

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-014318**Date Inspected:** 22-May-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:** Mr. Liu Huajie**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

**TRIAL ASSEMBLY.**

This QA Inspector witnessed final Bolt tension verification for the Cable Tray support at Lift:8West from Panel Point (PP) #61~71 (Except PP#62~63). Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed as per the ZPMC submitted Notification No. 00359 Dated: May 22, 2010.

Details of bolt size, RC Set # and final torque value are as follows:

Bolt sizes used were  $\frac{3}{4}$ " X  $2\frac{1}{4}$ ", RC Set# DHG60580 and final torque value was 340 N-m.

Manual Torque wrench was been used with Sr. No. XO2-114.

This QA Inspector witnessed final Bolt tension verification for the Side plates and Bottom plate T Rib transverse splice joint and Longitudinal Diaphragm Transverse splice joint at Segment:7AW-7BW PP#49.25. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed as per the ZPMC submitted Notification No. 00357 Dated: May 22, 2010.

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Details of bolt size, RC Set # and final torque value are as follows:

Bolt sizes used were M22X65, RC Set# DHGM220035 and final torque value was 433 N-m.

Bolt sizes used were M22X70, RC Set# DHGM220017 and final torque value was 520 N-m.

Bolt sizes used were M24X70, RC Set# DHGM240010 and final torque value was 560 N-m.

Bolt sizes used were M24X95, RC Set# DHGM240021 and final torque value was 540 N-m.

Manual Torque wrench was been used with Sr. No. XO2- 777 and Sr.No.XO2-666.

Refer attached photo for reference.

This QA Inspector witnessed final Bolt tension verification for the Longitudinal Diaphragm Transverse splice joint at Segment: 7BW-7CW PP#52. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed as per the ZPMC submitted Notification No. 00358 Dated: May 22, 2010.

Bolt sizes used were M24X70, RC Set# DHGM240010 and final torque value was 560 N-m.

Bolt sizes used were M24X95, RC Set# DHGM240021 and final torque value was 540 N-m.

This QA Inspector performed Inspection for the flatness of the 'T' Rib splice plate by using 1000 mm straight edge at Segment: 7AW-7BW PP#49.25.

The measured readings were data recorded, generated the report and submitted to the Team Leader.

Segment: 9AE.

This QA Inspector Randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) of weld joint SP622-001-29. Welder is identified as 053742. ZPMC Quality Control (QC) is identified as Mr. Wang Li Yang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132.

FCAW of weld joint SP582-001-27. Welder is identified as 053609. ZPMC Quality Control (QC) is identified as Mr. Wang Li Yang. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2132.

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

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## Summary of Conversations:

Only general conversation was held between QA and Quality Control (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 Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Prabhu, Surendra	Quality Assurance Inspector
<b>Reviewed By:</b>	Hall, Steven	QA Reviewer

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