

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-004926**Date Inspected:** 11-Dec-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name: Wu Ming Kai
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:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

OBG Sub-Assembly Bay 1:

The QA Inspector randomly observed 2 ZPMC magnetic drill operators drilling bolt holes in U-Ribs U-129, 130 and 130 prior to forming.

The QA Inspector randomly observed 4 ZPMC helpers utilizing angle grinders to blend tack welds on Deck Plate 10AW-DP127-001-001 through 008.

The QA Inspector randomly observed ZPMC welders Zhang Li Ping ID 201840/Zhao Cheng Chuang ID 059400, Yuan Feng Chuan ID 059355/Zhang Shao Wei ID 059403 and Wang Xiao Rong ID 059445/Jiang Shuang Chen ID 201788, utilizing the Gas Metal Arc Welding (GMAW) Process in 2G Position on Gantry 2 with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2342-U-1(U-Rib)-4, to weld the U-Ribs to Deck Plate 2BE-DP604-001 Weld Joint (WJ) Numbers 001/002, 005/006 and 009/010. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 371/383 amps, 31.2/31.3 volts (001/002), 378/390 amps, 31.4/30.9 volts (005/006), 364/376 amps, 30.7/31.3 volts with a travel speed of 530 millimeters (mm) per minute. Weld parameters appeared to comply with contract requirements.

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OBG Sub-Assembly Bay 2:

The QA Inspector randomly observed 4 Magnetic Drill Operators drilling bolt holes in OBG connection plates for deck plate I-Ribs.

OBG Sub-Assembly Bay 3:

The QA Inspector randomly observed ZPMC welder ID 203204, utilizing the Shielded Metal Arc Welding (SMAW) Process in 2F Position with ZPMC WPS WPS-B-P-2112, to weld tack weld T-Ribs during fit up to Bottom Plate BP045-001 WJ's 009/010. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Zhao Quan Li ID 046813, utilizing the SMAW Process in 2F Position with ZPMC WPS WPS-B-P-2112-FCM, to weld tack weld T-Ribs during fit up to Bottom Plate BP127-001 WJ's 009/010. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Wu Zhi Bin ID 049804, utilizing the Submerged Arc Welding (SAW) Process in the 1G Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld a butt splice in Bottom Plate Sub-Assembly CB205-001 at WJ SEG2A-037 between piece marks CB3-BP217-2/PL262A-2 and CB3-BP219A-2/PL264A-2-1 at WJ CB205-001-011. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 560 amps, 31.6 volts with a travel speed of 480 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

OBG Sub-Assembly Bay 4:

The QA Inspector randomly observed ZPMC welders ID 054460 and ID 058174, utilizing the Flux Cored Arc Welding (FCAW) Process in 2F Position with ZPMC WPS WPS-B-T-2312-2, to weld I-Beam and Angle Stiffeners to 9M Tower Diaphragms piece marks ND1-A9, SD1-A6 and ED1-A8. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 7:

The QA Inspector randomly observed ZPMC welders ID 066359 and ID 067876, utilizing the FCAW Process in 2F Position ZPMC WPS WPS-B-T-2132-3, to weld I-Stiffeners to Floor Beam Longitudinal Diaphragm Sub-Assembly LD029-001 at WJ's 108/109 respectively. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Yang Yu He ID 057795, utilizing the SMAW Process in 2F Position ZPMC WPS WPS-B-P-2112, to tack weld I-Stiffener piece mark X319J, to Floor Beam Longitudinal Diaphragm Sub-Assembly LD033-001 at WJ 008. The QA Inspector randomly observed ZPMC QC monitoring

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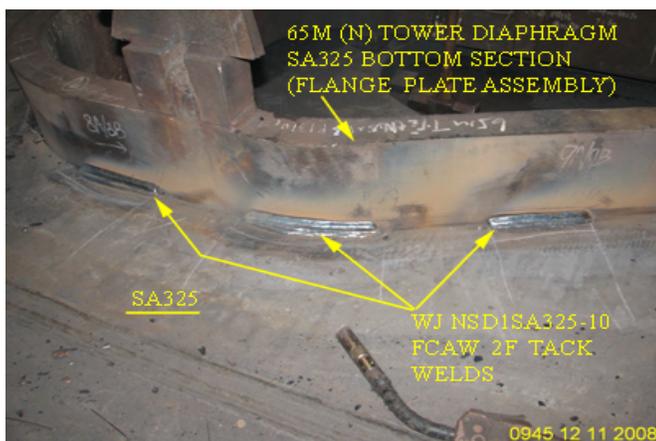
weld parameters. Weld parameters appeared to comply with contract requirements.

OBG Sub-Assembly Bay 8:

The QA Inspector randomly observed ZPMC welder Xia Lian Fang ID 045247, utilizing the SAW Process in the 1G Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld a butt splice in Deck Segment Assembly SEG 1AA "W" Line at WJ SEG2A-037. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 600 amps, 33 volts with a travel speed of 570 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Zhou Dian Qin ID 250050, utilizing the SAW Process in the 1G Position with ZPMC WPS WPS-B-T-2221-B-L2c-S-2, to weld a butt splice in Deck Segment Assembly SEG 2AA "W" Line at WJ SEG2A-039. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 607 amps, 30 volts with a travel speed of 545 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welders Wang Chai Li ID 045203 and Liu Yu Jun ID 202254, utilizing the FCAW Process in 2F Position ZPMC WPS WPS-B-T-4132, to tack weld the Flange Plate Assembly to 65M Bottom Tower Diaphragm NSD1-SA325 at WJ NSD1-SA325-10. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.



Summary of Conversations:

As noted in the above body of this report.

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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 Joshua Ishibashi, 13764710411, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
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Reviewed By:	Wright,Mark	QA Reviewer
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