

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-007580**Date Inspected:** 10-Jun-2009**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:** Xu Le Feng, Shi Wei Song**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 the OBG trial assembly area:

Segment 4AW/4BW

This QA Inspector, George Goulet, proceeded to this segment in response to Bolting Inspection Notification Sheet #00017 to observe final tension verification of ASTM A325 bolt sets at the lower chevron connections at panel points 24~28. Upon arriving, sandblasting work was beginning without protective curtains between panel points 23~24 and 28~29. The bolting crew left the area after informing this QA Inspector, George Goulet, that the final tightening verification was cancelled.

At panel point 27, ZPMC workers were performing turn of the nut tightening of ASTM A325 bolt sets at the lower chevron south inner connection 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°. The workers left the area shortly after the sandblasting began.

Segment 3BE

ZPMC workers were removing the nuts and turning the washers over of ASTM A325 bolt sets so that flatter of the

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two sides of the washers were against the steel member being bolted.

Bay 11

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

SAW welding of weld joints ESD1-FDSA4-2A/D-21A, 22A located on PCMK east tower, lift 4, skin D. Welder was identified as 041716. ZPMC QC was identified as CWI Xu Le Feng (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Ma Qian Li, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-4221-B-U3c-S-3.

SAW welding of weld joints ESD1-FCSA4-2A/C-86A, 85A, 84A located on PCMK east tower, lift 4, skin C. Welder was identified as 040634. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Ma Qian Li, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-4221-B-U3c-S-3.

Bay 10

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

SAW welding of weld joint NSD1-A166C/J-257B located on the bottom third on PCMK north tower shaft, lift 1, skins E to A. Welder was identified as 040460. ZPMC QC was identified as CWI Shi Wei Song (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also at this location and appearing to be monitoring the welding operations was ABF Representative Li Nan.

SAW welding of weld joint NSD1-A166C/J-257B located on the middle third on PCMK north tower shaft, lift 1, skins E to A. Welder was identified as 201750. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also at this location and appearing to be monitoring the welding operations was ABF Representative Li Nan.

SAW welding of weld joint NSD1-A166C/J-73A located on the middle third on PCMK north tower shaft, lift 1, skins E to A. Welder was identified as 209051. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also at this location and appearing to be monitoring the welding operations was ABF Representative Li Nan.

SAW welding of weld joint NSD1-A166C/J-73A located on the top third on PCMK north tower shaft, lift 1, skins E to A. Welder was identified as 040489. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2221-C-U2b-S-2. Also at this location and appearing to be monitoring the welding operations was ABF Representative Li Nan.

FCAW welding of weld joint NSD1-166E/J-73A located on the top third on PCMK north tower shaft, lift 1, skins E to A. Welders were identified as 040261, 052075. ZPMC QC was identified as QC2. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-T-2231-Tc-P5-F. Also at this location and appearing to be monitoring the welding operations was ABF Representative Li Nan.

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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 |
| Reviewed By: | Carreon, Albert | QA Reviewer |
