

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-000912**Date Inspected:** 23-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Ye Yong Jun, Li Xin Yang**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:** 77 meter Tower mock up**Summary of Items Observed:**

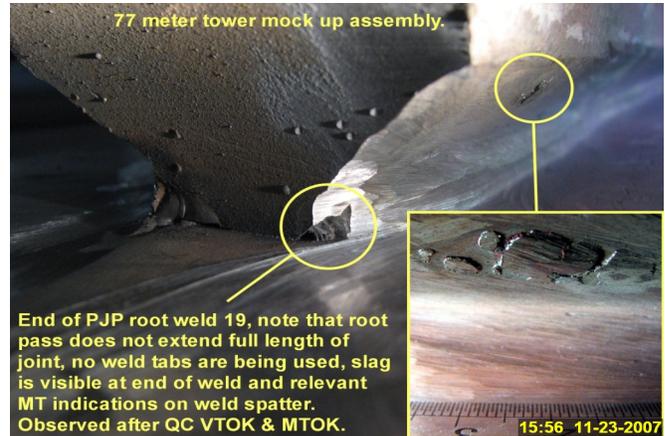
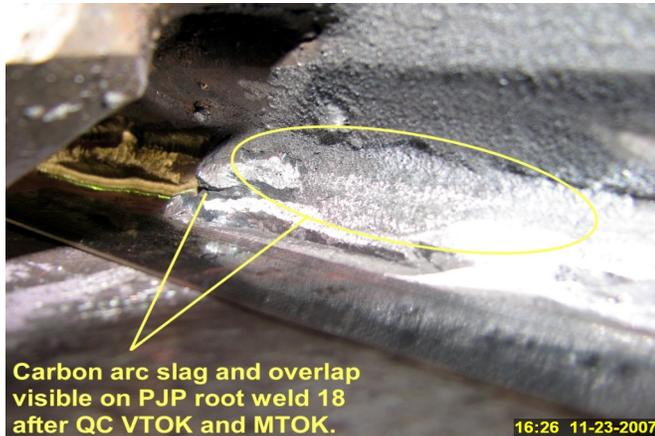
The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

The QA inspector Scott Croff witnessed ZPMC technician Cai Xin Xin conducting ambient magnetic particle testing (MT) on partial joint penetration (PJP) root welds on the 77 meter mock up assembly, between diaphragm SA104 and web plates P576, P579, P720 and P721. The QA inspector noted that no weld tabs are being used at the ends the PJP root welds. The QA inspector noted that root welds do not appear to run the full length of the prepared joints. The QA inspector noted that welds 5 & 6 of P579 are not completed at the intersection between P720 & P721. The ZPMC technician informed the QA inspector that MT was completed and acceptable on all welds. Upon receiving this information, the QA inspector asked the ZPMC Quality Control (QC) liaison Li Xin Yang (Tom) when the roots of welds 5 & 6 at the intersecting areas would be welded and inspected. The QC liaison was not familiar with the areas in question and he was shown the un-welded locations. The QC liaison Tom then spoke with the CWI Ye Yong Jun and QC liaison Chen Tan. They had a conversation regarding the QA inspector's question about the currently un-welded roots. The QC liaison Tom informed the QA inspector that after the ZPMC lunch break, the roots would be welded and QC inspection would be conducted. The QA inspector conducted random visual examination and MT examination of the other completed, QC inspected and accepted PJP root welds. The QA inspector identified weld spatter on the bevel of PJP weld 19 that contained relevant MT indications. The QA inspector also observed that weld 18 appears to have overlap and carbon arc spatter across the bevel and face of the PJP root weld. The QA inspector noted that the root weld also appears to have multiple weld passes in the weld access hole at this location. The QA inspector identified additional carbon

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arc spatter that is tightly adhering to the surface of the weld face and bevel on PJP root weld 2. The QA inspector showed the QC liaison these weld locations that appear to be non-conforming to the contract documents. The QC liaison then informed the QA inspector that additional work will be done to correct these areas and that a ZPMC technician will re-inspect the areas using MT. The QA inspector was then asked if work could proceed with the remaining QC inspected and accepted root welds. The QA inspector replied that work can proceed as they (ZPMC) see fit, but the lack of weld tabs and lengths and appearances of the root welds would be noted by the QA inspector on this report and relayed to the night shift QA personnel. See the accompanying TL-6028 and see the attached photos.



Summary of Conversations:

As noted above, the QA inspector Scott Croff witnessed MT being conducted by ZPMC technician Cai Xin Xin. The QC liaison Li Xin Yang (Tom) was present and was the mediator of the QA inspector's conversations with ZPMC personnel. The QA inspector was informed that MT inspection was completed and acceptable. The QA inspector asked why the PJP root welds did not extend the full length of the joints and why were weld tabs not used. The QC liaison Tom then spoke with CWI Ye Yong Jun and QC liaison Chen Tan. The QA inspector was informed that additional welding would be done at those areas. The QA inspector was then asked if any of the welds could be worked on by ZPMC. The QA inspector made random observations of PJP root welds that appeared to be completed. The QA inspector noted the appearance of non-conforming items and informed the QC liaison Tom of these observations. The QC liaison was shown the areas noted and asked if ZPMC planned to continue welding of the PJP welds. The QC liaison then remarked that these items would be worked on. The QA inspector informed the QC liaison that he would inform the night shift QA personnel of these observations so that additional follow up can be provided.

The QA inspector Scott Croff had a conversation with the QA inspectors Bruce Berger and Charlie Franco. The QA inspector Scott Croff informed them of the observations and status of the PJP root welds on the 77 meter Tower mock up assembly. The QA inspector Scott Croff also informed them of ZPMC's intended plan to correct these items, as it was relayed by the QC liaison Tom. There were no other notable conversations during this shift.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By:	Croff, Scott	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
