

**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-021714**Date Inspected:** 08-Mar-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**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 OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 14

This QA Inspector randomly observed the following work in progress in the Bay 14:

FCAW welding of weld joint SEG3013X-272 located on PCMK OBG 13AW. Welder was identified as 203871. QC was identified as ABF CWI Ji Cai Fang (QC1). Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Zhu Lin (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-T-2232-ESAB as verbally identified by QCA1.

SMAW welding of weld joint SEG3020-001-012 located on PCMK OBG 14W. Welder was identified as 047864. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2213-TC-U4b-FCM-1 as verbally identified by QCA1.

Also in Bay 14, the following observations were made by this QA Inspector and QA Inspector Paul Dawson:

TC-RFI-0041R0 and TC-RFI-0041R1 (Hinge pipe) - Segments 14E and 14W

This QA Inspector performed random document review of "Team China request for information (TC-RFI)"

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document #TC-RFI-0041R0 and TC-RFI-0041R1. This RFI addresses installation of pipe sleeves at OBG segments 14E and 14W near panel point 128.

The following observations were made concerning this RFI:

TC-RFI-0041R0, item 1 of the RFI addresses vertical and horizontal stiffener configuration at the left and right sides of the sides of the pipe sleeves and having a 150mm clearance gaps at this location. The RFI also addresses use of a CJP with backing on the vertical stiffeners in between horizontal stiffeners. This QA Inspector observed ZPMC appears to have installed the stiffeners as referenced in the RFI and that the pipe sleeve clearance dimensions vary between 155mm and 160mm.

TC-RFI-0041R0, item 2 of the RFI states the acceptable clearance between the pipe sleeve and the triangular shaped stiffeners to be 75mm. TC-RFI-0041R1 increases the acceptable clearance to 80mm. This QA Inspector performed random measurements of these gaps and observed the maximum gap appears to be approximately 78 mm.

TC-RFI-0041R0, item 3 of the RFI addresses pipe sleeve inner and outer slotted holes. This QA Inspector performed random measurements of these slotted holes and observed the sizes of the inner holes appear to be approximately 108mm long and 70mm wide. The outer slotted holes appeared to be approximately 100mm long and 70mm wide.

This QA Inspector took random photos of some of these items and copies of the photos and other related information have been placed in "TC-RFI Documentation" folder located on Team China folder on the Z drive on the Caltrans server pending engineering review. See the photos below for additional information.

TC-RFI-0043R0 - Segments 13CE and 13CW

In Segment 13CE, TC-RFI-0043R0 addresses installation of type 13 fit lugs between stiffener plates and floor beams at segments 3011L, PP122.5; 3011J, PP123; 3011G, PP123.5; 3011E, PP124; 3011C, PP124.5; and installation of type X3627 lugs at panel points PP123 and PP124.

13CE: type X3627 lugs are not installed type X3627 at panel points PP123 and PP124.

Type 13 Fit Lugs are installed at the locations noted above.

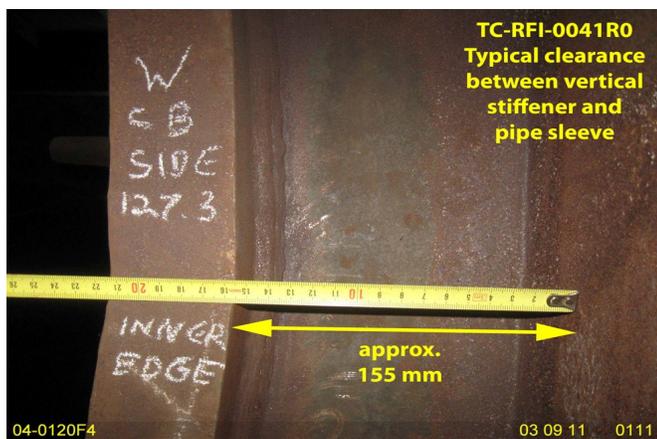
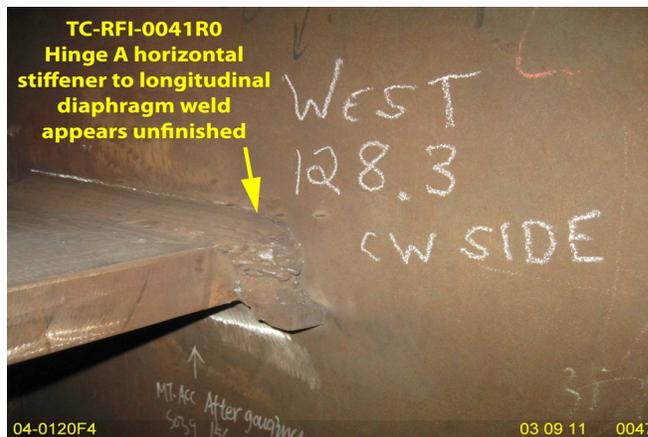
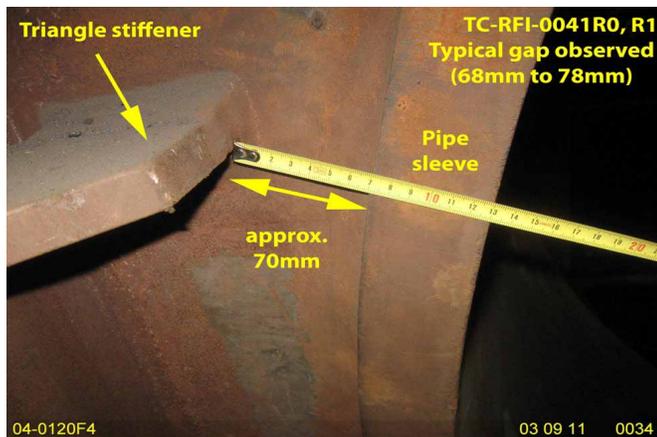
In Segment 13CW, TC-RFI-0043R0 addresses installation of type 13 fit lugs between stiffener plates and floor beams at segments 3015K, PP122.5; 3015H, PP123; 3015F, PP123.5; 3015D, PP124; 3015B, PP124.5; and installation of type X3627 lugs at panel points PP123 and PP124.

13CW: No fit lugs installed at any of the locations noted above.

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

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## Summary of Conversations:

As noted above.

## 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, 150-0042-2372, who represents the Office of Structural Materials for your project.

**Inspected By:** Goulet, George

Quality Assurance Inspector

**Reviewed By:** Riley, Ken

QA Reviewer