

**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-011534**Date Inspected:** 11-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Wang Chuan Qing, Tu Jun**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:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

**BAY 10 SOUTH TOWER LIFT 2 MECHANICAL SUPPORT**

This QA inspector performed random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. The members are identified as Tower Components. The weld designations reviewed are as follows.

ETM-1A/C-30-1, 2  
ETM-1A/C-31-1, 2, 3, 4  
ETM-1A/C-32-1, 2  
ETM-1A/C-33-1, 2, 3, 4  
ETM-1B/C-34-1, 2  
ETM-1B/C-36-1, 2  
ETM-1B/C-37-1, 2  
ETM-1B/C-38-1, 2  
ETM-1B/C-39-1, 2  
ETM-1B/C-41-1, 2

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

---

---

ETM-1C/C-42-1, 2

## BAY 11 TOWER STRUT

This QA inspector performed Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an UT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

WD1-STSA3-2-89M-2-10, 11, 61, 64, 3, 24 A/B GREEN TAG NO. 11702

## BAY 11 EAST TOWER LIFT 4 FIT LUG

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

ESTL4-2H/L-10, 11, 134, 135

ESTL4-2G/L-82

ESTL4-2G/L-83 (MT TRANSVERSE INDICATION OF APPROX 12mm IN LENGTH OBSERVED)

This Quality Assurance (QA) Inspector observed the following work in progress:

## Bay 10

### NORTH TOWER LIFT 4 B/C CORNER SEAM REPAIR

FCAW welding of weld joint 5A/B (Repair) located on NSTL4-3B/L.

Welder is identified as 040261. ZPMC QC is identified as Mr. Li Peng Fei.

The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-REPAIR.

### NORTH TOWER LIFT 4 A/B CORNER SEAM REPAIR

SMAW welding of weld joint 4A/B (Repair) located on NSTL4-3B/L.

Welder is identified as 056200. ZPMC QC is identified as Mr. Li Peng Fei.

The welding variables recorded by QC appeared to comply with WPS-345-SMAW-4G(4F)-REPAIR.

## BAY 11

### EAST TOWER LIFT 5 B/C CORNER SEAM

SMAW welding of weld joint 38B located on ESD1-TL5-2B/F.

Welder is identified as 040669. ZPMC QC is identified as Mr. Liu Dao Feng.

The welding variables recorded by QC appeared to comply with WPS-B-T-3212-Tc-U4b-1.

### WEST TOWER LIFT 5 A/E CORNER SEAM

SMAW welding of weld joint 36B located on ESD1-TL5-2B/F.

---

---

# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

---

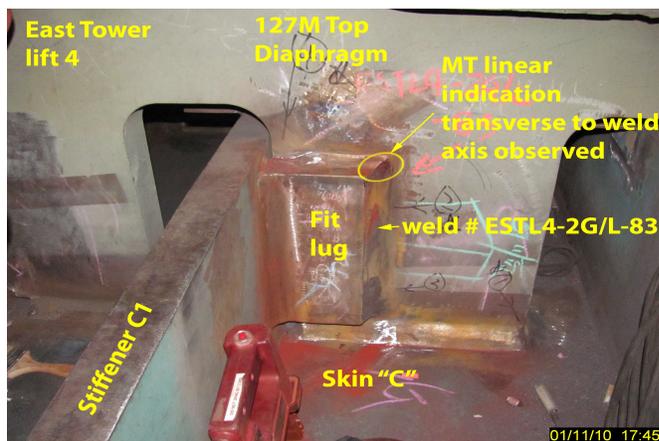
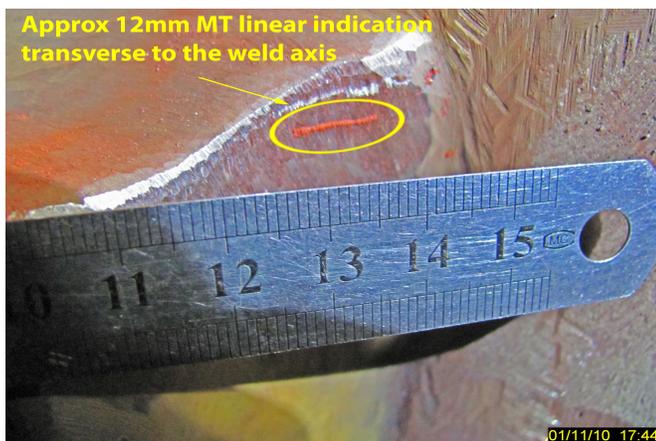
---

Welder is identified as 058009. ZPMC QC is identified as Mr. Liu Dao Feng.

The welding variables recorded by QC appeared to comply with WPS-B-T-3212-Tc-U4b-1.

During the Quality Assurance(QA) Magnetic Particle Testing (MT) review of welds located in East Tower lift 4 fit lug on skin C, ESTL4-2G/L-83, this Quality Assurance (QA) Inspector discovered One (1) linear indication transverse to the weld axis measuring approximately 12mm in length. The weld is identified as: ESTL4-2G/L-83. The Weld is a fillet weld joining the 127M top diaphragm to fit lug near stiffener C1. The member is located in Bay 11. The Notice of Witness Inspection Number (NWIT) is 005045. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform one hundred (100) percent MT inspection of this weld. The attached photographs provide additional detail.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



### Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

### 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 Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

---

**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

**Reviewed By:** Clifford,William

QA Reviewer