

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020077**Date Inspected:** 24-Jan-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

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|------------------------------------|-------------|----------------------------------|-------------|----|
| CWI Name: | Mr. Qui Wen | 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.

Bay 14

This QA Inspector observed the following work in progress:

Shielded Metal Arc Welding (SMAW) repair welding of weld joint SEG3020BB-028 located on Vertical Shear Plate to Bottom Plate of OBG Segment 14W. ZPMC Welder is identified as 066038. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-2G (2F)-Repair-FCM-1, which is used as per Critical Welding Repair (CWR) B-CWR-2752.

Flux Core Arc Welding (FCAW) repair welding of weld joint SEG3020BB-010 located on Vertical Shear Plate to Bottom Plate of OBG Segment 14W. ZPMC Welder is identified as 067942. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-FCAW-2G (2F) – FCM – ESAB- Repair-1, which is used as per Welding Repair Report (WRR) B-WRR-20164.

SMAW welding of weld joint SEG3020W-081 located on Floor Beam to Edge Beam of OBG Segment 14W. ZPMC Welder is identified as 066236. ZPMC Quality Control (QC) is identified as Mr. Zhu Lin. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-T-2233-ESAB.

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SMAW welding of weld joint SEG3020BB-027 and 093 located on Vertical Shear Plate to Floor Beam of OBG Segment 14W. ZPMC Welder is identified as 067609. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2214-Tc-U4b-FCM-1.

SMAW welding of weld joint DP3148-246 and 247 located on Deck Panel to Deck Panel Diaphragm of the OBG Segment 13CW. ZPMC Welders are identified as 037932. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2213-Tc-U4b-FCM-1.

SMAW welding of weld joint DP3146-249 and 250 located on Deck Panel to Deck Panel Diaphragm of the OBG Segment 13CW. ZPMC Welders are identified as 037840. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-B-P-2213-Tc-U4b-FCM-1.

SMAW repair welding of weld joint SEG3014S-052 located on Vertical Plate to Side Plate of OBG Segment 13BW. ZPMC Welder is identified as 045196. ZPMC Quality Control (QC) is identified as Mr. Sun Tian Liang. The welding variables recorded by QC appeared to comply with the Applicable WPS-345-SMAW-2G (2F)-Repair-FCM-1, which is used as per Critical Welding Repair (CWR) B-CWR-2625.

Description of Incident: During the Quality Assurance random visual inspection of welds located on Segment 13BW at panel point 122, this Quality Assurance Inspector (QA) observed that ZMPC personnel performed welding on Deck Panel Diaphragm to deck panel diaphragm weld, after back gouging of these welds are get cracks throughout weld length. It happens also at pp121.5 and 122 cross beam side Deck Panel Diaphragm to deck panel diaphragm welds of OBG Segment 13CW. This weld is a Complete Joint Penetration (CJP) weld joining the Deck Panel Diaphragm to deck panel diaphragm weld. The Deck Panel Diaphragm to deck panel diaphragm weld is identified as SPCM. The weld numbers are identified as SEG3014C-001 and 002. This weld is designated as Seismic Performance Critical Member (SPCM). OBG segment 13BW is located West Side of Bay 14 area. The ZPMC QC is identified as Mr. Sun Tian Liang. QA inform to ZPMC that prior to the repair welding, to prepare CWR and ensure with VT and MT all defect have been removed. See the attaché 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.

Inspected By: Kumar,Vibin

Quality Assurance Inspector

Reviewed By: Patel,Hiranch

QA Reviewer