

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-005022**Date Inspected:** 15-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:	Geng Wei, Zhang Bao Wei, Wang			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 Assembly		

Summary of Items Observed:

This report serves to document the events occurring on this date at the following location. Caltrans Quality Assurance (QA) Inspector Robert Vatcher 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. The QA Inspector observed the following:

OBG Assembly Bay I

Welding and placement of the temporary fixture for the new Orthotropic Box Girders (OBG) continues. The stanchions that will support the bottom panels are now in place.

OBG Assembly Bay II

5AE-

Lift Interior-

QA observed multiple locations where grinding is occurring for breaking edges for paint.

Lift Topside- Surveying being conducted.

No Observed Welding Activity

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5BE-

Lift Interior- No Observed Welding Activity

Lift Topside-

QA observed multiple locations where grinding is occurring for breaking edges for paint.

In process fit up of panel point 32 at deck panel DP352-001.

5CE-

Lift Interior- No Observed Welding Activity

Lift Topside-

QA observed that DP353-001 to DP380-001 & DP434-001 to DP461-001 are welded out completely.

QA observed multiple locations where grinding is occurring for breaking edges for paint.

3AE-

Lift Interior-

QA was tasked with performing welding operation monitoring at locations where flange plates are being joined to floor beam flange plates specifically SEG014 SSD17A-PP021-W127. QA observed for this operation the FCAW process utilizing 1.4 mm diameter Supercored 71H E71T-1 electrode wire in DCEP mode. Welder Zhou Jibo 055564, a qualified welding operator was observed as well utilizing a weave bead per the welding procedure specification WPS-B-T-2231-TC-U4B-F. QA observed measured amperage to be 302 (average), voltage at 29.7 and a travel speed of 295 mm per minute utilizing a weave bead method. Preheat was measured at 60.0+ degrees Celsius. ZPMC QC personnel Zhang Xian Ji was available for this evolution to record & document welding parameters.

Lift Topside-

Grinding of stiffener plates for joint cleanliness occurring at DP630A.

3BE-

Lift Interior- No Observed Welding Activity

Lift Topside- No observed welding activity however edge panel assembly CA4A is being set into place and will be fit up for welding in the near future.

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4AE-

Lift Interior- No Observed Welding Activity

Lift Topside- Surveying being conducted.

4BE-

Lift Interior- No Observed Welding Activity

Lift Topside- No Observed Welding Activity

Mid bay-

QA observed the in process joining of SEG030A-0032 side plates SP362A & SP335A by the SAW process. QA observed QC measure welding parameters in accordance with welding procedure specification WPS-B-T-2221-B-L2C-S-2 utilizing non corroded or detritus bearing 4.0 mm diameter H14 electrode wire by qualified welding operator Wang Min 048296. Qualified welding status was verified by the presence of certification card from the welders pocket. Measured amperage at 630.0, Voltage at 32.5, travel speed at 500 millimeters per minute. Preheat was measured at 60.0 degrees Celsius. Flux was reclaimed and strained through a large rare earth magnet and immediately reused. QA performed a cursory visual examination of the previously joined area prior to further depositing of weld metal. ZPMC QC personnel Wang Jie was present for this welding evolution. The above mentioned items as observed and documented by QA appears to be in conformance with the contract documents. Wang Jie mentioned that this will be the only Mid Bay welding operation for the day shift.

5CW-

Lift Interior- No Observed Welding Activity due to 3AW being moved this shift

Lift Topside- No Observed Welding Activity

5BW-

Lift Interior- No Observed Welding Activity due to 3AW being moved this shift

Lift Topside- No Observed Welding Activity

5AW-

Lift Interior- No Observed Welding Activity due to 3AW being moved this shift

Lift Topside- No Observed Welding Activity

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4BW-

Lift Interior- No Observed Welding Activity due to 3AW being moved this shift

Lift Topside- No Observed Welding Activity

4AW-

Lift Interior- No Observed Welding Activity due to 3AW being moved this shift

Lift Topside- No Observed Welding Activity

3BW-

Lift Interior- No Observed Welding Activity due to 3AW being moved this shift

Lift Topside- No Observed Welding Activity

3AW-

Lift Interior-

QA performed a preliminary walk through of the segment prior to movement outside of the OBG Assembly location. QA observed that there are multiple items that need addressing prior to painting operations etc. Specifically there are remaining ultrasonic testing indications found by ZPMC QC personnel that require repairing as well as multiple locations where temporary attachments were that require removal, grinding and magnetic Particle testing (MT). QA spoke with Peter Shaw of AB/ F who mentioned that same items of interest and as well already has a lift available for ZPMC personnel to utilize to increase quality production in order to finish this lift completely.

Lift Topside-

This lift was moved just prior to 1200 hrs. The process took up the entire morning due to temporary attachment weld removal to the permanent fixture that the lift sits on. Still there are remaining items that need to be addressed prior to blasting and painting as mentioned above.

North Sub-Assembly Area (Outside of OBG)

No observed joining operations

Summary of Conversations:

No relevant conversations this date.

Comments

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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 Peter Dautermann, who represents the Office of Structural Materials for your project.

Inspected By:	Vatcher,Robert	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
