

**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-012288**Date Inspected:** 28-Feb-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

<b>CWI Name:</b>	Li Yang and Wu Zhi Cheng	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes	No N/A
		<b>Delayed / Cancelled:</b>	Yes	No N/A
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG Trial Assembly	

**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 6AW (T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Rib to T-Rib at Side Panel Cross Beam side between Panel Point (PP) 38 to PP 38.5, PP 39 to PP 39.5 and PP 39.5 to PP 40 for Segment 6AW. Inspected the T-Ribs along with 12mm Reinforcing Splice Plate above the Splice Plates. Tension verified on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00262 Dated February 28, 2010.

The following locations identified where 12mm Reinforcing plate installed on the Splice Plate.

At PP 38 to 38.5

5th location, 6th location, 16th location, 17th location, 18th location and 19th location.

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At PP 39 to PP 39.5

12th location, 13th location, 14th location and 17th location.

At PP 39.5 to PP 40

14th location and 19th location.

Bolt sizes used were M22 x 65 RC Set# DHGM220033 and final torque required was 470 N-m and

Bolt sizes used were M22 x 80 RC Set# DHGM220050 and final torque required was 486 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Note: T-Ribs numbering reference taken from Bottom Panel as 1st T-Rib and towards Side Panel as 19th T-Rib.

Note: for more comprehensive details kindly refer the pictures attached.

Segment 5BE (T-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for T-Rib to T-Rib at Side Panel Cross Beam side between Panel Point (PP) 32 to PP 32.5 for Segment 5BE. Inspected the T-Ribs along with 12mm Reinforcing Splice Plate above the Splice Plates on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00263 Dated February 28, 2010.

At PP 32 to 32.5

11th location and 13th location.

Bolt sizes used were M22 x 80 RC Set# DHGM220050 and final torque required was 486 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-584.

Note: T-Ribs numbering reference taken from Bottom Panel as 1st T-Rib and towards Side Panel as 19th T-Rib.

Segment 6CW

Punch List item 406

The QA inspector performed inspection for the punch list item 406 for T-Rib web dimension at PP 44 for Segment 6CW as measured web bulge in more that 3mm (when measured by 150mm straight ruler) at Stiffener 9th, 11th, 12th, 13th, 14th, 16th and 19th (Numbering from Bottom Panel towards Side Panel) Cross Beam side, dimension verification performed, found the dimension meeting the requirements.

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Report forwarded to team leader for further action.

Segment 6CW

Punch List item 407

The QA inspector performed inspection for the punch list item 407 for T-Rib web dimension at PP 44 for Segment 6CW as measured web bulge in more than 3mm (when measured by 150mm straight ruler) at Stiffener 12th, 13th, 14th, 15th, 16th, 17th, 18th and 19th (Numbering from Bottom Panel towards Side Panel) Cross Beam side, dimension verification performed, found the dimension meeting the requirements.

Report forwarded to team leader for further action.

Segment 6BE to 6CE

Incident Report No. 1200

The QA inspector performed inspection against the Incident report 1200 for Transverse Splice Weld between PP 43 and PP 44 for Segment 6BE to 6CE dimension was performed exterior side of the segment Cross Beam side, dimension verification performed, found the dimension meeting the requirements.

Report forwarded to team leader for further action.

Segment 6AW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 054467 performing repair welding by Shielded Metal Arc Welding process (SMAW) for weld SSD11A-PP039-168 located on PCMK Cross Beam side for OBG Segment 6AW. ZPMC CWI Mr. Wang Li Yang. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-4G (4F)-Repair. The welding was performed against Welding Repair Report (WRR) B-WR10688 Rev. 0. Please refer pictures attached below for more comprehensive details.

Segment 6AE

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067183 performing repair welding by Shielded Metal Arc Welding process (SMAW) for weld SSD11A-PP039-168 located on PCMK Cross Beam side for OBG Segment 6AW. ZPMC CWI Mr. Wang Li Yang. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-4G (4F)-Repair. The welding was performed against Welding Repair Report (WRR) B-WR10688 Rev. 0. Please refer pictures attached below for more comprehensive details.

Segment 6CE

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 067609 performing repair welding by Shielded Metal Arc Welding process (SMAW) for weld SP 528-001 103/105 located on PCMK T-Ribs Cope hole below the Floor Beam at FL3 areas for OBG Segment 6CE (Cross Beam side). ZPMC QC Mr. Zhang monitoring

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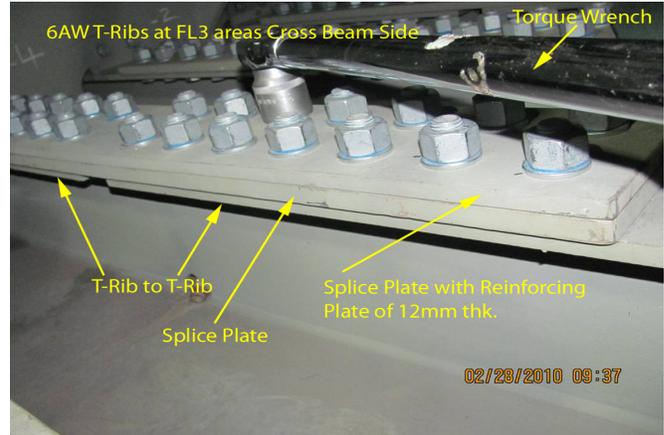
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this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2112-FCM-1 and WPS-B-P-2114-FCM-1.

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



## 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 T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Math,Manjunath

Quality Assurance Inspector

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**Reviewed By:** Miller,Mark

QA Reviewer