

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-010389**Date Inspected:** 03-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 appears to be complete and has been loaded on the ship.

OBG CROSS BEAM CB2

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

OBG CROSS BEAM CB3

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

OBG CROSS BEAM CB9

This QA observed ZPMC qualified welding personnel identified as 053609 perform FCAW welding on weld joint identified as CB202A-009-017. ZPMC QC identified as Mr. Zhou Jie was present to monitor the welding

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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 FB205-021-039/040. ZPMC QC identified as Mr. Zhou Jie 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 051246 perform FCAW welding on weld joint identified as FB205-023-039/040. ZPMC QC identified as Mr. Zhou Jie 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-U2-F.

This QA observed ZPMC qualified welding personnel identified as 222396 perform FCAW welding on weld joint identified as FB205-024-137/138. ZPMC QC identified as Mr. Zhou Jie 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.

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 CB13

During random in process review of the floor beams located in crossbeam CB13, this QA observed the following:

The tack welds joining the floor beam diaphragms to the SPCM area of the intermediate panel and the east and west side panels do not appear to comply with the requirements of the contract documents. The length of the tack welds measure approximately 50mm. AWS D1.5 section 12 table 12.2 requires the tack weld length to be a minimum of 75mm. Additionally, ABF QA inspector identified as Mr. Zou Hu visually confirmed that some of the tack welds exhibit cracking.

The affected welds and members are identified as floor beams FB204, FB205, FB202A (SPCM) and side panels SP202A (SPCM) and SP205A (SPCM). Weld joints are identified as CB202G-037/038/039/040-181, CB202G-037/038/039/040-183 and CB202G-037/038/039/040-185. The following FCW tack welds appeared to exhibit crack like indications in the crater areas: CB202G-037-183 and CB202G-038-181. See attached photos for details. This QA notified ABF inspector identified as Mr. Zou Hu and ZPMC QA identified as Mr. Zhang Wei of these issues and that an incident report would be generated.

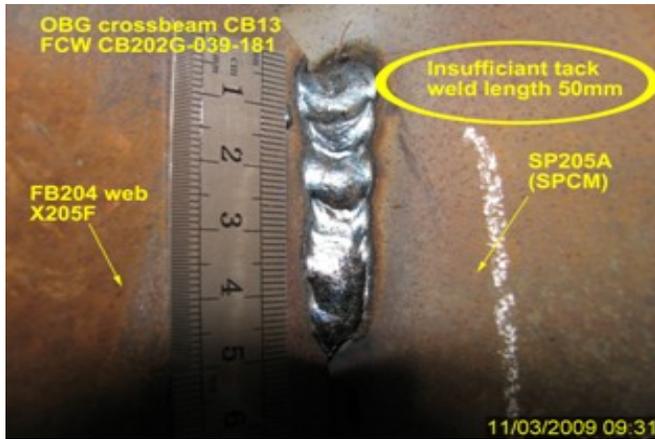
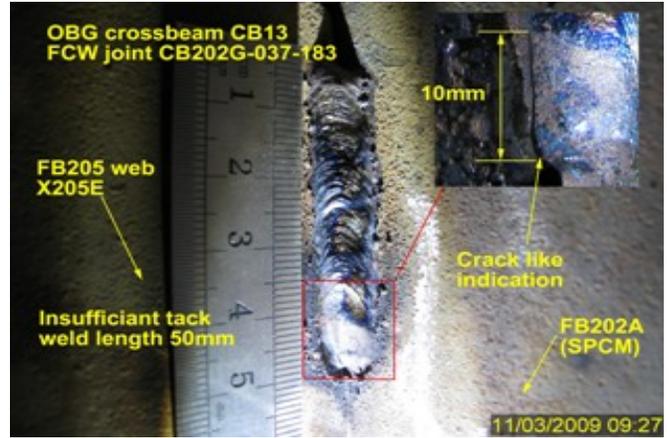
OBG CROSS BEAM CB16

This QA observed that ZPMC is continuing to fit this crossbeam together. Currently they have the side and intermediate panels fit and tack welded to the deck panel and are in the process of fitting the floor beam sections to the deck panel.

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

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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
