DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-010380
Date Inspected: 21-Oct-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Li Yang

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ 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 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 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 ZPMC Magnetic particle Testing (MT) technician MT various temporary fixture removal sites on the exterior of this crossbeam. No other significant work was observed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB8

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

OBG CROSS BEAM CB9

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

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 215248 perform SMAW repair welding on various welds in this crossbeam. The repairs being performed were discovered visually bt ZPMC QC inspectors. ZPMC 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-345-SMAW-1G (1F)-repair, WPS-B-T-345-SMAW-2G (2F)-repair and WPS-B-T-345-SMAW-3G (3F)-repair.

OBG CROSS BEAM CB12

This QA observed ZPMC qualified welding personnel identified as 066687 perform FCAW welding on weld

joint identified as CB201A-012-017. ZPMC QC identified as Mr. SunYan 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-B-T-2232-TC-U4b-F.

OBG CROSS BEAM CB13

This QA observed the contractors personnel fitting and tack welding the intermediate panel to the deck panel. No other significant work was observed during the time QA was present.

OBG CROSS BEAM CB14

This QA observed the contractors personnel fitting and tack welding floor beam sections to the deck panel. No other significant work was observed during the time QA was present.

OBG CROSS BEAM CB15

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 ZPMC qualified welding personnel identified as 217805 perform FCAW welding on weld joint identified as CB202G-049-158. ZPMC QC identified as Mr. Zhang 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-2132-3.

This QA observed ZPMC qualified welding personnel identified as 215689 perform FCAW welding on weld joint identified as CB202G-052-158. ZPMC QC identified as Mr. Zhang 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-2132-3.

During random in process visual inspection of above mentioned crossbeam, this QA observed twelve Fracture Critical Weld (FCW) tack welds that do not appear to comply with the contract documents. The tack welds in question are joining two of the FB diaphragms to the SPCM area of the west side panel. The members are identified as FB205 and SP205A weld joints identified as CB202F-050-180 and CB202F-051-180. This condition exists in 6 locations on both of the above mentioned welds. AWS D1.5 2002 section 12, table 12.2 requires FCW tack welds not covered by Submerged Arc Welding (SAW) to be a minimum of 75mm in length. The length of these tack welds measure 35mm to 60mm. This QA notified ZPMC QC CWI identified as Mr. Li Yang and ABF QA inspector identified as Mr. Yu Kum Ming of this issue and that an incident report would be generated. See attached photo for details.

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

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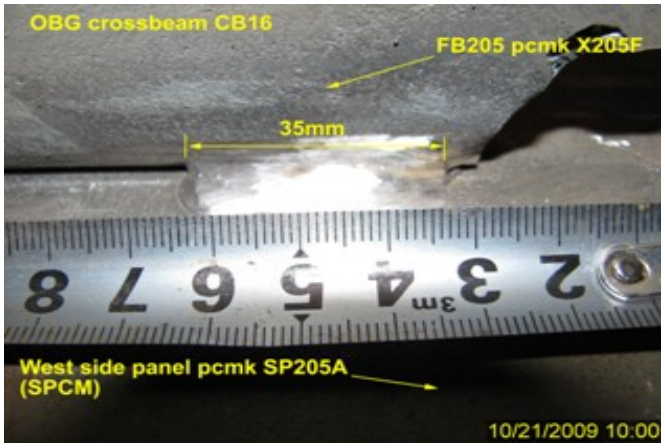

Summary of Conversations:

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