

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-015231**Date Inspected:** 06-Jun-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.

This QA Inspector randomly observed the following work in progress:

OBG # BAY 1

During the Quality Assurance (QA) random in-process visual inspection of Orthotropic Box Girder (OBG) Traveler Rails, this QA inspector discovered the following issues. ZPMC personnel performing heat straightening of 2 traveler rails. ZPMC did not appear to be following the approved heat straightening procedure HSR (B)-363, Revision 1. ZPMC personnel heated the areas to be straightened and mounted a temporary fixture to the flange and drove steel wedges between the fixture and flange. The use of the wedges is not mention in the approved HSR.

Furthermore, after the removal of the wedges and fixture, this QA observed damage to the base material of the flanges apparently caused by the steel wedges. The affected Traveler Rails are identified as: 21TR4-003, 21TR3-003. This QA notified ZPMC QA identified as Mr. Zhang wei of this issue and that an incident report would be generated. See attached picture.

OBG # BAY 2

This QA observed ZPMC qualified welding personnel identified as 045203 perform Flux Cored Arc Weld (FCAW) Process on weld joint FB3201-001-042,043. ZPMC Quality Control Personnel (QC) identified as Mr.

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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-2133.

This QA observed ZPMC qualified welding personnel identified as 045240 perform Flux Cored Arc Weld (FCAW) Process on weld joint FB3217-001-069,070. 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 Weld (FCAW) Process on weld joint FB3209-001-006. 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.

OBG # BAY 3

This QA observed ZPMC qualified welding personnel identified as 208035 perform Flux Cored Arc Weld (FCAW) Process on weld joint FB3109-001-027. ZPMC Quality Control Personnel (QC) identified as Mr. Zhang Hai Feng 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-2232-TC-U4B-F.

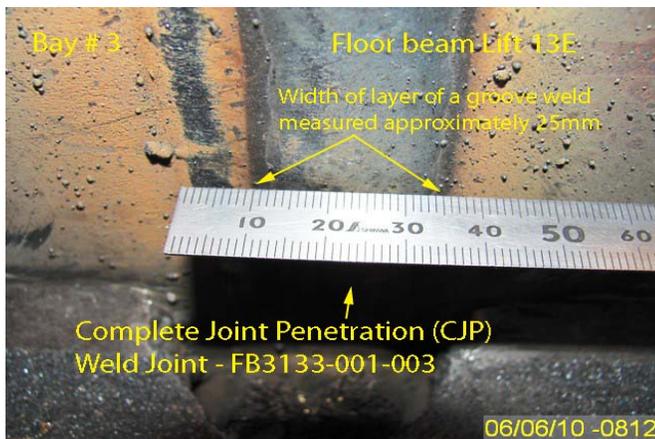
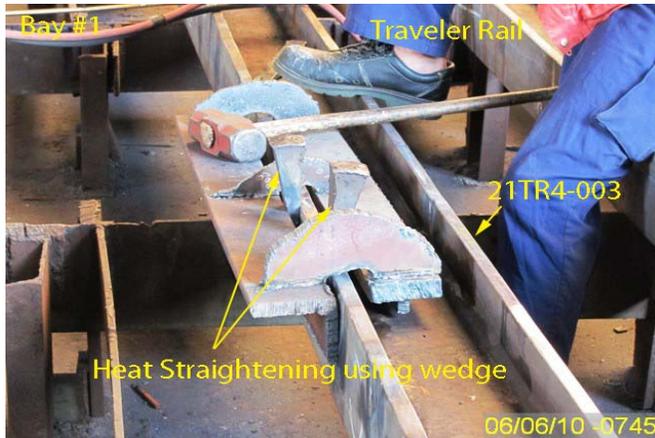
This QA observed ZPMC qualified welding personnel identified as 048038 perform Flux Cored Arc Weld (FCAW) Process on weld joint FB3109-001-023,024. ZPMC Quality Control Personnel (QC) identified as Mr. Zhang Hai Feng was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general compliance with WPS-B-T-2132-3.

During the Quality Assurance (QA) random visual inspection of Orthotropic Box Girder (OBG) Floor beam Lift 13E, this Quality Assurance Inspector (QA) discovered the following issues. The width of a single weld pass was measured to be approximately 25mm. This welding was performed in the flat (1G) position. The welding process performed was Flux Cored Arc Welding (FCAW). The maximum FCAW single weld pass width allowed in this position is 16mm. The affected Floor beam is identified as: FB3133-001, FB3113-001 & FB3137-001. This weld is detailed as a Complete Joint Penetration (CJP) welds on approved drawing. The affected welds are identified as FB3133-001-003, FB3133-001-010, FB3113-001-001, FB3113-001-002, FB3137-001-003 and FB3137-001-010. This QA notified ZPMC QA identified as Mr. Zhang wei 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