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

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-001412
Date Inspected: 30-Jan-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: 900
OSM Departure Time: 1630
Location: Shanghai, China

CWI Name: See Below
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 and OBG Fabrication

Summary of Items Observed:

Caltrans 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. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) and Tower Mock Up:

CWI Inspector: Hu We Ching

The QA Inspector observed three ZPMC welders using welding procedure specification WPS-B-T-2132-3 using the flux cored welding process for completing six OBG side plate SP054 stiffener fillet welds at the same time. ZPMC has multiple flux cored welding process manipulators attached to a movable gantry that runs on a track along the length of the stiffener plates. The QA Inspector observed a welding travel speed of approximately 455 mm per hour. As the welding commences, each of the welders is responsible for two of the flux cored welding heads. All welders are using 1.4 mm diameter E71T-1 rolls of electrodes that have been marked as being installed earlier today. The QA Inspector observed all six welding machines have a shielding gas flow between 18 and 21 liters per hour as required by the WPS. Welder Mr. Dong Jinbao stencil 49775 completed weld SP054-01-026 with a welding current of approximately 290 amps and 31.7 volts and weld SP054-01-025 with a welding current of approximately 285 amps and 30.9 volts. Welder Mr. Xin Meng stencil 53742 completed weld SP054-01-022 with a welding current of approximately 305 amps and 30.9 volts and weld SP054-01-021 with a welding current of approximately 315 amps and 30.2 volts. Welder Mr. Shi Yan Hao stencil 53604 completed weld SP054-01-018

with a welding current of approximately 315 amps and 30.0 volts and weld SP054-01-017 with a welding current of approximately 315 amps and 30.0 volts. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed KFM QC Magnetic Particle Inspector Mr. Cai Xinxin performing magnetic particle inspection of floor beam sub assembly weld FB013-04-028 and FB013-04-041. Mr. Xinxin informed the QA Inspector that he has marked an area in weld FB013-04-028 that needs to be ground and the welds are not MT acceptable.

Summary of Conversations:

See above for summary of 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Cochran,Jim	QA Reviewer