

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-007199**Date Inspected:** 07-Jun-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:** Shi Wei Song, Yu Dong Ping**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 (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Trial Assembly Area

This QA Inspector, George Goulet, randomly observed the following in segments 4AE/4BE:

Two ZPMC workers were changing the turn-of-nut marks on the 4AE/4BE deck panel U-rib lap plate ASTM A325 bolt sets by lightening the original marks with a solvent, then drawing in a more radially perfect mark than the original somewhat angled mark. This QA Inspector, George Goulet, advised ZPMC QC Shen Jian Bo (QC) that even though the original marks were not as perfectly drawn as in the Caltrans-approved SFOBB Project HS Bolt Installation and Inspection Plan, it is better that we work with those original marks. The ASTM A325 bolt sets had already been final tightened, and changing the marks for clarity might also affect the accuracy. QC informed this QA Inspector, George Goulet, that he understood the importance of accuracy and agreed not to allow any more changing off marks after final tightening. This QA Inspector, George Goulet, reviewed the previously changed marks and determined that the original marks had not been altered in a way as to affect the accuracy of the turn-of-nut specification.

ZPMC workers removed ASTM A325 bolt sets from 4AE/4BE deck panel U-rib lap plate #'s 72, 75, and 78. Then, ZPMC workers placed a shim in one end only of each as follows: #'s 72 east end, 75 east end, and 78 west end. QC informed this QA Inspector, George Goulet, that the old bolt sets would not be used again and new bolts would be installed.

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ZPMC workers rotated nuts in 4AE/4BE deck panel U-rib lap plates at various locations that had been marked as insufficient rotation. Each bolt set then appeared to comply with the turn-of-nut final tightening specification of 180° to 210°.

ZPMC workers performed what appeared to be final tightening ASTM A325 bolt sets on side plate t-rib stiffener flanges adjacent to panel point 28 north using a hydraulic bolt tightening wrench as follows: Hydra Electric Pump, Model MP582-11, Serial number PW090331002 and Hydra HY.Wrench, Model 2XLCT-36mm, Serial number Y090520001. The workers appeared to be tightening the nuts to the turn-of-nut specification of 180° to 210° and in a pattern from the center of the plate (at the rib seam) outward to the ends of the plate.

None of the above work was finished at the end of the work shift.

Bay 10

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

SAW welding of weld joint NSD1-FDSA4-3A/C-11B located on PCMK north tower, lift 4, skin D. Welder was identified as 207745. ZPMC QC was identified as CWI Shi Weisong (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Lu Wei Chao, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2.

Bay 11

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

SAW welding of weld joints WSD1-FESA4-4A/F-18B located on PCMK west tower, lift 4, skin B. Welder was identified as 041716. ZPMC QC was identified as CWI Yu Dong Ping (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Zhao Mao Mao, who was not a CWI. The welding variables recorded by QC2 and QC2's assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2.

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

Summary of Conversations:

As noted above, and this QA Inspector, George Goulet, asked each QC if all the welding variables observed by QC 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 QC was carrying the proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all QC 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 Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials for your project.

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