

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-015351**Date Inspected:** 05-Jul-2010**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), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang**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 (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Trial Assembly Yard

Segment 9BE/9CE

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated as OBE9B-009. The welder is identified as #048659 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-345-SMAW-3G (3F)-FCM-repair-1.

This QA Inspector observed buttering in progress using the Flux Cored Arc Welding (FCAW) process on the web of Longitudinal Diaphragm LD12B. The welder is identified as #220069 and was observed welding in the 1G (flat) position using approved Welding Procedure Specification WPS-345-FCAW-1G (1F)-repair-1 for WR13818.

For the above mentioned welding activities ZPMC Quality Control (QC) Inspector is identified as Wang Li Yang. QA Inspector observed QC Inspector verify welding parameters. The welding variables recorded by QC appeared to comply with the Applicable WPS.

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### Segment 9BE/9CE

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing on the Bottom Plate WT stiffener hold back fillet welds.

### Segment 9DW

This QA Inspector observed fit up of the FL3 Bottom panel to FL3 Bottom flange at panel points 80-82.

### Cross Beam 11

This QA Inspector observed ABF personnel performing Ultrasonic Testing on the Deck Panel to Side Panel CJP connection, west side of cross beam.

### QA Verification

This QA Inspector observed QC Inspector Zhang Hai Jun select M24x65 A325 high strength bolt assemblies (bolt, nut and washer) for Pre-tension verification of required tension testing, five (5) assemblies from lot # DHGM240013 and 5 from lot # DHGM240002.

Upon arrival to Bolt Testing room in Bay 11 this QA Inspector was informed by ZPMC QA Lay Tao that the Dial Gauge on the Skidmore-Wilhelm Bolt Tension Calibrator Model: HT Serial Number: 1014 had broken off during shipment.

During the Quality Assurance Pre-Installation Verification of Required Tension for M24x65 high strength bolts, this Quality Assurance Inspector (QA) discovered the following issues:

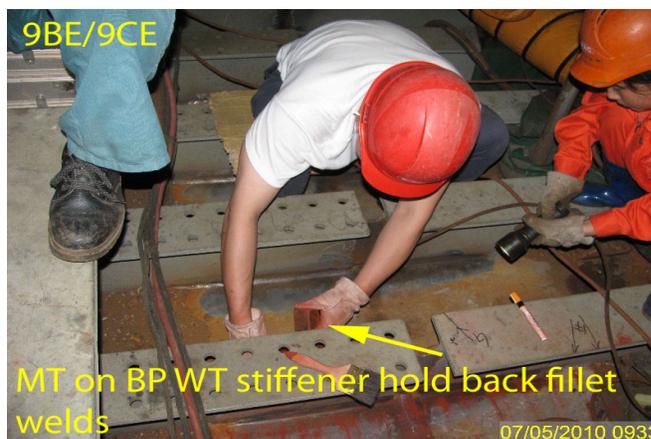
- The Skidmore-Wilhelm Bolt Tension Calibrator Model HT Serial Number 1015 calibration date had expired.
- Valid Dates of calibration are from 06/04/2009 thru 06/04/2010.
- Calibration dates are displayed on the Bolt Tension Calibrator.
- M24x65 Lot Number DHGM240013, M24x65 Lot Number DHGM240002

An Incident report was written for this issue.

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

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

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| <b>Inspected By:</b> | Hernandez,Dan | Quality Assurance Inspector |
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| <b>Reviewed By:</b> | Peterson,Art | QA Reviewer |
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