

**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-015606**Date Inspected:** 10-Jul-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:** Yang Bai Qiang**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:** OBG**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 # 04, Deck Panel: 13AW-DP3117-001

This QA Inspector performed Phased Array Ultrasonic Testing (PAUT) following the guide lines of UT procedure titled "Phased Array Ultrasonic Testing for the Detection and Sizing of Suspected Planar Discontinuities (Cracks) in PJP Welds, # UT 04-0120F4 PJP Rib Weld" after ZPMC welding personnel performed weld repairs of tacked areas of the Partial Joint Penetration (PJP) welds joining u-ribs to deck plate. The deck panels examined are as follows:

DP3117-001: 8 tack weld locations found compliant and 6 tack weld locations found non-compliant.

Tack weld locations found non-compliant are marked on U-rib and deck plate for ZPMC's reference for repair. See Caltrans U-rib to Deck Panel- Tack Weld Assessment sheets dated 10th July, 2010 for further information on PAUT inspections.

Deck Panel 13CW-DP3148-001

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QA inspector performed conventional Ultrasonic Testing (UT) Inspection of approximately 10% for Lack of Penetration (LOP) on deck panel weld areas previously tested and accepted by ZPMC Quality Control personnel. This QA inspector generated UT report for this date. The members are identified as Deck Panel. The weld designations reviewed are as follows.

DP3148-001-001~008, 011~018, 021~028

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

### BAY 04, DECK PANEL REPAIR

#### 13AE-DP3074-001

During random in process inspection this QA inspector observed that ZPMC personnel were performing repair welding on the Partial Joint Penetration (PJP) weld joints of deck panel 13AE-DP3074-001. Welder is identified as 062265. ZPMC QC is identified as Mr. Zhang Hai Tao. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-FCM-Repair. The repair area details are as follows.

Weld: 001; Y location: 5050, 4450, 10450

Weld: 002; Y location: 9250, 9850, 5650, 4450, 3850, 6850, 7450, 2650

Weld: 003; Y location: 7450

Weld: 004; Y location: 1450, 5050

Weld: 006; Y location: 7450

Weld: 008; Y location: 6850, 5050

#### 13AW-DP3119-001

During random in process inspection this QA inspector observed that ZPMC personnel were performing repair welding on the Partial Joint Penetration (PJP) weld joints of deck panel 13AW-DP3119-001. Welder is identified as 066239. ZPMC QC is identified as Mr. Zhang Hai Tao. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-FCM-Repair. The repair area details are as follows.

Weld: 001; Y location: 10050

Weld: 006; Y location: 9550

Weld: 010; Y location: 11650, 9550

#### 13AW-DP3125-001

During random in process inspection this QA inspector observed that ZPMC personnel were performing repair welding (root pass) on the Partial Joint Penetration (PJP) weld joints of deck panel 13AW-DP3125-001. Welder is identified as 203805. ZPMC QC is identified as Mr. Zhang Hai Tao. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-FCM-Repair. The repair area details are as follows.

Weld: 001; Y location: 7050

Weld: 003; Y location: 1650

Weld: 004; Y location: 2850

Weld: 005; Y location: 10050

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13AE-DP3078-001

During random in process inspection this QA inspector observed that ZPMC personnel were performing repair welding on the Partial Joint Penetration (PJP) weld joints of deck panel 13AE-DP3078-001. Welder is identified as 203805. ZPMC QC is identified as Mr. Zhang Hai Tao. The welding variables recorded by QC appeared to comply with WPS-345-FCAW-2G(2F)-FCM-Repair. The repair area details are as follows.

Weld: 001; Y location: 550, 1750, 2350, 2950, 3550, 6550

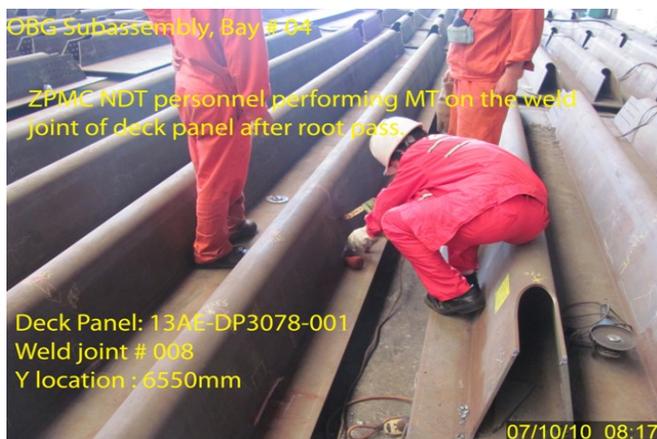
Weld: 007; Y location: 1750, 3550, 4150, 5350, 5950

Weld: 008; Y location: 1750, 5350, 7750

13AE-DP3078-001

This QA inspector observed that ZPMC NDT personnel Mr. Liu Zhang Min performed Magnetic Particle Testing (MT) after root pass on the repair locations of weld joint of above mentioned deck panel.

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 Eric Tsang : 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad,Umesh

Quality Assurance Inspector

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**Reviewed By:** Carreon,Albert

QA Reviewer