

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024096**Date Inspected:** 25-May-2011**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:** Mr. An Qing Xiang**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG Trial Assembly open yard.

Segment: 13AW

The following Non Destructive Testing (NDT) Inspection was carried out as per the ZPMC submitted Notification No.09251.

Magnetic Particle Testing (MT)

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated a MT report for this date. The members are identified as OBG weld Components. Total number of welds MT tested: (71). The weld designation inspected was as follows:

1. SEG3013M-170
2. SEG3013M-164,158,152,146,140,134,128,122,116,110,104,098,092
3. SEG3013M-168,169,162,163,156,157,150,151,144,145,138,139,

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4. SEG3013M-132,133,126,127,120,121,114,115,108,109,102,103
5. SEG3013M-097,096,090,091,043
6. SA3168-333,334,123,124,121,122,119,120,117,118,345,105~116
7. SEG3013X-429
8. SEG3013X-206,431,609,611,612

During QA Visual Inspection and MT review of welds located on OBG at panel point 119-1500 and 118.35 cross beam and counter weight side respectively, this QA observed three Longitudinal toe cracks measuring approximately 10~60 mm in length. The weld is identified as: SEG3013X-429. This weld is a Complete joint penetration (CJP) with reinforcement fillet weld joining Edge Beam (EB3031B) to floor beam (FB3186A). The weld is designated as Fracture Critical weld (FCW) on approved shop drawing. The “Y” locations are approximately 50 mm, 120 mm and 180 mm from south end of the weld termination (as shown on picture below). Two Longitudinal toe cracks measuring approximately 30 mm and 105 mm in length. The weld is identified as: SEG3013M-170. This weld is a CJP with reinforcement fillet weld joining floor beam (FB3180A) to “I” stiffener plate (RS3434B). The “Y” locations are approximately 130 mm and 0 mm from top of the weld termination (as shown on picture below). The cracks are clearly marked on the material near the weld. Segment 13AW is currently located in the OBG Trial assembly area.

The Notice of Witness Inspection Number (NWIT) is 09251. The weld no SEG3013X-429 indications are located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, the contractors personnel are required to perform 100% MT inspection of this weld.

The weld no SEG3013M-170 indications are not located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, the contractors personnel are required to perform 25% MT inspection of this lot. These indications were found visually and confirmed by MT. This QA generated an incident report on this date for the above issue, for further information see the incident report and attached photos.

