

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-024161**Date Inspected:** 30-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.09301.

Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated a UT report for this date. The members are identified as OBG weld Components. Total number of welds UT tested: (20). The weld designations inspected were as follows:

1. SEG3013AA-077,079,081,083,085
2. SEG3013AA*-085,088,092,095,099,102,109,113,116,120,123
3. SEG3013AV-037,040,041,044

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During QA Visual Inspection (VT) and UT review of welds located on OBG between panel point (PP)119+1500 and PP120 (Cross Beam Side), this QA observed following 6 issues:

Indication #1

- One Longitudinal toe crack measuring approximately 100 mm in length.
- The weld is identified as: SEG3013AA-054.
- This weld is a Complete joint penetration (CJP) with reinforcement fillet weld joining horizontal "I" stiffener (RS3417E) to floor beam (FB)-FB3193A.
- The "Y" location is approximately 60 mm from south end of the weld termination.

Indication #2

- One Longitudinal toe crack measuring approximately 100 mm in length.
- The weld is identified as: SEG3013AA-056.
- This weld is a CJP with reinforcement fillet weld joining FB (FB3193A) to horizontal "I" stiffener plate (RS3417E).
- The "Y" location is 0 from south end of the weld termination.

Indication #3

- One Longitudinal toe crack measuring approximately 130 mm in length.
- The weld is identified as: SEG3013AA-058.
- This weld is a CJP with reinforcement fillet weld joining FB (FB3193A) to horizontal "I" stiffener plate (RS3417E).
- The "Y" location is 0 from south end of the weld termination.
- Crack has been removed by grinding to approximately 3 mm in depth.

Indication #4

- One Longitudinal toe crack measuring approximately 100 mm in length.
- The weld is identified as: SEG3013AA-060.
- This weld is a CJP with reinforcement fillet weld joining FB (FB3193A) to horizontal "I" stiffener plate (RS3417E).
- The "Y" location is 0 from south end of the weld termination.

Indication #5

- One Longitudinal toe crack measuring approximately 100 mm in length.
- The weld is identified as: SEG3013AA*-106.
- This weld is a CJP with reinforcement fillet weld joining vertical "I" stiffener (X4469H) to RS stiffener plate (RS3382E).
- The "Y" location is 70 from top end of the weld termination.

Indication #6

- One Longitudinal toe crack measuring approximately 45 mm in length.
- The weld is identified as: SEG3013E-050.
- This weld is a CJP with reinforcement fillet weld joining FB (FB3197A) to horizontal "I" stiffener plate (RS3464M).
- The "Y" location is 20 from bottom end of the weld termination.

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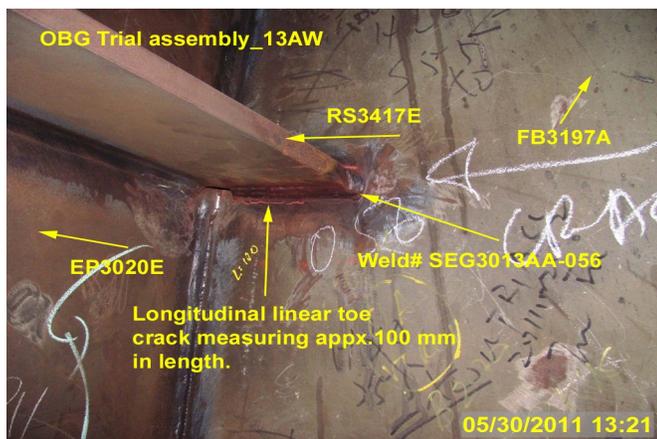
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- These cracks are clearly marked on the material near the weld.
- Segment 13AW is currently located in the OBG Trial assembly area.

The Notice of Witness Inspection Number (NWIT) is 09301. The cracks 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% VT and UT inspection of these welds. These cracks were found visually and confirmed by Magnetic Particle Testing (MT).

This QA Inspector generated an Incident Report for the above issues on this date, for further information see the Incident Report and attached photos.

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



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

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your project.

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