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

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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: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017302
Date Inspected: 06-Oct-2010

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

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name: See Below

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ 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: OBG

Summary of Items Observed:
CWI Inspectosr: ZPMC: Mr. Liu Hua Jie, Mr. Shi Lei

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG Segment Trial Assembly

This QA Inspector observed ZPMC welder Ms. Chen Lin Li, stencil 053871 and ZPMC welder Mr. Xu Jian Wen, stencil 040378 used shielded metal arc welding procedure WPS-345-SMAW-4G(4F)-FCM-Repair to make base metal weld repairs on the exterior of OBG segment 10AE side plate where a temporary alignment plate weld had been removed. This QA Inspector measured both welders to have a welding current of approximately 160 amps, the base material was preheated with a torch and both welders appeared to be certified to make these 4G position weld repairs. No ZPMC or ABF QC Inspectors were observed to be in the area where this welding was taking place. This QA went to the interior of the Eastbound OBG where ZPMC CWI Mr. Liu Hua Jie was monitoring other welders. Mr. Liu Hua Jie showed this QA Inspector weld repair report B-CWR1799 that addresses the base material weld repairs. This QA Inspector showed CWI Mr. Liu Hua Jie that the weld repair document requires a CWI to witness the base material weld repairs that were taking place on the exterior of the OBG and Mr. Liu Hua Jie informed this QA Inspector that he was the only CWI that was assigned to the eastbound OBG segments and that he had not been able to monitor the welding on the exterior. Items observed on this date do not appear to

fully comply with applicable contract documents.

Earlier today ZPMC informed Caltrans that OBG segment 10BE to 10CE side plates has a misaligned “T” stiffener and that ZPMC intends to cut completed weld SP631-001-046. This QA Inspector observed ZPMC has issued B-WR15281 to document this work. This QA Inspector witnessed ZPMC using an acetylene torch to cut the top 60% of the weld and then ZPMC used mechanical jacks to align the top surfaces of the “T” ribs. Following ZPMC grinding of the flame cut surfaces ZPMC welder Mr. Zhuang Zhao, stencil 56200 used the shielded metal arc welding process to tack weld the top portion of the cut weld. This QA Inspector measured a welding current of approximately 160 amps, and ZPMC used a torch to preheat the base material prior to welding. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Mr. Yun Qiang, stencil 044504 used shielded metal arc welding procedure WPS-B-T-2213-B-U2-FCM-1 to make OBG segment 11BE to 11CE “T” rib splice weld BP078-001-022. This QA Inspector observed ZPMC CWI Mr. Liu Hua Jie has recorded a welding current of 153 amps. Mr. Yun Qiang appeared to be certified to make these welds, the welding electrodes were stored in a portable rod oven which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Sun Guang Ping, stencil 050289 used shielded metal arc welding procedure WPS-B-P-2213-B-U2-FCM-1 to make “I” rib butt weld SP699-001-035. This weld is located where OBG segment 11AE joins 11BE. This QA Inspector observed a welding current of approximately 160 amps. This QA Inspector observed that Mr. Sun Guang Ping appeared to be certified to perform this welding, the electrodes were stored in a heated portable electrode storage container and a torch was used to preheat the base material prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Xue Fu Tai stencil 500674 used shielded metal arc procedure WPS-B-P-2112-FCM-1 to tack weld temporary alignment plates on the exterior of 10CW and 11CW edge plates in order to secure the counterweight prior to drilling mounting holes. This QA Inspector observed Mr. Xue Fu Tai appeared to be certified to perform this welding and the welding electrodes were stored in a portable rod oven which was warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Zhu Ming Jun, stencil 040609 used flux cored welding procedure WPS-B-T-2132 to make OBG segment 11AW side plate SP663-001 welds -021 through -030 and segment 11BW side plate SP664-001 welds -011 through -020. This QA Inspector measured a welding current of approximately 320 amps, 30.4 volts and Mr. Hu Yacheng appeared to be certified to make this weld. This QA Inspector observed the base material was preheated with a torch prior to welding. Items observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

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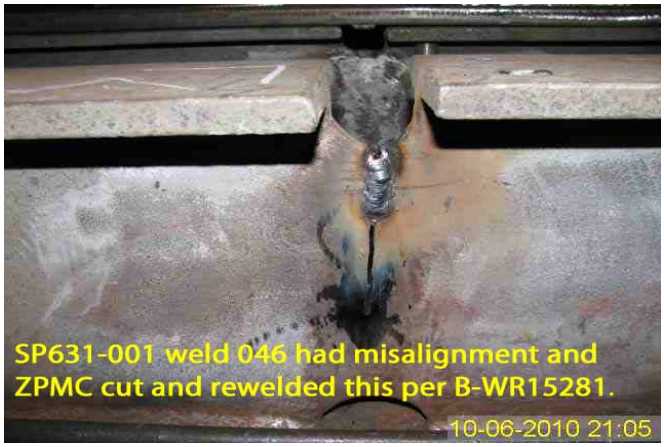

Summary of Conversations:

See Above.

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 phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer