

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-011478**Date Inspected:** 17-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:** Xu Xian Ping**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 Sub-Assembly**Summary of Items Observed:**

On this day Caltrans OSM Quality Assurance (QA) Inspector Stefan Holmes was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhen Hua Port Machinery Company (ZPMC) at Chang Xing Island in Shanghai, China.

Non-Destructive Testing:

Ultrasonic Testing (UT) pursuant to NDT Inspection Notification Sheet (Document No. 005072):

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 OBG Components. The weld designations reviewed are as follows:

- | | |
|--------------------------|--------------------------|
| 1. 13TB50 WELD 001, 002 | 2. 13TB16 WELD 001, 002 |
| 3. 13TB18 WELD 001, 002 | 4. 13TB57 WELD 001, 002 |
| 5. 13TB78 WELD 001, 002 | 6. 13TB87 WELD 001, 002 |
| 7. 13TB58 WELD 001, 002 | 8. 13TB63 WELD 001, 002 |
| 9. 13TB51 WELD 001, 002 | 10. 13TB13 WELD 001, 002 |
| 11. 13TB38 WELD 001, 002 | |

Magnetic Particle Testing (MT) pursuant to NDT Inspection Notification Sheet (Document No. 005072, 005071 and 005067):

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% 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 OBG Components. The weld designations reviewed are as follows:

- | | |
|--|------------------------------|
| 1. 13TB50 WELD 001 | 2. 13TB16 WELD 001 |
| 3. 13TB18 WELD 001 | 4. 13TB57 WELD 001 |
| 5. 13TB78 WELD 001 | 6. 13TB87 WELD 001 |
| 7. 13TB58 WELD 001 | 8. 13TB63 WELD 001 |
| 9. 13TB51 WELD 001 | 10. 13TB13 WELD 001 |
| 11. 13TB38 WELD 001 | 12. 13TB92 WELD 001 |
| 13. 13TB80 WELD 001 | 14. 13TB96 WELD 001 |
| 15. 13TB73 WELD 001 | 16. 13TB05 WELD 001 |
| 17. 13TB71 WELD 001 | 18. 13TB61 WELD 001 |
| 19. 13TB54 WELD 001 | 20. 13TB40 WELD 001 |
| 21. 13TB84 WELD 001 | 22. 13TB35 WELD 001 |
| 23. 13TB10 WELD 001 | 24. LD3008-001-040, 058, 069 |
| 25. LD3012-001-044, 050, 067, 073, 084 | |
| 26. LD3011-001-044, 050, 056, 072, 078, 079, 084 | |
| 27. DP3032-001-001~006 | |
| 28. DP3062-001-001~006 | |
| 29. DP3045-001-011~020 | |

This QA Inspector performed Green Tagging activities in conformance with the Green Tagging procedure. Items Green Tagged and Green Tag numbers are as follows:

1. DP3032-001; Green Tag No. 11843
2. DP3062-004; Green Tag No. 11844
3. DP3045-003; Green Tag No. 11842

This QA Inspector observed the following work in progress:

Flux Cored Arc Welding (FCAW) of 11TR1-003; Weld 006, 013. Welder is identified as 050316. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of 10TR2-003; Weld 006, 014, 013. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of 10TR2-0014; Weld 005, 007, 010, 014. Welder is identified as 045280. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Flux Cored Arc Welding (FCAW) of 20TR1-007; Weld 001. Welder is identified as 045240. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of 20TR1-014; Weld 003. Welder is identified as 062708. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of 20TR1-015; Weld 001. Welder is identified as 045227. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

Flux Cored Arc Welding (FCAW) of 20TR1-016; Weld 001. Welder is identified as 045227 and 048696. ZPMC Quality Control (QC) is identified as Yang Qing Feng. Weld Procedure Specification (WPS) is identified as WPS-B-T-2231-TC-U5-F. Welding appears to conform to the requirements of the WPS used.

This QA Inspector also observed Magnetic Particle Testing (MT) performed by ZPMC MT Technician Jin Jian Ting of LD3024-001 (side A); 12 Welds tested with MT indications identified as rejects by the ZPMC MT Technician at the following locations:

1. Weld 012; Y=1300; Diam=2mm; PO (porosity)
2. Weld 025; Y=1300; L=3mm; TLI (transverse linear indication)
3. Weld 024; Y=3800; Diam=3mm; PO
4. Weld 007; Y=1000; L=5mm; TLI
5. Weld 004; Y=3750; Diam=3mm; PO

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the 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 Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Holmes,Stefan	Quality Assurance Inspector
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Reviewed By:	Hall,Steven	QA Reviewer
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