

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-010400**Date Inspected:** 18-Nov-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 crossbeam has been brought back to the dock in order to allow American Bridge / Fluor (ABF) and Caltrans QA inspectors to perform Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) corner joints using the "D" scanning pattern described in AWS D1.5 figure 6.7. The purpose for this particular testing method is to detect suspected transverse cracking of the CJP corner joints.

OBG CROSS BEAM CB2

This crossbeam has been brought back to the dock in order to allow American Bridge / Fluor (ABF) and Caltrans QA inspectors to perform Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) corner joints using the "D" scanning pattern described in AWS D1.5 figure 6.7. The purpose for this particular testing method is to detect suspected transverse cracking of the CJP corner joints.

OBG CROSS BEAM CB3

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This crossbeam has been brought back to the dock in order to allow American Bridge / Fluor (ABF) and Caltrans QA inspectors to perform Ultrasonic Testing (UT) on the Complete Joint Penetration (CJP) corner joints using the “D” scanning pattern described in AWS D1.5 figure 6.7. The purpose for this particular testing method is to detect suspected transverse cracking of the CJP corner joints.

OBG CROSS BEAM CB4

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 this crossbeam has been moved into trial assembly. QA observed several ZPMC workers aligning this crossbeam to the east and west lines at segment 6AE and 6AW.

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 attempting to correct an “out of square” condition on this crossbeam. According to ZPMC Quality Control (QC) inspector identified as Mr. Liu Cheun Gang, this crossbeam was fabricated 10mm out of square. This QA noted that all welding has been completed on this crossbeam. This QA observed ZPMC personnel rigging hand operated winches (come-alongs) diagonally, top to bottom, inside of the crossbeam at two floor beam diaphragm locations on each side of the intermediate panel. This QA observed that ZPMC appears to have heated the web and flange plates on the floor beam diaphragm corner sections. ZPMC QC presented this QA with two Heat Straightening Records (HSRs) for review. This QA observed the work being performed did not appear to comply with either one of the HSRs. The HSRs do not mention the use of come-alongs and the locations of the heat applications appear to be inconsistent with the locations detailed on the HSRs. See attached photos for details. This QA informed ZPMC QA identified as Mr. Zhang Wei and ABF QA inspector identified as Mr. Kelvin Cheung of this issue and that an incident report would be generated.

OBG CROSS BEAM CB9

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 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.

OBG CROSS BEAM CB13

This QA observed ZPMC qualified welding personnel identified as 022387 perform FCAW welding on weld joint identified as FB204-038-054. ZPMC QC identified as Mr. Zhao Cheng Jian 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 054459 perform FCAW welding on weld joint identified as FB204-039-054. ZPMC QC identified as Mr. Zhao Cheng Jian 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 053486 perform FCAW welding on weld joint identified as CB202G-038-157. ZPMC QC identified as Mr. Zhao Cheng Jian 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.

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 that ZPMC is fitting the floor beam corner sections to the intermediate panel. No other significant work was observed on this crossbeam during the time QA was present.

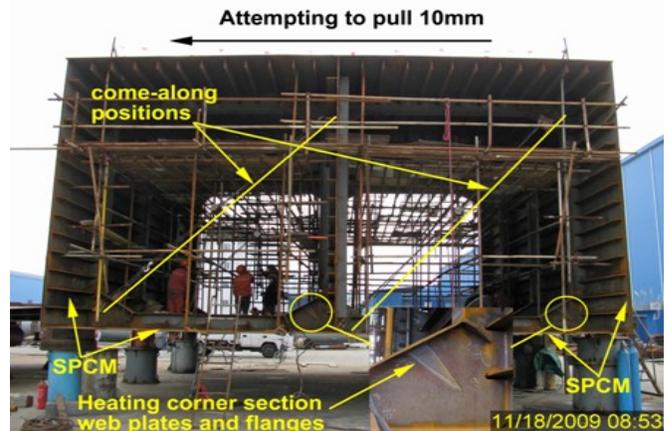
OBG CROSS BEAM CB16

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

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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.

Inspected By: Hall, Steven

Quality Assurance Inspector

Reviewed By: Patterson, Rodney

QA Reviewer
