

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-006686**Date Inspected:** 11-May-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 ZPMC Quality Control (QC) Ultrasonic Testing (UT) technician perform second time repair (R2) UT on welds identified as SP215-001-048 and FB206-001-028. ZPMC has rejected SP215-001-048 and accepted FB206-001-028. This QA performed UT on weld FB206-001-028 and found it to be compliant with the contract documents. This QA generated a TL-6027 UT report for this date.

During random Visual Testing (VT) on the above mentioned crossbeam, this QA discovered another cracked Complete Joint Penetration (CJP) weld. The weld is identified as FB206-001-106. ZPMC QC CWI identified as Mr. Chen Xi concurred with this QA and instructed ZPMC personnel to grind the area in order to determine the extent of the crack. After grinding, ZPMC Magnetic particle Testing (MT) technician performed MT of the ground area and determined the area to be free from any discontinuities. The grinding did not reduce the size of the weld beyond the size tolerance specified in AWS D1.5 2002. No repair welding was required.

OBG cross beam CB2

This QA noted that this crossbeam has been set into the superstructure assembly. No significant work was

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observed on this cross beam during the time this QA was present.

OBG cross beam CB3

This QA noted that this crossbeam has been set into the superstructure assembly. No significant work was observed on this cross beam during the time this QA was present.

OBG cross beam CB4

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

OBG cross beam CB5

This QA noted that this crossbeam has been moved to the outside area behind OBG assembly bay 13. This QA observed No significant work was being performed on this crossbeam during the time QA was present.

OBG cross beam CB6

This QA observed ZPMC qualified welding personnel identified as 215185 perform FCAW welding on weld joint identified as FB205-009-030. ZPMC QC identified as Mr. Chen Shi Ming 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-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 217562 perform FCAW welding on weld joint identified as FB205-012-030. ZPMC QC identified as Mr. Chen Shi Ming 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-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 215250 perform FCAW welding on weld joint identified as FB204-012-088. ZPMC QC identified as Mr. Chen Shi Ming 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-B-U2-F.

This QA observed ZPMC qualified welding personnel identified as 250341 perform FCAW welding on weld joint identified as FB204-009-08. ZPMC QC identified as Mr. Chen Shi Ming 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-B-U2-F.

During random Visual Testing (VT) of the tack welds on the above mentioned crossbeam this QA found numerous Fracture Critical Weld (FCW) tack welds that did not appear to meet the requirements of AWS D1.5 2002 section 12. The tack welds are located at the fillet weld joint joining the floorbeam diaphragms to the SPCM bottom panel. The tack welds exhibited a number of non-compliant discontinuities including undercut, overlap and the tack welds not meeting the minimum required length of 75mm as per AWS D1.5 2002 table 12.2. This QA informed representatives from both ZPMC QC and ABF QC that an incident report would be issued for this issue.

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:

Only general conversation was held between QA and QC concerning this project.

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
