

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-013070**Date Inspected:** 08-Apr-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:** Mr. Tian Lei/Mr. Chen xi**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

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

This QA Inspector Randomly observed the following work in progress:

BAY-1 -TRAVELER RAIL (TR)

Flux Cored Arc Welding (FCAW) welding of Repair weld joint 20TR1-022-001. Welder is identified as 216575. ZPMC Quality Control (QC) is identified as Mr. Ai wei. American Bridge/Fluor (AB/F) QA Inspector Mr. Wang wei bin was present at site during this time. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair-1. The Repair welding was been performed against the Welding Repair Report (WRR) No: B-WR11622 Rev No: 0 and ZPMC Ultrasonic Testing (UT) Report No: B787-UT-12174.

FCAW welding of weld joint 20TR2-017-011. Welder is identified as 215397. ZPMC Quality Control (QC) is identified as Mr. Ai wei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-F.

FCAW welding of weld joint 20TR2-046-011. Welder is identified as 059450. ZPMC Quality Control (QC) is

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identified as Mr. Ai wei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-F.

This QA Inspector observed ZPMC Personnel's performing grinding for the TR weld back gouged area. The TR Numbers are review as 20TR1-037~040.

BAY-2-FLOORBEAM (FB)

Submerged Arc Welding (SAW) welding of weld joint FB3189-001-012. Welder is identified as 045270. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

SAW welding of weld joint FB3192-001-009. Welder is identified as 045265. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

SAW welding of weld joint FB3201-001-011. Welder is identified as 045265. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

SAW welding of weld joint FB3237-001-002. Welder is identified as 045270. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

FCAW welding of weld joint FB3212-001-022. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-B-U2a-F-1.

FCAW welding of weld joint FB3212-001-022. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-B-U2a-F-1.

FCAW welding of weld joint FB3176-001-002. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-B-U2a-F-1.

This QA Inspector observed ZPMC Tack welder was performing Tack welding by Shielded Metal Arc Welding (SMAW) process for the FB weld joint FB3200-001-026. The tack welder was identified as 207464. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The tack welding was being performed against the Caltrans Engineer approved Welding Procedure Specification (WPS): WPS-B-P-2112.

BAY# 3.

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No.

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005487.

Magnetic Particle Testing (MT)

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The member is identified as OBG Lift 12 weld Components. Total number of welds MT Tested: 136 No's. The weld designations are review as follows:

- | | |
|-----------------------------|-----------------------------|
| 1. SEG072D-001~006,009,010. | 2. SEG072D-024~029,032,033. |
| 3. SEG068D-001~006,009,010. | 4. SEG068D-024~029,032,033. |
| 5. SEG068D-047~052,055,056. | 6. SEG067D-082~087,003,004. |
| 7. SEG072E-054~059,062,063. | 8. SEG072E-068~073,076,077. |
| 9. CA6501-007~014. | 10. CA6501-021~028. |
| 11. CA3005-035~042. | 12. CA3004-007~014. |
| 13. CA3003-021~028. | 14. CA3003-049~056. |
| 15. CA3002-021~028. | 16. CA3002-035~042. |
| 17. CA3002-049~056. | |

BAY-5-TR

This QA Inspector observed ZPMC welding personnel performing Buttering by FCAW process for 10TR2-001. Welder is identified as 053486. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1283 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Zheng zhi wei and Certified Welding Inspector (CWI) is identified as Mr. Li Jia.

BAY-6-WEST JACKING FRAME (WJF)

SMAW welding of weld joint WJF-0-178 and WJF-0-180. Welders are identified as 053753 and 049769 respectively. ZPMC Quality Control (QC) is identified as Mr. Zhang sheng jun. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-3112-1.

BAY-7-TR

This QA Inspector observed ZPMC welding personnel performing Buttering by FCAW process for 11TR3-007 and 11TR3-009. Welders are identified as 062447 and 048625 respectively. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1100 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Wang jian and Certified Welding Inspector (CWI) is identified as Mr. Huang min.

BAY-8-TR

This QA Inspector observed ZPMC welding personnel performing Buttering by FCAW process for 11TR11-001.

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Welder is identified as 054460. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e. WPS-345-FCAW-1G (1F)-Repair-1. The Buttering welding was been performed against the B-CWR1340 Rev No: 0 and ZPMC Quality Control (QC) is identified as Mr.Zhou cheng jian and Certified Welding Inspector (CWI) is identified as Mr. Sun Bo.

BAY-8-BIKE PATH (BK)

FCAW welding of weld joint BK004A6-061-094 and BK004A6-061-095. Welders are identified as 219414 and 210341 respectively. ZPMC Quality Control (QC) is identified as Mr. Sun yan fei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132.

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 Quality Control (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.

Inspected By:	Prabhu,Surendra	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer
