).

## Beveling Oxyfuel gas cutting

ZPMC was observed performing beveling operation using the oxyfuel cutting process at the plates p18A and p160A.

## Magnetic particle inspection at the end of the weld joint a

The QA inspector performed (MT) at the end of the joint after removing and grinding the run on tabs at the junction of the ESD1-SA-233-A/F-21A East lift 1. The QA inspector found a relevant indication at the end of the joint. The QA inspector had conversation with ZPMC representative Xu Jun . The QA inspector brought it to the attention of ZPMC that it appeared that ZPMC has overlooked an indication that is approximately 8 mm long.



## Summary of Conversations:

As noted 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials

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for your project.

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