

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-007193**Date Inspected:** 30-May-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:** Wan Wen Zhong, Li Ming**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 trial assembly area:

ZPMC workers were performing installation of ASTM A325 bolt sets in the two rows of south side plate flange connections at OBG sections 4BW between PP21 and PP22. ZPMC workers were performing installation of ASTM A325 bolt sets in the one row of south side plate flange connections at OBG sections 4BW between PP20 and PP21. The metal containers containing the bolt sets were marked as follows: ASTM A325 – M22 x 65; Lot #'s MJ201Z, MJ501Z, C0271Z; Set # DHGM220021.

No ZPMC workers were performing any other bolting work. ASTM A325 bolt sets had been installed in many connections between panel point 24 and panel point 28 in sections 4AE and 4BE, but many were missing and the condition was undetermined. Also, many bolts installed were less than flush with the outer face of the nuts. Many of the connections near the end plates at the deck plates and side plates exhibited gaps between faying surfaces from less than 1 mm to more than 3 mm and some had metal shavings between the faying surfaces.

Bay 10

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

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SAW welding of weld joints SSD1-FESA4-1A/F-23B, 22, 18B located on PCMK south tower, lift 4, skin E. ZPMC QC was identified as CWI Wan Wen Zhong (QC1). Welder was identified as 209051. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Hao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2 for the CJP welds and WPS-B-T-2321-B-P3-S-2 for the PJP weld. Also at this location and appearing to be monitoring the welding was ABF Representative Ma Zhen Yi.

SAW welding of weld joints SSD1-FESA4-1A/F-17, 14B, 13, 9B(2) located on PCMK south tower, lift 4, skin E. ZPMC QC was identified as QC1. Welder was identified as 209106. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Hao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2 for the CJP welds and WPS-B-T-2321-B-P3-S-2 for the PJP weld. Also at this location and appearing to be monitoring the welding was ABF Representative Ma Zhen Yi.

SAW welding of weld joints NSD1-FBSA4-1A/C-30A, 15A, 26, 32 located on PCMK north tower, lift 4, skin B. ZPMC QC was identified as QC1. Welder was identified as 209051. The welding variables recorded by QC1 appeared to comply with WPS-B-T-2221-B-U3c-S-2 for the CJP welds and WPS-B-T-2321-B-P3-S-2 for the PJP weld. Also at this location and appearing to be monitoring the welding was ABF Representative Ma Zhen Yi.

SMAW tack welding of weld joints SSD1-FESA4-1A/F-9A, 7 located on PCMK south tower, lift 4, skin E. ZPMC QC was identified as QC1. Welder was identified as 040324. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Wang Hao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-P-2311-B-P3 and WPS-B-P-2221-B-U3b. Also at this location and appearing to be monitoring the welding was ABF.

FCAW welding of weld joint NSD1-112B/H-2B located on PCMK north tower shaft, lift 1, skins C to D. Welders were identified as 040261, 053869. ZPMC QC was identified as Li Ming (QC2). Assisting QC2 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yang Ming Ming, who was not a CWI. The welding variables recorded by QC2 and his assistant appeared to comply with WPS-B-T-2231-C-U2-F. Also at this location and appearing to be monitoring the welding was ABF.

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 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. 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 Eric Tsang, 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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