

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-001343**Date Inspected:** 27-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1800**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:****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 mock up assemblies**Summary of Items Observed:**

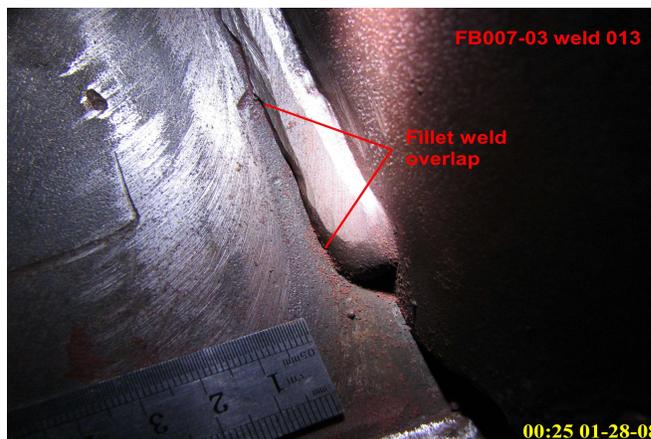
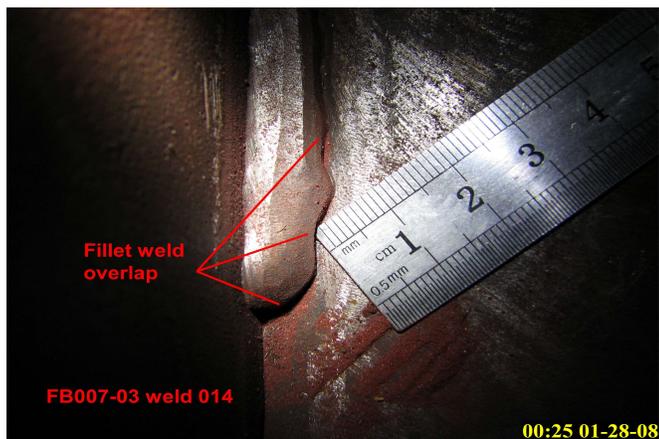
The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

Bay 7: The QA inspector was directed to measure the X, X1 and Y fillet weld hold back distances on floor beam diaphragm stiffeners, flanges and intermediate stiffeners. The QA inspector was informed that measurements should be taken as they are specified on ZPMC drawing GN3 for DECK fabrication. The QA inspector was informed that these measurements will be compiled with additional data that has been recorded by other QA inspectors through out the day. The QA inspector noted that several of the floor beam assemblies have already been measured by QA inspectors. The QA inspectors Scott Croff and Paul Stovall then proceeded to measure the fillet weld hold back distances, as they are accessible. The QA inspectors noted that the majority of the welds and parts are still in progress and these measurements may not reflect the finished dimensions. The measurements of all accessible and identifiable fillet welds on the following parts were measured: FB001-01, FB001-02, FB001-03, FB002-01, FB002-03, FB007-01, FB007-03, FB007-04, FB007-05, FB008-02, FB015-01 & FB015-02. During this survey of dimensions, the QA inspector noted that several of previously observed repairs were noted as being un-acceptable by ZPMC Quality Control (QC) personnel. The QA inspector observed that R1 (repair 1) QC rejected welds included FB007-03-045, FB008-02-043 and FB015-01-043. Also during this survey, the QA inspector noted that 2 floor beam assemblies (FB007-03 & FB015-01) have identifiable markings that QC personnel have visually accepted the fillet welds and that magnetic particle testing (MT) has been accepted for the fillet welds. While making measurements of fillet welds on these assemblies, the QA inspector noted several conditions of fillet welds that appear to be visually non-conforming to the contract requirements. The QA

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inspector noted that slag and carbon arc residue are visible at the ends of fillet welds. The slag and carbon arc residue were removed by the QA inspector using a small metallic scraper in order to make accurate measurements of the hold back lengths. Upon removal of the slag and carbon arc residue, the QA inspector noted that the fillet welds have non-conforming weld profiles, per AWS D1.5 2002 and there appears to be a tack weld that was not incorporated into the production fillet weld. The QA inspector marked these items but did not conduct further examinations of the parts at this time. See the attached photos of these non-conforming conditions.



Summary of Conversations:

The QA inspector Scott Croff had conversations with the QA inspector Paul Stovall regarding the above mentioned survey and the observations that described above. There were no ZPMC QC personnel present and no other notable conversations during this shift. The QA inspector Scott Croff compiled the survey data and informed the QA inspector Robert Cuellar of the above mentioned observations and measurements.

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.

Inspected By: Croff, Scott

Quality Assurance Inspector

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Reviewed By: Cuellar,Robert

QA Reviewer