

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-009280**Date Inspected:** 25-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 ZPMC personnel installing cat walk in this crossbeam. No other significant work was observed 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 qualified welding personnel identified as 055609 perform FCAW welding on weld joint identified as CB202A-008-005. ZPMC QC identified as Mr. Liu Chuan 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.

This QA observed ZPMC personnel removing the temporary turning lugs from the top corners of this crossbeam. The worker appeared to be using an oxy/fuel torch to remove these lugs.

OBG CROSS BEAM CB9

This QA observed ZPMC qualified welding personnel identified as 220688 perform FCAW welding on weld joint identified as CB202G-024-023. ZPMC QC identified as Mr. Liu Chuan 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-2233-Tc-U4c-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 that no significant work was being performed on this crossbeam during the time QA was present.

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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 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 that the contractor appears to have removed two Fracture Critical Welds (FCW) for their full length, without the Engineers approval. The welds in question joined one of the stiffeners to the SPCM bottom panel. QA observed the worker initially remove the stiffener using an oxy/fuel torch and later in the day QA observed another worker carbon arc gouging the remainder of the stiffener material and fillet welds. QA also observed another worker preheat the material prior to arc gouging as specified in the contract documents. The SPCM panel is identified on the approved shop drawings as BP201A. The welds are identified as

BP201A-015-001 and 002. AWS D1.5 2002 section 12.2.2.2 states "All welds to FCMs shall be considered fracture critical and shall conform to the requirements of this FCP..." AWS D1.5 2002 section 12.17.4 states "All critical repairs to base metal and welds shall be approved by the Engineer prior to beginning the repair and shall be documented giving details of the type of discontinuity and extent of repair".

AWS D1.5 2002 section 12.17.3 states "Except as provided in 12.17.2, all welded repairs shall be considered critical. They include, but are not limited to the following:

- (5) Corrections requiring weld removal and rewelding except as provided in 12.17.2(4).
- (6) All welding to correct errors in fabrication such as improper cutting, punching, drilling, machining, assembly, etc.

This QA notified ABF inspector identified as Mr. Chang Boa Qian and ZPMC QC CWI identified as Mr. Xu Xian Ping of the above mentioned issue and that an incident report would be generated. See attached photo for details.

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.

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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
