

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-006381**Date Inspected:** 16-Apr-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1845**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 645**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Liu Yang, Li Lin, Guo Yan Fei	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 Components	

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 10:

SMAW tack welding of weld joint NSD1-FESA-1A/D-23 located on PCMK north tower, lift 3, skin E. Welders were identified as 040324 and 205524. ZPMC QC was identified as Liu Yang (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Shi Jing Wei, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-P-2312-B-Tc-P5.

Bay 11

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 11:

SAW welding of weld joint WSD1-FESA3-2A/D-20, 21, 21B, 17B-1, 17B-2 located on PCMK west tower, lift 3, skin E. Welder was identified as 056975. ZPMC QC was identified as Li Lin (QC2). Also at this location and appearing to be monitoring the welding were ABF Representatives Xie Yan and You Yuan Mao. The welding variables recorded by QC2 and his assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2 for the CJP welds and WPS-B-T-2221-B-P3-S-2 for the PJP welds.

SAW welding of weld joint WSD1-FESA3-2A/D-11, 15, 8B-2, 12B located on PCMK west tower, lift 3, skin E. Welder was identified as 047304. ZPMC QC was identified as QC2. Also at this location and appearing to be

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

monitoring the welding were ABF Representatives Xie Yan and You Yuan Mao. The welding variables recorded by QC2 and his assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2 for the CJP welds and WPS-B-T-2221-B-P3-S-2 for the PJP welds.

Bay 9 - PMT

This QA Inspector, George Goulet, monitored OBG Production Monitoring Test (PMT) #1 for deck panels DP134-001 and DP508-001 at Gantry #2. Prior to PMT #1, the magnetic particle test (MT) of the tack welds was noted on the test panel as having been performed by ZPMC MT Inspector Sun Gong Chang. The visual inspection of tack welds and root gap was performed by ABF Representative Lv Yun (ABF), ZPMC CWI Guo Yan Fei (QC3), and this QA Inspector, George Goulet. The start time for welding of PMT #1 was approximately 0023 hours on Friday, 4/17/09 and the finish time was approximately 0053 hours. This QA Inspector, George Goulet, randomly verified and documented the welding amperage, voltage and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) processes, welds 1 thru 6 at the completion of both the GMAW root pass and SAW cover pass. The welds were visually inspected by ABF, QC3 and this QA inspector, George Goulet. QC3 and ABF informed this QA Inspector, George Goulet, that all six welds were acceptable and this QA Inspector, George Goulet, concurred. This QA Inspector, George Goulet, randomly witnessed ZPMC ultrasonic testing (UT) inspector, identified as Xue Hai Rong, perform UT on each of the 500 mm test welds for depth of penetration and conformance. This QA Inspector, George Goulet, selected fifteen designated locations for macroetch sampling per contract requirements. Each macroetch location was stamped by ZPMC personnel with the number 134, the letter B, and an individual macroetch identifying number for each macroetch. After removal from each of the weld test specimens and polishing of the selected end, the macroetches were evaluated with a 7X optical comparator and a 10X optical comparator and accepted by QC3, ABF, and this QA Inspector, George Goulet.

All fifteen sample macros appeared to meet requirements and were noted to appear acceptable. See Caltrans U-ribs PMT Inspection Sheet, ZPMC production monitoring test plate inspection report, and Caltrans Macro Etch Log - all dated 4/17/2008 for additional information.

Summary of Conversations:

As noted above, and this QA Inspector, George Goulet, asked each QC if all the welding variables observed by him appeared to comply with the appropriate WPS, including the preheat requirements according to thickness of the thickest member being welded. Each QC showed this QA Inspector, George Goulet, that he was carrying the proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all he observed did appear to comply.

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, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
