

**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-011254**Date Inspected:** 15-Dec-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**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 # CROSS BEAM CB01

This crossbeam appears to be complete and has been loaded on the ship.

OBG # CROSS BEAM CB02

This crossbeam appears to be complete and has been loaded on the ship.

OBG # CROSS BEAM CB03

This crossbeam appears to be complete and has been loaded on the ship.

OBG # CROSS BEAM CB04

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

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### OBG # CROSS BEAM CB05

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB06

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB07

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB08

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB09

This Quality Assurance Inspector (QA) observed ZPMC personnel performing base metal repairs inside Orthotropic Box Girder (OBG) crossbeam CB9 without Engineers approval. ZPMC Welding Quality Control Plan (WQCP) section 9 requires prior Engineer approval for repairs to base metal. The repair was being performed on floor beam intermediate diaphragm identified as FB205-024. The repair was performed using the Shielded Metal Arc Welding (SMAW) process. This QA notified ZPMC Quality Control Personnel (QC) identified as Mr. Liu chuan gang of this issue and that an incident report would be generated.

### OBG # CROSS BEAM CB10

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB11

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB12

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

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### OBG # CROSS BEAM CB13

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB14

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

### OBG # CROSS BEAM CB15

This QA observed ZPMC qualified welding personnel identified as 215397 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint CB202G-045-053,054. ZPMC Quality Control Personnel (QC) identified as Mr. Tian Lei 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 216575 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint CB202G-046-053,054. ZPMC Quality Control Personnel (QC) identified as Mr. Tian Lei 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 219188 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint CB202G-045-043,044. ZPMC Quality Control Personnel (QC) identified as Mr. Tian Lei 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 054460 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint CB202G-047-043,044. ZPMC Quality Control Personnel (QC) identified as Mr. Tian Lei 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.

During random in-process visual inspection on OBG cross beam CB15, this Quality Assurance Inspector (QA) observed single pass fillet welds that exceeded the maximum single pass weld size qualified. Weld Procedure Specification (WPS) # WPS-B-T-2133 specifies a maximum single pass fillet weld size of 9mm. The single pass fillet welds, as measured by this QA, were between 12mm and 14mm. This QA notified ZPMC QC identified as Mr. Tian Lei of this issue and that an incident report would be generated.

### OBG # CROSS BEAM CB16

This QA observed ZPMC qualified welding personnel identified as 204342 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint FB204-051-053. ZPMC Quality Control Personnel (QC) identified as Mr. Zheng zhi wei was present to monitor the welding process. The Welding parameters as measured using QC's

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calibrated instruments appeared to be in general compliance with WPS-B-T-2231-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 215185 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint FB205-049-029. ZPMC Quality Control Personnel (QC) identified as Mr. Zheng zhi wei 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-2231-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 215353 perform Flux Cored Arc Welding Process (FCAW) welding on weld joint FB204-049-053. ZPMC Quality Control Personnel (QC) identified as Mr. Zheng zhi wei 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-2231-B-U2-F.

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

### 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.

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<b>Inspected By:</b>	Sukanthan,Dhanasingh	Quality Assurance Inspector
<b>Reviewed By:</b>	Hall,Steven	QA Reviewer

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