

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-018807**Date Inspected:** 17-Dec-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 Mr. M. Manikandan was present during the time noted above for observations relative to the work being performed.

OBG # TRIAL ASSEMBLY YARD (11CW-11DW)

This QA Inspector witnessed the final bolt tension verification on the U-rib of segment 11CW to 11DW. The torque wrench S/N was XO2-676. The QA inspector witnessed 10% of the bolts on a random basis and found the tensioning of the bolts appeared to be in general compliance with the contract specifications. The panel point and bolt size designations were as follows:

PP 103 to PP 104:

M22 X 65 – DHGM 220114– 333 NM

M22 X 85 – DHGM 220121– 393 NM

M22 X 80 – DHGM 220094– 470 NM

For additional information please reference the pictures below:

OBG # TRIAL ASSEMBLY YARD (11CW-11DW)

This QA Inspector witnessed the final bolt tension verification on the corner assembly of segment 11CW to 11DW. The torque wrench S/N was XO2-676. The QA inspector witnessed 10% of the bolts on a random basis and found the tensioning of the bolts appeared to be in general compliance with the contract specifications. The panel point

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and bolt size designations were as follows:

PP 103 to PP 104:

M22 X 55 – DHGM 220044– 473 NM

M22 X 85 – DHGM 220109– 350 NM

M22 X 120 – DHGM 220054– 497 NM

M24 X 60 – DHGM 220014– 567 NM

M24 X 65 – DHGM 220013– 540 NM

M24 X 80 – DHGM 220011– 533 NM

OBG # TRIAL ASSEMBLY YARD (11BW-11CW)

This QA Inspector witnessed the final bolt tension verification on the corner assembly of segment 11CW to 11DW.

The torque wrench S/N was XO2-676. The QA inspector witnessed 10% of the bolts on a random basis and found the tensioning of the bolts appeared to be in general compliance with the contract specifications. The panel point and bolt size designations were as follows:

PP 100 to PP 101:

M22 X 55 – DHGM 220044– 473 NM

M22 X 85 – DHGM 220109– 350 NM

M22 X 120 – DHGM 220054– 497 NM

M24 X 60 – DHGM 220014– 567 NM

M24 X 65 – DHGM 220013– 540 NM

M24 X 80 – DHGM 220011– 533 NM

OBG # TRIAL ASSEMBLY YARD (11CE)

This QA Inspector witnessed the final bolt tension verification on the corner assembly of segment 11CE. The

torque wrench S/N was XO2-666. The QA inspector witnessed 10% of the bolts on a random basis and found the tensioning of the bolts appeared to be in general compliance with the contract specifications. The panel point and bolt size designations were as follows:

PP 101 to PP 103:

M22 X 55 – DHGM 220011– 457 NM

M22 X 85 – DHGM 220121– 393 NM

M22 X 120 – DHGM 220054– 497 NM

M24 X 60 – DHGM 220014– 567 NM

M24 X 65 – DHGM 220013– 540 NM

M24 X 80 – DHGM 220011– 533 NM

OBG # TRIAL ASSEMBLY YARD (11DE)

This QA Inspector witnessed the final bolt tension verification on the corner assembly of segment 11DE. The

torque wrench S/N was XO2-666. The QA inspector witnessed 10% of the bolts on a random basis and found the

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tensioning of the bolts appeared to be in general compliance with the contract specifications. The panel point and bolt size designations were as follows:

PP 104 to PP 106:

M22 X 55 – DHGM 220011– 457 NM

M22 X 85 – DHGM 220121– 393 NM

M22 X 120 – DHGM 220054– 497 NM

M24 X 60 – DHGM 220014– 567 NM

M24 X 65 – DHGM 220013– 540 NM

M24 X 80 – DHGM 220011– 533 NM

This QA Inspector randomly observed the following work in progress:

OBG # TRIAL ASSEMBLY YARD (12AW-12BW)

The QA Inspector observed the welding operation per the SMAW process on weld joint no. 005 in the (4G) overhead position on edge and side panel piece mark no. CA3007. The location was the complete joint penetration groove weld joining edge and side panel of segment 12AW at work point W1. The welder ID was 040611. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-Tc-U4b-FCM-1.

The QA Inspector observed the welding operation per the SMAW process on weld joint no. 005 in the (4G) overhead position on edge and side panel piece mark no. CA3008. The location was the complete joint penetration groove weld joining edge and side panel of segment 12BW at work point W1. The welder ID was 040611. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-Tc-U4b-FCM-1.

OBG # TRIAL ASSEMBLY YARD (12AE)

The QA Inspector observed the welding operation per the SMAW process on weld joint no. 057 in the (4F) overhead position on edge panel piece mark no. EP3001-001. The location was the hold back of 'I' stiffener fillet weld of segment 12AE. The welder ID was 053871. The ZPMC CWI was identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-P-2114-FCM-1.

OBG # TRIAL ASSEMBLY YARD (12BE)

The QA Inspector observed the welding operation per the SMAW process on weld joint no. 008 in the (4F) overhead position on edge panel piece mark no. EP3002-001. The location was the hold back of 'I' stiffener fillet weld of segment 12BE. The welder ID was 053871. The ZPMC CWI was identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-P-2114-FCM-1.

OBG # TRIAL ASSEMBLY YARD (12AW-12BW)

The QA Inspector observed the welding operation per the FCAW process on weld joint no. 002 in the (3G) vertical position on side panel piece mark no. OBW12D. The location was the transverse splice weld joining segment 12AW and 12BW at work point W6 to W4. The welder ID was 053486. The ZPMC CWI was identified

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as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233T-ESAB.

The QA Inspector observed the welding operation per the FCAW process on weld joint no. 003 in the (3G) vertical position on side panel piece mark no. OBW12D. The location was the transverse splice weld joining segment 12AW and 12BW at work point W6 to W4. The welder ID was 049220. The ZPMC CWI was identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233T-ESAB.



Summary of Conversations:

No relevant conversations were reported on this date.

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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| Inspected By: | Manikandan,Murugan | Quality Assurance Inspector |
| Reviewed By: | Peterson,Art | QA Reviewer |
