

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-025036**Date Inspected:** 26-May-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Lu Li Qing**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**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Baskar Govindarajan, was present during the times noted above for observations relative to the work being performed.

OBG-Trial assembly Yard

Lift 13 East

This QA Inspector observed the following work in progress,

Flux cored Arc Welding (FCAW)

Weld joint- 003, Located on I rib in PP 123.5 to 124 –SA3063-004. Welder is identified as 066041. ZPMC Quality Control Inspector (QC) is identified as Lu Li Qing. The welding variables recorded by QC appeared to comply with the WPS-B-T-2131-ESAB.

Weld joint- 007, Located on I rib in PP 123.5 to 124 –SA3063-004. Welder is identified as 066041. ZPMC Quality Control Inspector (QC) is identified as Lu Li Qing. The welding variables recorded by QC appeared to comply with the WPS-B-T-2131-ESAB.

Shielded Metal Arc Welding (SMAW)

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Repair welding of Weld joint- 148 as per CWR no. B-CWR-2984, Located on Segment 13CE, Floor beam 3138. Welder is identified as 051359. ZPMC Quality Control Inspector (QC) is identified as Lu Li Qing. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-4G (4F) –FCM-Repair.

Magnetic Particle Testing (MT)

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 09267

This QA inspector performed (MT) of approximately 15% of an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA Inspector generated a TL 6028 MT report for this date. The member is identified as OBG Lift 13AE &BE components. The weld designations reviewed are as follows:

SEG3009E--Jt. nos. -207, 205, 206

SEG3009V-Jt. nos. -017, 019, 021, 023, 025, 016, 018, 020, 022, 024

BP3036-001-Jt. nos -001~012

BP3037-001-Jt. nos -001~006

SEG3007B-Jt. nos -067~072, 074~079, 001~005, 007~011, 013~017, 019~023, 025~026, 028, 029,
031~035, 037~041, 120,

SEG3007B –Jt. no. 027

This QA Inspector observed the following work not in compliance:

Description of Incident:

During Quality Assurance Magnetic Particle Testing (MT) review of welds located on Orthotropic Box Girder (OBG) Lift 13AE, this Quality Assurance Inspector (QA) discovered the following issues:

- One Longitudinal Linear indication measuring approximately 80 mm in length on Toe of weld.
- This indication found in weld joining Stiffener and bottom plate of Segment 13AE.
- The weld is identified as: SEG 3007B-027.
- This weld is a fillet weld joining Bottom plate and Stiffener.
- The “Y” location is approximately 300 mm from Floor beam 3119A, PP 120
- The bottom plate thickness is 100 mm and Stiffener thickness is 25mm.
- The Indication is clearly marked on the material near the weld.
- This Segment is located in OBG Trial assembly area.

The Notice of Witness Inspection Number (NWIT) is 09267. The indication is located within an area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel.

Applicable reference:

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks”.

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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.”

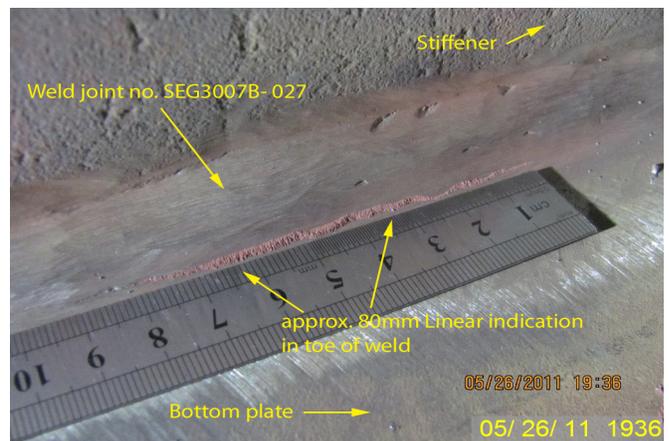
This QA notified ZPMC QC identified as Mr. Li Peng Fei & Mr. Zhan Hai Feng and ABF inspector identified as Mr. Liang Biao, of the above issue and that an incident report will be generated.

Post Blast Visual Inspection

This QA inspector, Baskar Govindarajan, performed Post blast inspection of external surfaces of Segment 13AE between PP 117.3 to 118. Due to Poor surface preparation, Water in corners, This QA Inspector observed, ABF Inspector Mr. Shi Stone rejected these surfaces.

For further information see below pictures:-

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

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Inspected By: Baskar, Govindarajan

Quality Assurance Inspector

Reviewed By: Clifford, William

QA Reviewer