

**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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-024844**Date Inspected:** 13-Jun-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) Chanxing Island**Location:** Shanghai, China**CWI Name:** Mr. Shi Lei**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 Segment**Summary of Items Observed:**

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

**Magnetic Particle Testing (MT)**

This QA inspector witnessed and performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as OBG Segment 14W.

The weld designations reviewed/witnessed are as follows:

1. SEG3020BB-050
2. SEG3020BB-059
3. SEG3020BB-068
4. SEG3020BB-077

Description of Incident: During random Quality Assurance visual review of the OBG Segment 14W at Trial assembly Yard, this Quality Assurance Inspector (QA) observed the following issue:

- The one (1) Longitudinal Toe Crack measuring approximately 50mm in length, found by ABF personnel as on 06/13/2011
- This weld number is identified as SEG3020BB55.

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- The weld is Complete Joint Penetration (CJP) weld, joining Vertical shear plate to Bottom Plate at Panel Point 125 to 126 cable side.
  - This weld is designated as Seismic Performance Critical Member (SPCM).
  - ZPMC personnel completed weld repair on SEG3020BB-055 joint by SMAW welding with Weld Repair Report (WWR).
  - This OBG Segment 14W is located in OBG Trial assembly yard north end.
- For further information, see the attached pictures.

### OBG Trial Assembly Yard

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint SEG3020\*-018 located on Edge Plate to Deck panel at panel point 128.3 to 128.7 of OBG Segment 14W. ZPMC Welder is identified as 067609. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020D- 057 located on SA3416A to Deck panel at panel point 128.3 of OBG Segment 14W. ZPMC Welders are identified as 066019 and 067520. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2211-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020E-001 located on deck panel splice plate to floor beam at panel point 128.3 to 128.7 of OBG Segment 14W. ZPMC Welder is identified as 067904. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2212-Tc-U4b-FCM-1.

SMAW welding of weld joint SEG3020W-197, 198 located on deck panel I-rib to Floor Beam at panel point 125 of OBG Segment 14W. ZPMC Welder is identified as 066459. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2113-FCM-1.

SMAW welding of weld joint SEG3020X - 069 located on longitudinal diaphragm to Floor Beam at panel point 125 of OBG Segment 14W. ZPMC Welder is identified as 066361. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1. See the attached picture.

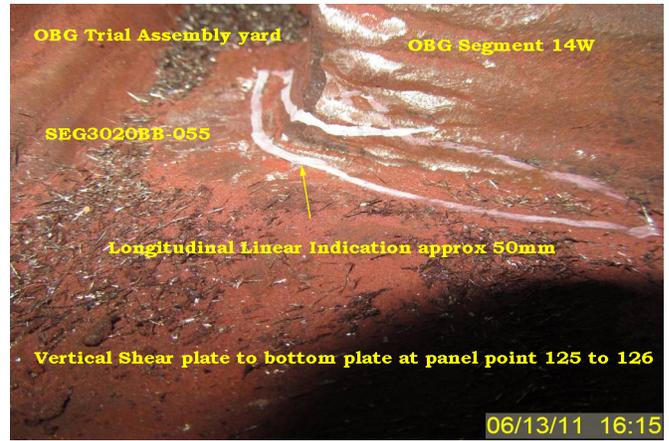
Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

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## Summary of Conversations:

Only general conversation was held between QA and QC concerning this project.

## 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 , who represents the Office of Structural Materials for your project.

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**Inspected By:** Kumar,Vibin

Quality Assurance Inspector

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**Reviewed By:** Patel,Hiranch

QA Reviewer