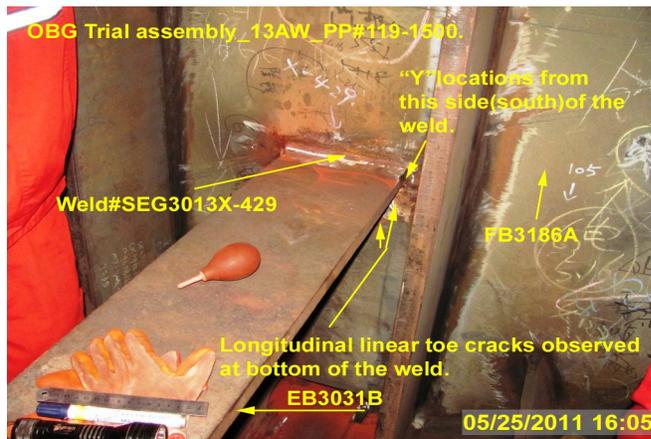
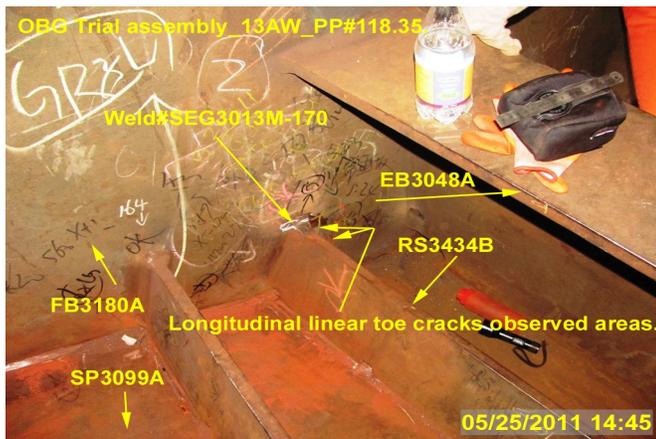
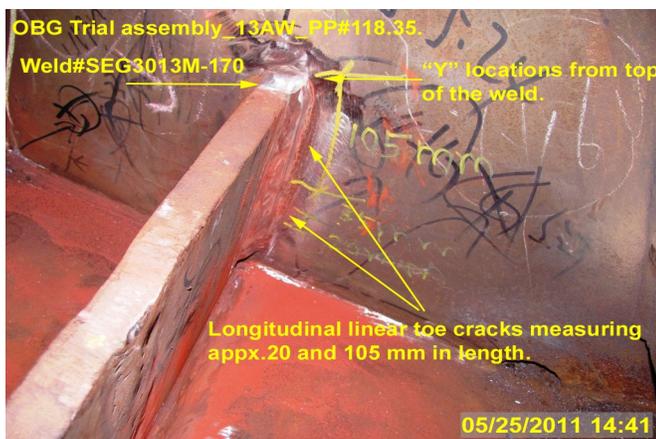
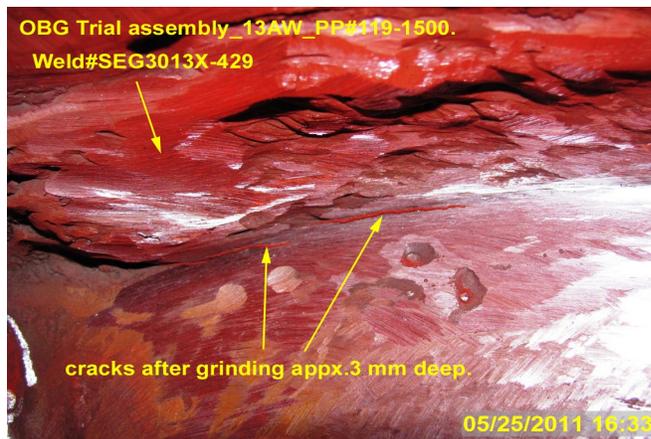
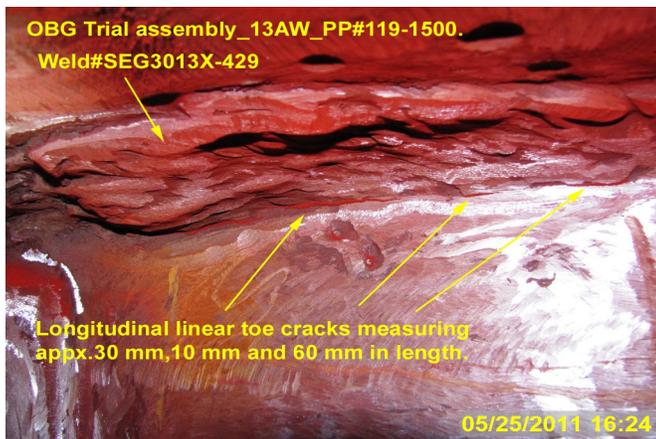
Cross beam-CB18

This QA received ZPMC inspection notification sheet 09249 to perform dimensional inspection of bearing seat gap between diaphragms to bearing blocks at 14 locations. Dimensional inspections performed on each location include, but is not limited to, width of the bearing blocks vertical stiffener. The results of the inspection were recorded on the drawing and submitted to CT QA lead for review.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No significant conversations were reported on this date.

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.

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Inspected By:	Prabhu,Surendra	Quality Assurance Inspector
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Reviewed By:	Peterson,Art	QA Reviewer
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