

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-014032**Date Inspected:** 12-May-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:** Tower and OBG Components**Summary of Items Observed:**

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

Bay 10

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

FCAW welding of weld joint WD1-A22A/B-75 located on PCMK west tower, connection plate to base shear plate assembly, face B2. Welder was identified as 054069. QC was identified as ZPMC CWI Li Lin (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

FCAW welding of weld joint WD1-A22A/B-21 located on PCMK west tower, connection plate to base shear plate assembly, face B2. Welder was identified as 040533. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

FCAW welding of weld joint WD1-A22A/B-25 located on PCMK west tower, connection plate to base shear plate assembly, face B2. Welder was identified as 057180. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

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FCAW welding of weld joint ND1-A24A/B-26 located on PCMK north tower, base shear plate assembly, face A2. Welder was identified as 052075. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

FCAW welding of weld joint ND1-A24A/B-25 located on PCMK north tower, base shear plate assembly, face A2. Welder was identified as 053869. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

FCAW layered repair welding of part number WD1-A2-1 located on PCMK west tower, outside diaphragm. Welder was identified as 053870. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-345-FCAW-2G(2F)-repair.

FCAW layered repair welding of part number WD1-A2-2 located on PCMK west tower, outside diaphragm. Welder was identified as 053116. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-345-FCAW-2G(2F)-repair.

SMAW welding of weld joint SSD1-TL5-1B-F-2A located on PCMK south tower, lift 5. Welder was identified as 500373. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-3213-B-U3b.

Bay 11

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

FCAW welding of weld joint WD1-A25B/E-27 located on PCMK west tower, base shear plate assembly. Welder was identified as 040704. QC was identified as ZPMC CWI Li Lin (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhao Mao Mao, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

FCAW welding of weld joint WD1-A25B/E-23 located on PCMK west tower, base shear plate assembly. Welder was identified as 040609. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhao Mao Mao, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

FCAW welding of weld joint WD1-A25B/E-14 located on PCMK west tower, base shear plate assembly. Welder was identified as 040736. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhao Mao Mao, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

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FCAW welding of weld joint WD1-A25B/E-7 located on PCMK west tower, base shear plate assembly. Welder was identified as 042218. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Zhao Mao Mao, who was not a CWI. The welding variables recorded by QC1's assistant appeared to comply with WPS-B-T-2331-TC-P4-F.

Bay 9 – PMT

This QA Inspector, accompanied by QA Inspector Albert Carreon and QA Inspector Daniel Barrentine, arrived at Bay 9 at 2350 hours to monitor the OBG Production Monitoring Test (PMT) for OBG 13AW deck panels DP3119-001 and DP3120-001 at Gantry #1. Prior to the start of the PMT, this QA Inspector observed the root openings to be within the 0.0 to 0.5mm tolerance. The magnetic particle test (MT) of the tack welds was noted on the test panel as having been performed by ZPMC MT Inspector Gun Yunwu on 5/12/10. The visual inspection of tack welds and root gaps was performed by ABF Representative Cao Hai Zhou (ABF), ZPMC CWI Chen Shigang (PQC), and this QA Inspector. The tack welds and root gaps appeared to be within prescribed tolerances. This QA Inspector observed that the deck plate of the test panel was approximately 20mm thick and the U-ribs were approximately 12mm thick. This QA Inspector observed that the test panel was generally representative of the production panels. The ambient temperature was approximately 20°C. ZPMC personnel used an oxy-fuel torch to preheat the specimens to above 60°C as required by WPS-B-T-2342-U1-(U-rib)-5. The start time for welding of the 3–12mm x 20mm specimens was approximately 0022 hours on 5/12/10 and the finish time was approximately 6 seconds after the start. Apparently, GMAW welding machine #6 was not operating properly and ZPMC chose to abort the test. After attempting to contact a technician to repair the machine, ABF and PQC informed this QA Inspector that the PMT for this day was cancelled.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

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

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Dawson,Paul	QA Reviewer
