

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-009818**Date Inspected:** 20-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: Liu Zhong An
Inspected CWI report: Yes No N/A
Electrode to specification: Yes No N/A
Qualified Welders: Yes No N/A
Approved Drawings: Yes No N/A

CWI Present: Yes No
Rod Oven in Use: Yes No N/A
Weld Procedures Followed: Yes No N/A
Verified Joint Fit-up: Yes No N/A
Approved WPS: Yes No N/A
Delayed / Cancelled: Yes No N/A

Bridge No: 34-0006**Component:** Tower/OBG**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Shrikant Utekar 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

This QA Inspector randomly observed the following work in progress.

NORTH TOWER LIFT # 3

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 040533 performing Flux Cored Arc Welding process for the weld NSTL3-3B/K-84B located on PCMK corner weld between skin A and skin E of North tower lift 3. ZPMC QC Mr. Liu Zhong An monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-345-FCAW-2G (2F) Repair.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 040343 performing Flux Cored Arc Welding process for the weld NSTL3-3B/K-84A located on PCMK corner weld between skin A and skin E of North tower lift 3. ZPMC QC Mr. Liu Zhong An monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-345-FCAW-2G (2F) Repair.

TOWER ASSEMBLY/ JETTY AREA

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This QA Inspector randomly observed the following work in progress.

SOUTH TOWER LIFT # 1

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 052075 performing Flux Core Arc Welding process for the weld joint SSD1-A111B/H-09 located on PCMK South tower lift #1 to base plate. ZPMC QC Mr. Chen Ying Xin monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-2132-TC-P5-F.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 050041 performing Flux Core Arc Welding process for the weld joint SSD1-A111B/H-06 located on PCMK South tower lift #1 to base plate. ZPMC QC Mr. Chen Ying Xin monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-2132-TC-P5-F.

TRIAL ASSEMBLY YARD

This QA Inspector randomly observed the following work in progress.

OBG SEGMENT 1AAW- 1AW

This Quality Assurance (QA) Inspector observed ZPMC qualified welders 054467, 049969 performing Shielded Metal Arc Welding process for the weld joint OBW1A-003(outside) on the excavated areas located on PCMK bottom panel splice weld joint between of OBG segment 1AAW and 1AW. The Y location measured approximately 5760mm and 7160mm from cross beam side. ZPMC QC Mr. Feng Yangjun monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-4G (4F)-FCM Repair-1. The critical weld repair report identified as B-CWR847.

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 048659 performing Shielded Metal Arc Welding process for the weld joint OBW1A-003(inside) on the excavated areas located on PCMK bottom panel splice weld joint between of OBG segment 1AAW and 1AW. The Y location measured approximately 8410 from cross beam side. ZPMC QC Mr. Feng Yangjun monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-1G (1F)-FCM Repair-1. The critical weld repair report identified as B-CWR847.

OBSERVATION

OBG SEGMENT 1AAW-1AW

This QA Inspector checked the status of buttering on the "I" rib at splice weld between OBG segment 1AAW and 1AW. The observation of buttering as below

DECK PANEL

Center section

- Stiffener No 6 and 4 from cross beam side L.D are not welded
- Stiffener No 1, 2 and 3 from cross beam side L.D are welded but not ground

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- Stiffener No 5, 7, 8, 9, 10, 11, 12, and 13 from cross beam side L.D are welded and ground

Cross beam side section

- Stiffener No 1 to 6 and 9 from edge panel are not welded
- Stiffener No 7, 8 and 10, 11, 12, 13 from edge panel are welded but not ground

Counter weight side section

- Stiffener No 3, 12, and 13 from edge panel are not welded
- Stiffener No 1, 2, 4, 5, 6, 9, 10, and 11 from edge panel are welded and ground
- Stiffener No 7 and 8 from edge panel are welded but not ground

SIDE PANEL

Cross beam side

- Stiffeners No 1 and 4 from edge panel are welded but not ground other stiffeners are not welded.

Counter weight side

- Stiffeners No 7 from edge panel is welded but not ground other stiffeners are not welded.

BOTTOM PANEL

- No any stiffener on bottom panel observed welded.

* All above welded (buttering) 'I' rib stiffeners have depth of buttering in the range of approximately 30mm to 50mm and length of buttering measured approximately 700mm.

BAY # 09

MAGNETIC PARTICLE INSPECTION

This Caltrans QA Inspector performed approximately 15% Magnetic Particle Testing verification of OBG Deck panel U rib tack welds after ZPMC initial MT inspection. ZPMC personnel have made repairs of areas found unacceptable. ZPMC has not performed the final MT of the repair areas. This Quality Assurance (QA) Inspector did not generated Magnetic particle Inspection (MT) report for above inspection. No relevant indications were found during this in-process inspection. The Following panels were tested

DP3044-001-001 through 10

DP3059-001-001 through 06

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

Summary of Conversations:

No relevant conversations.

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 13482570045, who represents the Office of Structural Materials for

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your project.

Inspected By: Utekar,Shrikant

Quality Assurance Inspector

Reviewed By: Dawson,Paul

QA Reviewer