DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-003447
Date Inspected: 16-Jul-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Shanghai, China

CWI Name:	See Below	**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: Tower & OBG

Summary of Items Observed:

The Caltrans 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 Bay 4:

The QA Inspector randomly observed ZPMC welder Li Shuqiang ID Number 053609, utilizing the Flux Cored Arc Welding (FCAW) Process in the 3G (Vertical Groove) Position with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2233-U3-F, to weld the butt splice between ESD1-SA322 Tower Diaphragm Flange Plate Assembly Sections SA272 and p1082 at at Weld Joint (WJ) Number ESD1-SA322-5A. The QA Inspector randomly observed ZPMC CWI Zhao Chun Sun monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 217 amps, 26.6 volts with a travel speed of 116 millimeters (mm) per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welders Li Mengqian ID Number 054460 and Han Kun ID Number 066751, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-4232, to weld 33 M Bottom Tower Diaphragm Flange Plate Assembly ESD1-SA317 to the Diaphragm at WJ 2. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 310 amps, 31 volts with a travel speed of 300 mm per minute for Mr. Han and 312 amps, 31.1 volts with a travel speed of 301 mm per minute for Mr. Li. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

OBG Bay 7:

The QA Inspector randomly observed ZPMC welder Meng Tao ID Number 068918, utilizing the FCAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-2231-B-U2-F, to weld Flange X75G to Floor Beam Lateral Diaphragm Sub-Assembly LD004-016 (LD4A) at WJ LD004-016-012. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 307 amps, 30.6 volts with a travel speed of 312 mm per minute. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Li Wen Guo ID Number 066261, utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-P-2112, to weld Flange X75F to Floor Beam Lateral Diaphragm Sub-Assembly LD002-001 at WJ LD002-001-011. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welding personnel utilizing the Carbon Air Arc Gouging Process to remove deposited weld metal containing porosity in numerous FCAW 2F welds attaching various stiffeners to Floor Beam Sub-Assembly FB028-001. The QA Inspector randomly observed that many of the gouged areas still contained rejectable porosity at gouged depths up to 3 mm. The QA Inspector randomly observed ZPMC CWI Hu Wei Qing monitoring to work. The attached photographs provide additional detail.

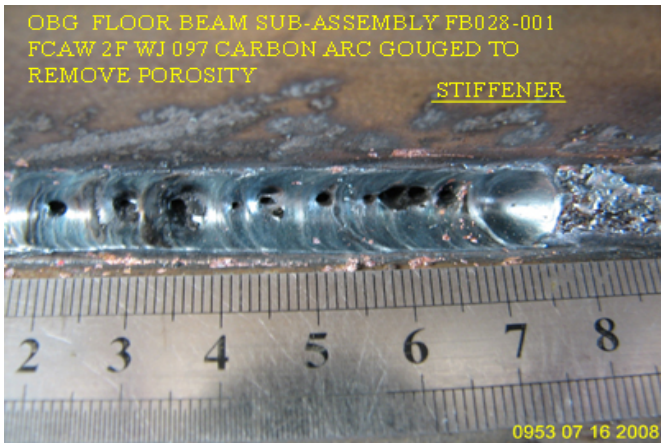
Bay 8:

The QA Inspector randomly observed ZPMC welder Yuan Wei ID Number 066164, utilizing the FCAW Process in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-U3-F, to weld the butt splice between ESD1-SA316 Tower Diaphragm Flange Plate Assembly Sections p426 and p1082 at at WJ Number ESD1-SA316-8B. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 208 amps, 26.8 volts with a travel speed of 119 mm per minute. The weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC personnel utilizing track mounted torch cutting apparatus to cut the bevels on various Tower Diaphragm Flange Plate Assembly Sections.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

As noted in the above body of this report.

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 Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer