

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-007238**Date Inspected:** 09-May-2009**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:** Sun Wei / Sun Bo**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 Components**Summary of Items Observed:**

The Caltrans (CT) Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the Tower and Orthotropic Box Girders (OBG).

Outside at Vertical Milling Machine:

The QA Inspector randomly observed a ZPMC Machine Operator utilizing the Vertical Milling Apparatus to mill the bottom edges of Skin Plates A through E and attached longitudinal stiffeners on Lift 1 South Tower. The attached photograph provides additional detail.

Heavy Equipment Shop Bay 10:

The QA Inspector attempted to perform a 100% Visual Inspection (VT) Inspection of the welds attaching the diagonal corner stiffener over the long seam weld between Skin Plate C and Skin Plate D and 53M through 80. 75M Diaphragms to Skin Plate C and Skin Plate D in Lift 2 South Tower Shaft per ZPMC NDT Notification Sheet number 002989. There were several areas that will require grinding at the minimum and others which will require weld repair as well. The QA Inspector informed ZPMC Quality Control (QC) that these areas would have to be re-worked and that the above listed welds in Lift 2 South Tower Shaft were not ready for inspection at this time. ZPMC QC informed the QA Inspector that he would be notified when repairs were completed and the welds would be ready for re-inspection. The QA Inspector exited Lift 2 South Tower Shaft at 0930. The attached photograph provides additional detail.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

The QA Inspector was notified that repairs had been completed to the welds attaching the diagonal corner stiffener over the long seam weld between Skin Plate C and Skin Plate D and 53M through 80.75M Diaphragms to Skin Plate C and Skin Plate D in Lift 2 South Tower Shaft. The QA Inspector attempted to perform a follow up 100% VT Inspection of the above listed welds per ZPMC NDT Notification Sheet 002989. There appeared to be no indications on the welds attaching the diagonal corner stiffener over the long seam weld between Skin Plate C and Skin Plate D and the QA Inspector accepted those 2 welds. The QA Inspector also observed that repairs had been completed to the welds attaching 53M through 80.75M Diaphragms to Skin Plate C and Skin Plate D; but that the repairs in the copes on 53M through 80.75M Diaphragms to Skin Plate C and Skin Plate D had not been completed.

There were several areas that will require grinding at the minimum and others which will require weld repair as well. The QA Inspector informed ZPMC QC that these areas would have to be re-worked and that the above listed welds for the copes on 53M through 80.75M Diaphragms to Skin Plate C and Skin Plate D in Lift 2 South Tower Shaft were not ready for inspection at this time. ZPMC QC informed the QA Inspector that he would be notified when repairs were completed and the welds would be ready for re-inspection. The QA Inspector exited Lift 2 South Tower Shaft at 1415.

The QA Inspector was notified that repairs had been completed in the cope areas of the welds attaching 53M through 80.75M Diaphragms to Skin Plate C and Skin Plate D and attempted to perform a follow up 100% VT Inspection of the above listed welds per ZPMC NDT Notification Sheet 002989. The QA Inspector observed that the repairs in the cope areas of the welds attaching 53M through 80.75M Diaphragms to Skin Plate C and Skin Plate D had not been completed and informed ZPMC QC that these areas would still have to be re-worked and that the above listed welds in Lift 2 South Tower Shaft were not ready for inspection at this time. ZPMC QC informed the QA Inspector that per Section 4.0 paragraph 4.2 of the approved "Tower Cope Hole Acceptance Criteria", the copes were acceptable. Paragraph 4.2 states that "Some sharp edges inside the cope hole, small amounts of weld spatter inside the cope hole and other anomalies within the cope hole can be accepted if an effort has been made by ZPMC production to remove these items. Complete removal is not necessary if they are in line with the attached photographs. ZPMC QC showed the QA Inspector the above mentioned criteria with paragraph 4.2 highlighted with the exception of the last part of the last sentence that states: "...if they are in line with the attached photographs. The QA Inspector pointed out the omission and produced the photographs for ZPMC QC to view. ZPMC QC informed the QA Inspector that he would be notified when repairs to the cope areas were completed and the welds would be ready for re-inspection. The QA Inspector exited Lift 2 South Tower Shaft at 1640.

Heavy Equipment Shop Bay 11:

The QA Inspector performed a 100% VT Inspection of the long seam weld between Skin Plate A and Skin Plate B and 65M through 80.75M Diaphragms in Lift 2 East Tower Shaft per ZPMC NDT Notification Sheet 003000. There was area that required some blending which was corrected by a ZPMC helper with an angle grinder. There appeared to be no indications after the blending of the I area and the QA Inspector accepted the above listed welds.

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

Summary of Conversations:

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

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 Serge Sinevod 13482570045, who represents the Office of Structural Materials for your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
