

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-007885**Date Inspected:** 08-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**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 and TOWER Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Sandeep Kumar was present during the times noted above for observations relative to the work being performed.

BAY 1

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #142 located on Cross Beam CB201G-013. Welder is identified as 203871. ZPMC QC is identified as Tian Lei. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

FCAW process welding of weld joint #163 located on Cross Beam CB201G-013. Welder is identified as 219189. ZPMC QC is identified as Tian Lei. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

BAY 2**Ultrasonic Testing**

This QA inspector performed 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 member is identified as OBG Component. The weld designations reviewed are as follows:

1. FB012 – 030 – 043

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2. FB010 – 032 – 043
3. FB012 – 031 – 043
4. FB020 – 005 – 126; 127; 021
5. FB024 – 008 – 146

BAY 3

Magnetic Particle Testing

This QA inspector performed 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. FB019 – 008 – 097; 104; 085; 118; 070; 112; 095; 069
2. FB028 – 012 – 126; 127; 120; 121; 130; 133; 141; 129; 093
3. FB003 – 197 – 011; 012; 023; 024
4. FB003 – 092 – 011; 012; 023; 024
5. FB009 – 039 – 011; 012; 003; 046
6. FB010 – 038 – 011; 012; 032; 046
7. FB015 – 041 – 011; 012; 032; 046
8. FB012 – 037 – 021; 022; 013; 014
9. FB010 – 035 – 021; 022; 013; 014
10. FB015 – 044 – 021; 022; 013; 014
11. FB011 – 035 – 011; 012; 003; 046

Ultrasonic Testing

This QA inspector performed 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 member is identified as OBG Component. The weld designations reviewed are as follows:

1. FB028 – 011 – 126; 148
2. FB012 – 036 – 045
3. FB009 – 039 – 045

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #058 located on Floor Beam FB020 –009. Welder is identified as 208035. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

FCAW process welding of weld joint #033 located on CSD5 – PP089. Welder is identified as 044824. ZPMC QC is identified as Zhang Yaxu. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2132 – 3.

FCAW process welding of weld joint #146 located on Floor Beam FB023 – 010. Welder is identified as 044824. ZPMC QC is identified as Yang Qing Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

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Green Tags

The following green tags issued for OBG components after completing the NDT requirements are:

1. FB028 – 012 – Green Tag # 009629
2. FB015 – 044 – Green Tag # 009565
3. FB019 – 008 – Green Tag # 009628
4. FB010 – 035 – Green Tag # 009625
5. FB012 – 037 – Green Tag # 009626

This QA Inspector observed the following work not in compliance:

During random in-process visual inspection on various X37A stiffeners, observed that, single pass fillet welds that exceeded the maximum allowable single pass weld size qualified and noted on WPS # WPS-B-T-2133. The following weld numbers are affected of CA58A – 065. The number of welds affected is approximately eighty welds on forty-four members. The weld sizes have been measured and range between 11mm and 14mm, the maximum qualified single pass weld is 9mm (WPS-B-T-2133). Examples of welds with this condition are as follows: Approximately 14mm single pass weld size at weld number CA58A-065 and weld number CA64A –35 has a single pass fillet weld size measuring approximately 12mm. This does not comply with applicable approved WPS # WPS – B – T – 2133, where the maximum fillet weld size for single pass should be 9mm.

All members were located in Bay 3 at the time of this review.

For Further details please see the incident report: - 040120F4_TL015_B227_07-08-09_Fillet Weld Size.

BAY 5

This QA Inspector observed the following work in progress:

FCAW process welding of weld joint #007 located on Traveler Rail TR1L– PP48. Welder is identified as 205390. ZPMC QC is identified as Xu Hong Min. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4c – F – 1.

FCAW process welding of weld joint #007 located on Traveler Rail TR1E– PP44. Welder is identified as 205390. ZPMC QC is identified as Xu Hong Min. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – Tc – U4c – F – 1.

BAY 6

This QA Inspector observed the following work in progress:

SAW process welding of weld joint #7 – 1A located on ND1 – SA658 – 65M. Welder is identified as 054458. ZPMC QC is identified as Shi Yu. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3221 – TC – U5 – S – 1.

SMAW process welding of weld joint #59 located on WD1 – A305 – 53M – 1. Welder is identified as 068918. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2113.

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SAW process welding of weld joint #3 – 1A located on ND1 – SA658 – 53M. Welder is identified as 054458. ZPMC QC is identified as Shi Yu. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3221 – TC – U5 – S – 1.

SMAW process welding of weld joint #58 located on WD1 – A305 – 53M – 1. Welder is identified as 068918. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2113.

FCAW process welding of weld joint #018 located on Floor Beam FB204 – 023. Welder is identified as 062447. ZPMC QC is identified as Huang Min. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

SMAW process welding of weld joint #15 – 1B located on ND1 – SA – 77M. Welder is identified as 069493. ZPMC QC is identified as Wang Xiao Bing. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

FCAW process welding of weld joint #037 located on Floor Beam FB204 – 024. Welder is identified as 222396. ZPMC QC is identified as Huang Min. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – Tc – U4b – F.

BAY 7

This QA Inspector observed the following work in progress:

FCAW process of weld joint #020 located on Bottom Plate BP3019 – 001. Welder is identified as 048625. ZPMC QC is identified as Shen Jian Guo. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2233 – B – U2 – F.

FCAW process of weld joint #032 located on Side Plate SP3016 – 001. Welder is identified as 220061. ZPMC QC is identified as Zhan Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – U2 – F.

FCAW process of weld joint #028 located on Bottom Plate BP3019 – 001. Welder is identified as 048625. ZPMC QC is identified as Shen Jian Guo. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2233 – B – U2 – F.

Unless otherwise noted, all work observed on this date 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 Eric Tsang - 15000422372, who represents the Office of Structural Materials for your project.

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Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
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Reviewed By:	Prue,Erik	QA Reviewer
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