

**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-007529**Date Inspected:** 19-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1400**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng, Liu 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:** TOWER**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

**Outside Yard at Vertical Mill:**

The QA Inspector randomly observed the vertical mill was idle and that there was no milling being performed on the longitudinal stiffeners and skin plates on Lift 1 East Tower Shaft or Lift 2 East Tower Shaft at this time.

The QA Inspector randomly observed that no contract work was being performed in the interiors or on the exteriors of Lift 1 East Tower Shaft, Lift 2 East Tower Shaft or Lift 2 South Tower Shaft.

**Heavy Equipment Shop Bay 11:**

The QA Inspector randomly observed ZPMC welder Zheng Ming Ye ID 066155, utilizing the Flux Cored Arc Welding (FCAW) Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-2132 to weld the triangle plates to the diagonal plates for Lift 1 West Tower Shaft at Weld Joint (WJ) WSD1-TL6E/D-149. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed the placement of Lift 3 Skin Plate C Interior Splice Plate SPSA3-67 into a

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# WELDING INSPECTION REPORT

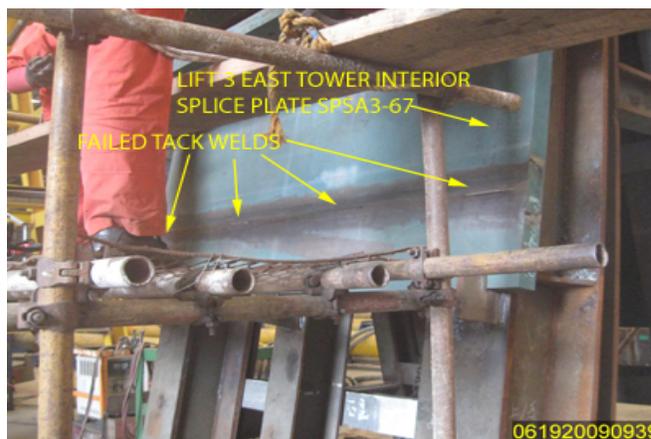
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small A-Frame jig to allow for welding of the part in the 1 G position. The QA Inspector did not observe; but shortly after the placement of Lift 3 Skin Plate C Interior Splice Plate SPSA3-67 into a small A-Frame jig, Longitudinal Stiffener piece mark LS3-60 fell off SPSA3-67. ZPMC Quality Control (QC) informed the QA Inspector that it fell off when one of the welders stepped on it to weld the longitudinal stiffener that was positioned at the top of the jig. The QA Inspector randomly observed that there had been only 4 single pass tack welds on one side of LS3-60 and that they had all failed. The QA Inspector also randomly observed that 2 of the single pass tack welds appeared to have been cracked prior to the failure. There was rust observed inside the weld metal where the cracks were located. The QA Inspector randomly observed 2 ZPMC welders add additional tack welds to the remaining 2 longitudinal stiffeners before ZPMC riggers lifted SPSA3-67 from the A-Frame jig and placed it on the gantry platform. The QA Inspector randomly observed a ZPMC helper immediately begin to remove the remnants of the tack welds from the bevel of Longitudinal Stiffener LS3-60. The attached photographs provide additional detail.

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



### Summary of Conversations:

No relevant conversations.

### 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 13482570045, who represents the Office of Structural Materials for your project.

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| <b>Inspected By:</b> | Franco,Charlie   | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Clifford,William | QA Reviewer                 |

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