

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 #: 04-0120F4Cty: 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-012410**Date Inspected:** 04-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **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:** OBG and Tower**Summary of Items Observed:**

CWI Inspectors: Mr. Du Zhi Qun, Mr. Wu Zhi Cheng and Mr. Lv Li Qing

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 Bays 1 through 9

This QA Inspector observed no ZPMC personnel were working on Caltrans OBG segments or tower assemblies in OBG Bays 1 through 9.

Tower Bay 10

This QA Inspector observed ZPMC welder Ms. Dong Yumei stencil 054069 is using flux cored welding procedure WPS-345-FCAW-2G(2F)-Repair to add weld material and extend the length of East tower shear plate ED1-27A in accordance with weld repair document TWR3074. This QA Inspector observed a welding current of approximately 300 amps and 31.0 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel are monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

This QA Inspector observed ZPMC welder Ms. Bu Xuezhen stencil 052075 is using flux cored welding procedure WPS-345-FCAW-3G(3F)-Repair to add weld material and extend the length of East tower shear plate WD1-A28 in accordance with weld repair document TWR-3081. This QA Inspector observed a welding current of approximately 230 amps and 26.0 volts. This QA Inspector observed ZPMC has electrical heating elements to maintain the base material temperature and ZPMC QC personnel are monitoring the interpass temperature to ensure the base material is an acceptable temperature. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

This QA Inspector observed ZPMC welder Ms. Ye Xulan, stencil 040581 has recently used shielded metal arc welding procedure WPS-B-P2114 to make North tower lift 4 ladder attachment plate to skin plate stiffener weld NSD1-FCSA4-1A/C-32, 34 and 36. This QA Inspector observed ZPMC CWI Mr. Du Zhi Qun has recorded a welding current of 154 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. Later in the shift this QA Inspector observed Mr. Ye Xulan using shielded metal arc welding procedure WPS-345-FCAW-2G(2F)-Repair to add weld material to the exterior corner of North tower lift 4 skin plate B to skin plate C. This QA Inspector observed ZPMC personnel are using a torch to preheat the base material prior to welding and ZPMC CWI Mr. Du Zhi Qun is monitoring the skin plate preheat temperatures. This QA Inspector observed a welding current of approximately 160 amps and that the welding electrodes are being stored in a heated electrode storage container that is connected to an electric power supply. ZPMC welder Ms. Ye Xulan appears to be certified to make these welds. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.

Tower Bay 11

This QA Inspector observed no ZPMC personnel were working on Caltrans OBG segments or tower assemblies in Tower Bay 11.

OBG BAY 13

This QA Inspector observed no ZPMC personnel appear to be welding on Caltrans OBG segments. Near the front of OBG Bay 13 one ZPMC worker was using a torch to remove temporary attachment plates from the bottom of OBG segment 11AE. See the photograph below for additional information.

OBG BAY 14

This QA Inspector observed ZPMC welder Mr. Wang Wei, stencil 205097 and ZPMC welder Mr. Jiang Shi Zhen, stencil 048694 have recently used using shielded metal arc welding process to tack weld various temporary braces to OBG segment 12CW near panel point 117. This QA Inspector observed ZPMC QC Inspectors Mr. Li Jie and Mr. Chi Gao Wu are monitoring this welding. This QA Inspector observed Mr. Wang Wei and Mr. Jiang Shi Zhen are both certified to make these welds and the shielded metal arc welding electrodes are being stored in electrically heated electrode storage containers which are warm to the touch. Items observed on this date appeared to generally comply with applicable contract documents.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

OBG BAY 15

This QA Inspector observed three ZPMC workers are grinding various welds in cross beam CB6.

This QA Inspector observed ZPMC welder Mr. Hu Yanming, stencil 062092 is using shielded metal arc procedure WPS-345-SMAW-2G(2F)-Repair- to make repair welds to various stiffener hold back welds at the end of cross beam CB5. This QA Inspector observed the welding electrodes are being stored in a portable rod oven which is connected to an electric power cable. This QA Inspector observed the base material appears to have been preheated with a torch prior to commencement of welding. This QA Inspector measured a welding current of approximately 1805 amps and Mr. Hu Yanming appears to be certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents. See the photograph below for additional information.



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