

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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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-021867**Date Inspected:** 11-Mar-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:** Geng Wei**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 Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

BAY#10

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 08509

Ultrasonic Testing (UT)

This QA inspector performed UT of the area previously tested and accepted by ZPMC Quality Control personnel.

This QA Inspector generated an UT report for this date. The member is identified as OBG Component. The weld designation reviewed as follows:

BIKE PATH CANTILEVER BEAM

BK15B-001-012; 014

BK16B-001-012~014

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint #002 located on Bike path BK17B-001. Welder is identified as 044511. ZPMC Quality Control (QC)

Inspector is identified as Sun Zi Wang. The welding variables recorded by QC appeared to comply with the

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WPS-B-P-2212-Tc-U5b.

Weld joint #002 located on Bike path BK16B-001. Welder is identified as 040582. ZPMC Quality Control (QC) Inspector is identified as Sun Zi Wang. The welding variables recorded by QC appeared to comply with the WPS-B-P-2213-Tc-U5b.

Weld joint #014 located on Bike path BK17B-001. Welder is identified as 052930. ZPMC Quality Control (QC) Inspector is identified as Sun Zi Wang. The welding variables recorded by QC appeared to comply with the WPS-B-P-2213-Tc-U5b.

This QA Inspector observed the following work not in compliance:

Description of Incident:

During random 10% verification Ultrasonic Testing (UT) of bike path cantilever beam, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) Class "A" non conforming longitudinal indication in a weld.
- UT discontinuity rating was +4 db; Class "A" non-conformable indication.
- Depth of the discontinuity from face "B" is approximately 20 mm.
- Length of the discontinuity is approximately 25 mm.
- Y location is approximately 220 mm from left side of the joint.
- Weld is a double groove, complete joint penetration (CJP) T- joint, joining the side plate (BKX37E) to the stiffener (BKX38A).
- The weld is identified as BK15B-001#13.
- Scanning was performed from face "A" and "B" to cover the full volumetric scan of the weld.
- The material thickness is 30 mm.
- This member is identified as Non-Seismic Performance Critical Member (SPCM).
- Component located at fabrication Bay#10.

The Notice of Witness Inspection Number (NWIT) is 08509. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. ZPMC's QC personnel performed 100% UT inspection of this weld.

Applicable reference:

Special Provisions Section 8.3; "Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents."

AWS D1.5 Section 6.26.3.1; "Welds that are subject to UT in addition to visual inspection shall be acceptable if they meet the following requirements:...(1) Welds subject to tensile stress under any condition of loading shall conform to the requirements of Table 6.3.

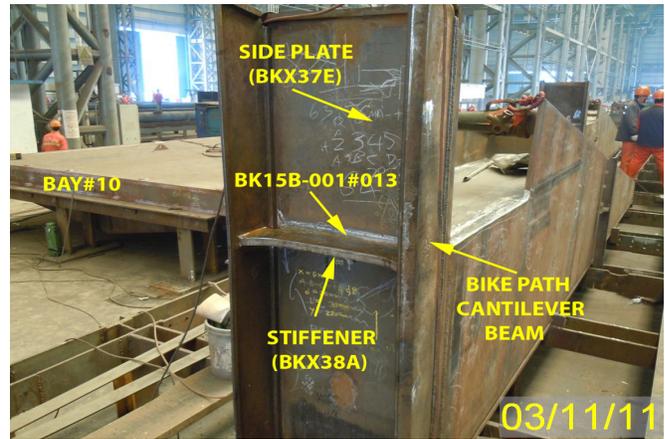
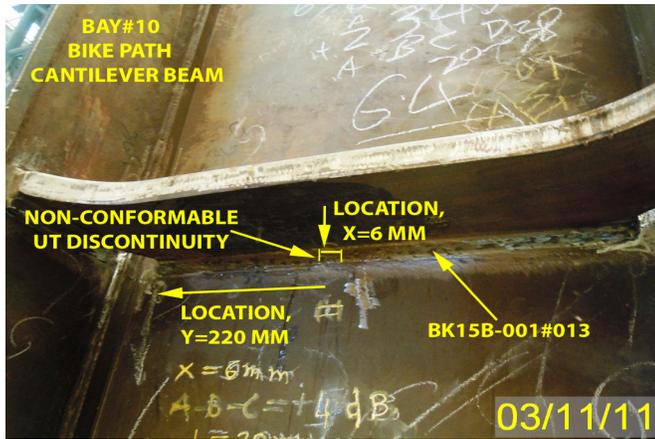
AWS D1.5-02 Table 6.2; "General Note 5: On tension welds on bridges, the top quarter of thickness shall be tested with the final leg of sound progressing from Face B towards Face A, the bottom quarter of thickness shall be tested with the final leg of sound progressing from Face A towards Face B; ie., the top quarter of thickness shall be tested either from Face A in Leg II or from Face B in Leg I".

For further information, please see the attached pictures below.

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



Summary of Conversations:

No Relevant Conversations.

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: Kumar,Sandeep

Quality Assurance Inspector

Reviewed By: Clifford,William

QA Reviewer