

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001411**Date Inspected:** 31-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**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:** Tower and OBG Fabrication**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) and Tower Mock Up:

CWI Inspector: Mr. Liz Hijiang

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The QA Inspector observed ZPMC welder Mr. Chen Chaun Zong stencil 44824 is using welding procedure specification WPS-345-FCAW-1G(1F)-FCM-Repair using the flux cored welding process for a groove weld critical weld repair of an ultrasonic rejection in floor beam weld FB018-01-079. ZPMC QC Inspector Mr. Liz Hijiang showed the QA Inspector a copy of critical weld repair documentation B-CWR17 that has been approved by Caltrans on 1-28-2008. The QA Inspector observed 1.4 mm diameter E71T-1 electrode with a welding current of approximately 290 amps, 30 volts and the base material had been preheated to a minimum of 60°C. Items observed by the QA Inspector appear to comply with project specifications.

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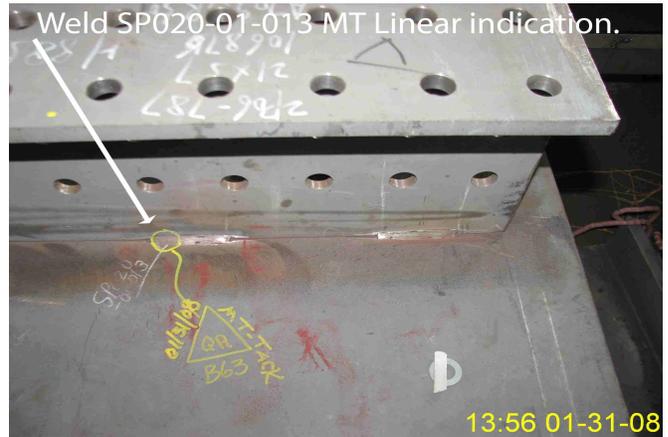
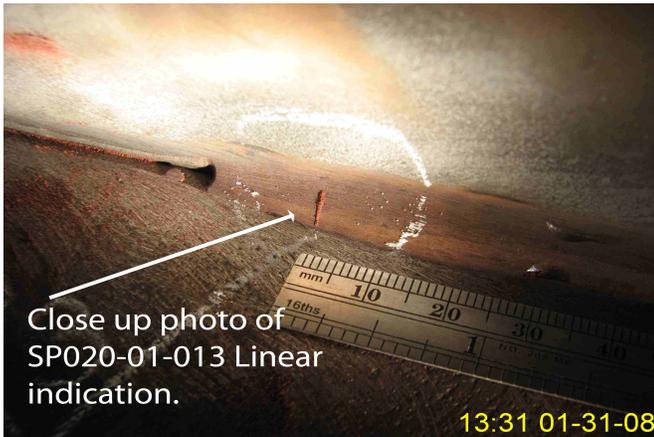
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The QA Inspector performed random visual inspections and magnetic particle inspections of portions of OBG side plate SP020 stiffener fillet tack welds SP020-01-013 through SP020-01-024. The plate has been placed on a pre-camber table in order to minimize final weld distortion. Welds SP020-01-014 through SP020-01-024 appear to comply with project specifications. The QA Inspector observed one of the tack welds in weld SP020-01-013 has a transverse linear indication located approximately 320 mm from the west end of the plate. The QA Inspector showed ZPMC QC CWI Inspector Mr. Shen Xue Jun and American Bridge/Fluor representatives Mr. Warren Buehler and Dave LaRue this linear indication. Mr. LaRue said this weld will be ground to determine if the indication extends into the base material. After this portion of the fillet weld was removed Mr. LaRue said the indication extends into the base material and a critical weld repair document will be submitted to allow repairs of this linear indication. See the photographs below for additional information.



## Summary of Conversations:

See above for summary of 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Dawson,Paul

Quality Assurance Inspector

**Reviewed By:** Cochran,Jim

QA Reviewer

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