

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-009146**Date Inspected:** 20-Sep-2009**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:** 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:** OBG Crossbeams**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG CROSS BEAM CB1

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

OBG CROSS BEAM CB2

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

OBG CROSS BEAM CB3

This crossbeam has been loaded on the ship.

OBG CROSS BEAM CB4

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

OBG CROSS BEAM CB5

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

OBG CROSS BEAM CB6

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

OBG CROSS BEAM CB7

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

OBG CROSS BEAM CB8

This QA observed ZPMC personnel removing the scaffolding from the inside of this crossbeam. No other significant work was observed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB9

This QA observed ZPMC qualified welding personnel identified as 220688 perform FCAW welding on weld joint identified as CB202A-009-002. ZPMC QC identified as Mr. Meng Lin Nan 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 048625 perform FCAW welding on weld joint identified as CB202A-009-014. ZPMC QC identified as Mr. Liu Cheung Gang 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.

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 ZPMC qualified welding personnel identified as 217185 perform FCAW welding on weld joint identified as FB204-029-050. ZPMC QC identified as Mr. Zhen Zhi Wei was present to monitor the welding process. The welding parameters as measured using QC's calibrated instruments appeared to be in general

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compliance with WPS-B-T-2232-B-U3-F-2.

This QA observed ZPMC qualified welding personnel identified as 205390 perform FCAW welding on weld joint identified as FB204-031-050. ZPMC QC identified as Mr. Zhen 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-2232-B-U3-F-2.

This QA observed ZPMC qualified welding personnel identified as 215250 and 204342 perform FCAW welding on weld joint identified as CB202A-011-019. ZPMC QC identified as Mr. Zhen 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-2132-2.

This QA observed ZPMC qualified welding personnel identified as 037780 perform SMAW welding on temporary lifting lugs at the deck panel to side panel locations. ZPMC QC identified as Mr. Zhen 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-P-2213-Tc-U4b.

OBG CROSS BEAM CB12

This QA observed ZPMC qualified welding personnel identified as 066687 perform FCAW welding repairs on various weld joints on this crossbeam. ZPMC QC identified as Mr. Sun Yan Fei 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-345-FCAW-2G (2F)-repair.

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 the contractor appeared to be "cold bending" Seismic Performance Critical Material (SPCM) and a Fracture Critical Weld (FCW). This QA previously issued an incident report concerning this same condition for the same component and weld dated 09/18/09. This QA observed one three (3) ton weight had been placed on the material, near the FCW. The weight appeared to be for the purpose of correcting excessive distortion at the FCW. This QA asked ZPMC QC CWI identified as Mr. Chen Xi why the weight was placed on this material. Mr. Chen offered no explanation as to why the weight was placed on the material. He did however state to this QA that ZPMC has or will submit a procedure to the Engineer for approval to straighten this joint and that he did not believe that placing the weight on the material is considered "cold bending" because they were not using jacks and/or a machine to bend the material. This QA requested that the weight be removed from the material. Mr. Chen instructed the workers to remove the weight. After the weight was removed the material exhibited severe distortion. This QA measured the distortion at 30mm per 1000mm. This QA informed Mr. Chen Xi and ABF inspector identified as Mr. Wang Wen Bin that another incident report would be generated for cold bending SPCM. AWS D1.5 2002 section 12.12 states "Cold bending shall be prohibited for all fracture critical steels". The SPCM is identified as FB202A. The FCW joint is identified as CB202E-014-002. See attached photos for details.

OBG CROSS BEAM CB15

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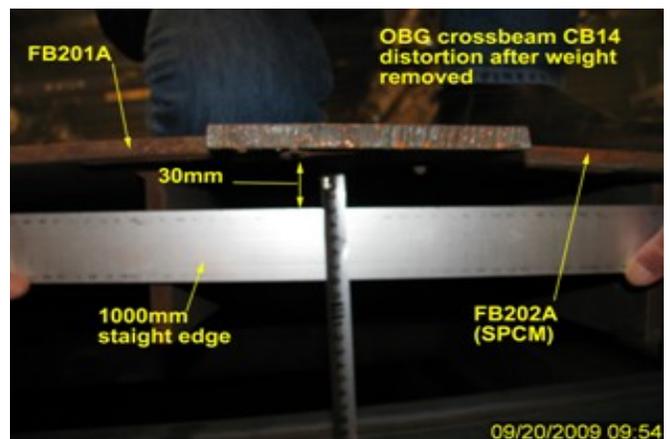
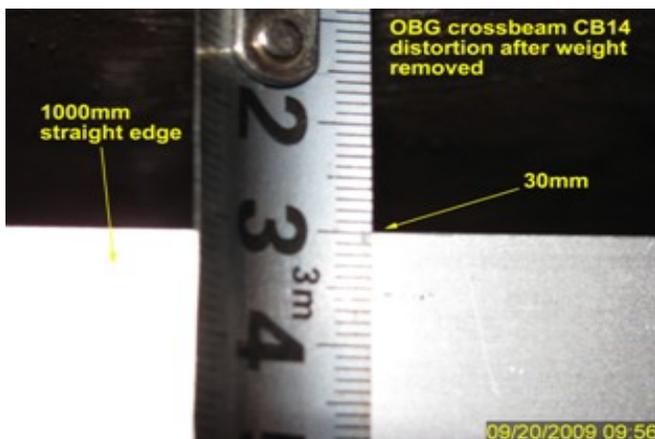
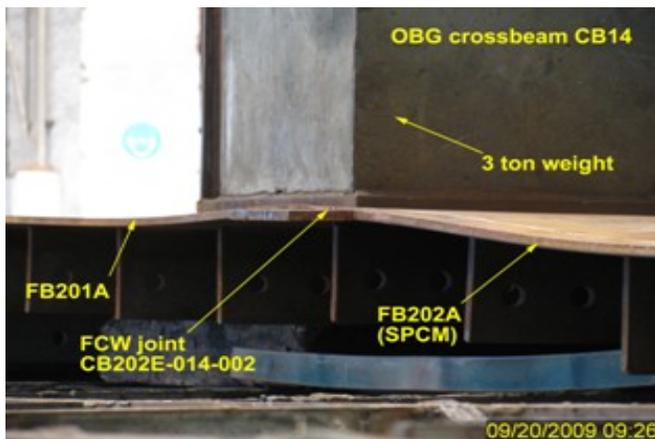
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This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB16

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

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.



Summary of Conversations:

As mentioned 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 (15000422372), who represents the Office of Structural Materials for your project.

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Inspected By:	Hall, Steven	Quality Assurance Inspector
Reviewed By:	Prue, Erik	QA Reviewer
