

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-000877**Date Inspected:** 16-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Changxing Island**CWI Name:** Arthur Peterson**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 Deck Plate Trail**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Larry Viars was present to perform welding inspection of Orthotropic Box Girder (OBG) Deck Plate Panel Mock-up, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Caltrans QA Inspector Viars and Caltrans QA Inspector Croff performed random visual observations of the Submerged Arc Welding (SAW) cover pass welds on the OBG Deck Plate Panel Trial closed ribs. Visual observations were performed on 13 and 1.7 meter deck plate panel closed ribs welds. ZPMC Quality Control (QC) personnel performed 100% visual inspection prior to Caltrans random observation. American Bridge Flour (ABF) performed random observations of the cover pass prior to Caltrans observations. The following welding anomalies were noted during the random visual inspection; undercut that exceeded 0.25 mm, overlap, undersized weld and areas of incomplete fusion. These areas were marked on the deck plate adjacent to area of interest. Mapping and locations were recorded by the above mentioned Caltrans QA Inspectors. Overlap was evaluated with a steel rule butted up to the bottom plate to weld toe while artificial lighting at induced 90° to the steel rule. Areas where the overlap exceeded a 90° angle and light was visible from the toe of the weld with a no visible light noticeable from the bottom of the rule were marked as overlap. Areas where the overlap was suspect and a light leak was present under the rule were recorded but not marked as overlap. The following pictures below shows an area of undercut at the weld to U Rib toe on the (bottom left photo), and an area of underfill on the 1.7 meter Deck Plate Panel where the runoff tab begins (bottom right photo).

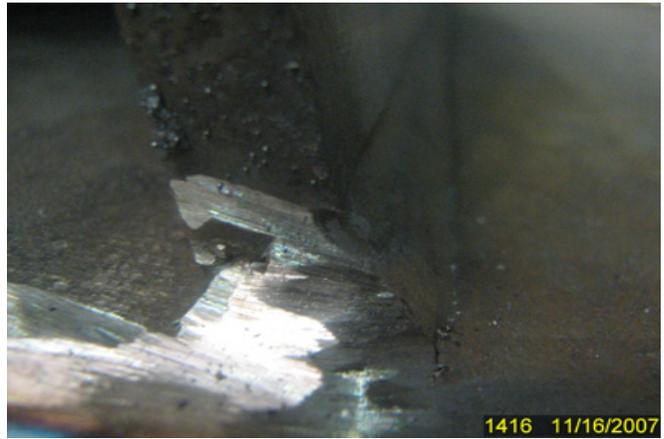
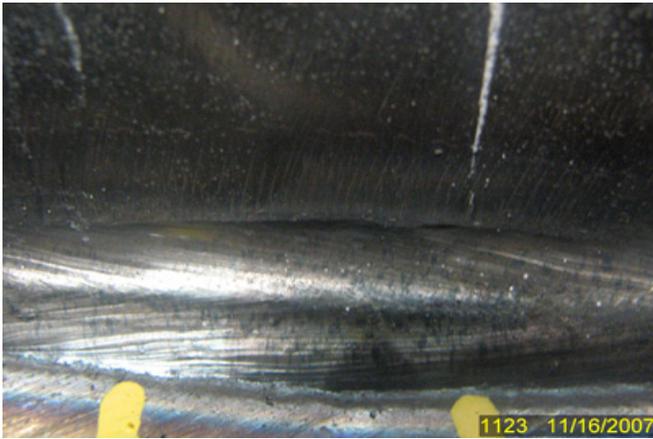
Areas of welding discontinuities noted above were in addition to those found by ABF and ZPMC personnel.

Caltrans QA Inspector Viars performed random visual observations of the welding of U Ribs on the Deck Plate

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Panel mock-up. The SAW cover pass welding of the U Ribs did not appear to meet AWS D1.5 requirements.



Summary of Conversations:

No relevant conversations occurred 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Viars,Larry	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
