

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-008466**Date Inspected:** 15-Aug-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yan Hua**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 segments**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 assembly bay 13

This QA observed ZPMC qualified welding personnel identified as 049339 perform SMAW welding on OBG segment 8CW weld joints identified as SEG047H-070 and 073. ZPMC QC identified as Mr. Guo Xing Hui 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-4213-Tc-U4b-2 (weld 070) and WPS-B-P-2213-Tc-U4b-FCM (weld 073).

This QA observed ZPMC qualified welding personnel identified as 044772 perform SMAW welding on OBG segment 8CW weld joints identified as SEG047H-001 and 004. ZPMC QC identified as Mr. Guo Xing Hui 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-4213-Tc-U4b-2 (weld 001) and WPS-B-P-2213-Tc-U4b-FCM (weld 004).

This QA observed ZPMC qualified welding personnel identified as 045265 perform SAW welding on OBG segment 10CW weld joint identified as SEG063A-018. ZPMC QC identified as Mr. Li Ming Yang 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-2221-B-L2c-S-2.

This QA observed ZPMC personnel perform the following tasks relative to the fabrication of the deck super

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panels: fitting and tack welding deck panels identified as DP-367 and DP-340 weld joint identified as SEG054*-001 for OBG segment 9CE, grinding the back gouged groove of deck panels identified as DP-448 and DP-421 weld joint identified as SEG054*-006 and back gouging the root area of deck panels identified as DP-475 and DP-340 weld joint identified as SEG054*-008.

OBG assembly bay 14

This QA observed ZPMC qualified welding personnel identified as 045265 perform SAW welding on OBG segment 10CW weld joint identified as SEG063A-018. ZPMC QC identified as Mr. Li Ming Yang 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-2221-B-L2c-S-2.

Outside OBG segment 6AW

Between the times of 20:45 and 21:25 this QA observed ZPMC qualified welding personnel identified as 201583 and 045240 perform weld repairs on OBG segment identified as 6AW weld joint identified as SSD12-PP040-004. The contractor's Quality Control inspector (QC) was not present to monitor the repairs. The project's contract special provisions section 8-3.01 states "QC inspections shall be provided to ensure continuous inspection when any welding is being performed. Continuous inspection, as a minimum, shall include (1) having QC Inspectors continually present on the shop floor or project site when any welding operation is being performed, and (2) having a QC Inspector within such close proximity of all welders or operators so that inspections by the QC Inspector of each operation, at each welding location, shall not lapse for a period exceeding 30 minutes". ZPMC QC CWI identified as Mr. Li Yan Hua arrived in the vicinity of this segment at approximately 21:25 hrs. This QA asked Mr. Li if he could show QA the weld monitoring report for this weld and welders. Mr. Li informed this QA that although he is in charge of this OBG segment he was not personally responsible for checking and recording the welding parameters for this weld and welders. Mr. Li then informed this QA that the QC inspector that was responsible had left the area prematurely. Mr. Li was unable to produce any information regarding compliance to an applicable WPS. This QA informed Mr. Li that an incident report would be generated for this issue.

NOTE: This weld currently has at least one outstanding/unresolved incident report issued by other Caltrans QA inspectors, dated 06/24/09, concerning the contractor changing the joint design from a fillet weld to a Complete Joint Penetration (CJP) weld without the approval of the Engineer.

This QA also observed two holes measuring approximately 6 to 7mm that have been blown all the way through the same weld mentioned above (SSD12-PP040-004). The holes were created when welders back gouged the weld too deep and inadvertently blew through the weld and base metal. Due to the unavailability of QC in this segment, this QA was unable to inform QC of this discrepancy. See attached pictures. This QA also observed two holes measuring approximately 6 to 7mm that have been blown all the way through the same weld mentioned above (SSD12-PP040-004). The holes were created when welders back gouged the weld too deep and inadvertently blew through the weld and base metal. Due to the unavailability of QC in this segment, this QA was unable to inform QC of this discrepancy. See attached pictures.

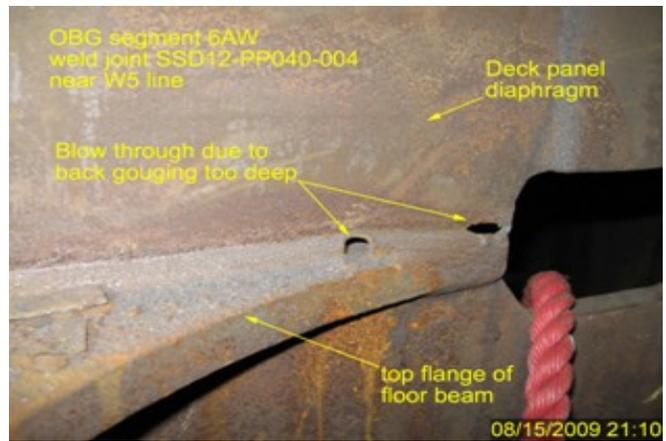
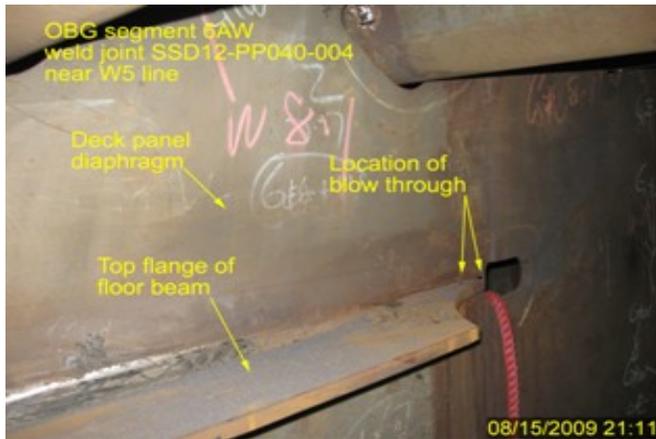
Outside OBG segments 7DW, 7BW, 7EW and 6CW

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

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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: Prue,Erik

QA Reviewer