

**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-015692**Date Inspected:** 12-Jul-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Le Zhi Jiang**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

On this date Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector, D.Sukanthan was present during the time noted above for observations relative to the work being performed.

**OBG # BAY 3**

This QA inspector received ZPMC Non Destructive Testing (NDT) notification 06180 to perform Ultrasonic Testing (UT) of approximately 10% of the area previously tested and accepted by ZPMC Quality Control Personnel. This QA Inspector generated a Ultrasonic Test report for this date. The member is identified as Floor beam. The weld tested is identified as follows:

(FB3126-001-043,046,058,057)

(FB3110-001-046,047,058,057)

This QA Inspector randomly observed the following work in progress:

**OBG # BAY 2**

This QA observed ZPMC qualified welding personnel identified as 066912 perform Flux Cored Arc Welding (FCAW) Process on weld joint FB3194-001-033,034. ZPMC Quality Control Personnel (QC) identified as Mr. Zhu Jun was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

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This QA observed ZPMC qualified welding personnel identified as 066439 perform Flux Cored Arc Welding (FCAW) Process on weld joint FB3221-001-003,004. ZPMC Quality Control Personnel (QC) identified as Mr. Zhu Jun was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

This QA observed ZPMC qualified welding personnel identified as 045209 perform Flux Cored Arc Welding (FCAW) Process on weld joint FB3182-001-003,004. ZPMC Quality Control Personnel (QC) identified as Mr. Zhu Jun was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

During the Caltrans Quality Assurance in-process observations of the fabrication of Floor beam Lift 13W, this Quality Assurance Inspector (QA) discovered the following issue. ZPMC personnel have wrapped the welds around the ends of the stiffeners. The affected Floor beam welds are identified as FB3194-001-032,035,036,025, 026 and FB3223-001-049,050. This QA notified ZPMC QC identified as Mr. Zhu Jun of this issue and that an incident report would be generated.

OBG # BAY 3

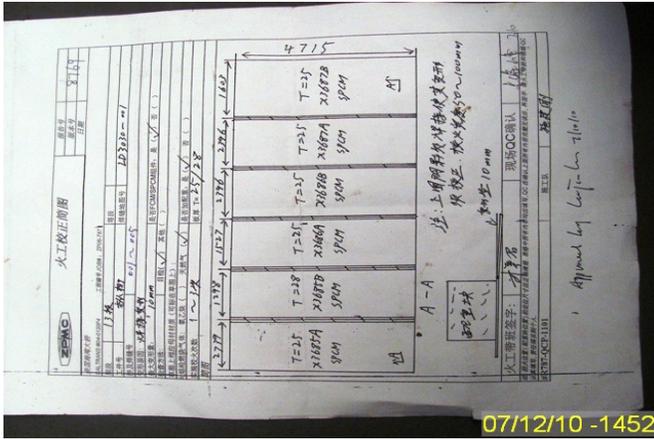
During the Caltrans Quality Assurance in-process observations of the fabrication of longitudinal diaphragm LD3030-001, this Quality Assurance Inspector (QA) discovered the following issue. ZPMC personnel heat straightening excessive distortion on Seismic Performance Critical Material (SPCM) material distorted by welding without the Engineers approval. The Longitudinal Diaphragm is identified as LD3030-001. The plates are identified as X3685A (SPCM), X3685B (SPCM), X3686A (SPCM), X3686B (SPCM), X3687A (SPCM), and X3687B (SPCM). The deviation from flat as measured by this QA is 14mm per 1000mm. The Material thickness is 25 mm and 28 mm. This QA notified ZPMC CWI identified as Mr. Chen Xi of this issue and that an incident report would be generated. See attached picture.

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



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## Summary of Conversations:

As mention above

## 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 150-00422372, who represents the Office of Structural Materials for your project.

**Inspected By:** Sukanthan,Dhanasingh

Quality Assurance Inspector

**Reviewed By:** Hall,Steven

QA Reviewer