

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-015671**Date Inspected:** 18-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 and Zhu Zhong Hai**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 Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. 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

Incident Report generated at Cross Beam # 11

This Quality Assurance (QA) Inspector wrote an Incident Report for a Stiffener being out of flatness. The Stiffener was identified as the 4th from the bottom at the south end of the Cross Beam at Panel Point (PP) 74. Please reference Incident Report # 04-0120F4_TL-15_B278_07-18-2010_CB 11_PP 74_Stiffener_Impact Damage dated July 18, 2010.

Please reference the pictures attached for more comprehensive details

Incident Report generated at Segment 9CE

This Quality Assurance (QA) Inspector wrote an Incident Report for welding the Intermediate Stiffener of Longitudinal Diaphragm required only to be Tight Fit to bottom panel after grinding the base material was gouged into the more than the allowable tolerances. The Longitudinal Diaphragm is located at Segment 9CE between

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Panel Points (PP) 76.25 to PP 77. Please reference Incident Report # 04-0120F4_TL-15_B278_07-18-2010_9CE_PP 76.25 to PP 77_Intermediate Stiffener_Tight Fit dated July 18, 2010.

Please reference the pictures attached for more comprehensive details

Segment 9BE to Segment 9CE

This QA Inspector performed Dimension Control Inspection for measuring Offset and Sweep along with Caltrans QA Inspector Mr. Manikandan Murugan on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point E3 (Bike Path side) and E4 (Cross Beam side) for the Segment 9BE to Segment 9CE between Panel Point (PP) 76 to PP 77 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9CE to Segment 9DE

This QA Inspector performed Dimension Control Inspection for measuring Offset along with Caltrans QA Inspector Mr. Manikandan Murugan on the U-Rib to U-Rib from Cross Beam side towards Bike Path side at a total of 39 locations on Segment 9CE to Segment 9DE between Panel Point (PP) 79 to PP 80 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9BE to Segment 9CE (Skin Flatness)

This QA Inspector performed Joint Inspection along with Caltrans QA Mr. Manikandan Murugan and with the ABF Survey Team to check the Skin Flatness between Segment 9BE to Segment 9CE between Panel Points (PP) 76 and PP 77 at the following locations:

The skin flatness was measured on North side (Cross Beam side at B1 and B2 location) and South side (Bike Path side at B3 and B4 location) at 100mm from the weld connecting Bottom Panel to Side Panel using 5000mm string line to verify overall flatness. The Straight Edges of 600mm and 630 mm of length were also used to measure the

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localized flatness.

The skin flatness was measured on North side (Cross Beam side at T1 location) and South side (Bike Path side at T2 location) at 100mm from the weld connecting Deck Panel to Edge Panel using 5000mm string line to verify overall flatness. The Straight Edge of 600mm and 630 mm length were also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 9BW to Segment 9CW

This QA Inspector observed the in-process welding by Submerged Arc Welding (SAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW9-008. The welder identification was 045265 and 045270 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-223(2)1T-2. The piece mark was identified as the Deck Panel transverse splice weld.

Segment 9BW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA059-006. The welder identification was 045196 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as the Deck Panel to Edge Panel Longitudinal Weld at Work Point W2 on the Counter Weight Side.

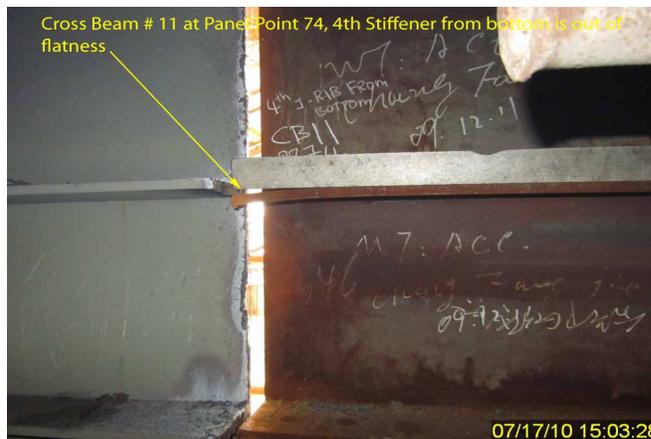
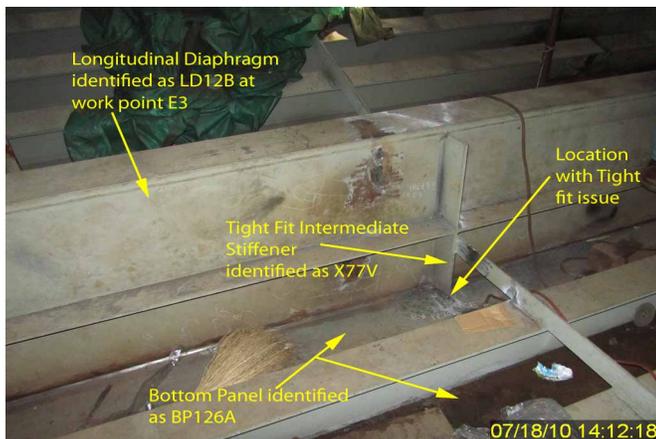
Segment 9CW

This QA Inspector observed the in-process welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as CA061-002. The welder identification was 045196 and was observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-B-P-2214-Tc-U4b-FCM-1. The piece mark was identified as the Deck Panel to Edge Panel Longitudinal Weld at Work Point W2 on the Counter Weight Side.

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 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 150000422372, who represents the Office of Structural Materials for your project.

Inspected By: Math, Manjunath

Quality Assurance Inspector

Reviewed By: Peterson, Art

QA Reviewer