

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-006095**Date Inspected:** 11-Mar-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**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:** Tower Fabrication**Summary of Items Observed:**

CWI Inspectors Mr. Wu Ming Kai, Mr. Chen Shou hua

Tower Bay 10

On this date CALTRANS OSM Quality Assurance (QA) Inspector Mr. Paul Dawson arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

The QA Inspector observed ZPMC welder Mr. Gao Qiang, stencil 057258 is using welding procedure WPS-B-T-3212-TC-U5b to make a shielded metal arc groove weld on shear link weld WDI-A467-33M-4A. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring Mr. Qiang to have a welding current of 280 amps. Prior to welding the QA Inspector observed ZPMC personnel to be using electric heating elements to preheat the base material of the complete joint penetration weld joint and adjacent base material. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Huang Xhao stencil 056200 is using welding procedure WPS-B-T-3212-TC-U5b to make a shielded metal arc groove weld on shear link weld WDI-A467-23M-1A. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring Mr. Xhao to have a welding current of 270 amps. Prior to welding the QA Inspector observed ZPMC personnel to be using electric heating elements to preheat the base material of the complete joint penetration weld joint and adjacent base material. Items observed

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by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Mr. Chen Jizhong, stencil 052771 is using welding procedure WPS-B-T-3212-TC-U5b to make a shielded metal arc groove weld on shear link weld WDI-A467-23M-4B. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring Mr. Chen Jizhong to have a welding current of 240 amps. Prior to welding the QA Inspector observed ZPMC personnel to be using electric heating elements to preheat the base material of the complete joint penetration weld joint and adjacent base material. Items observed by the QA Inspector appear to comply with project specifications.

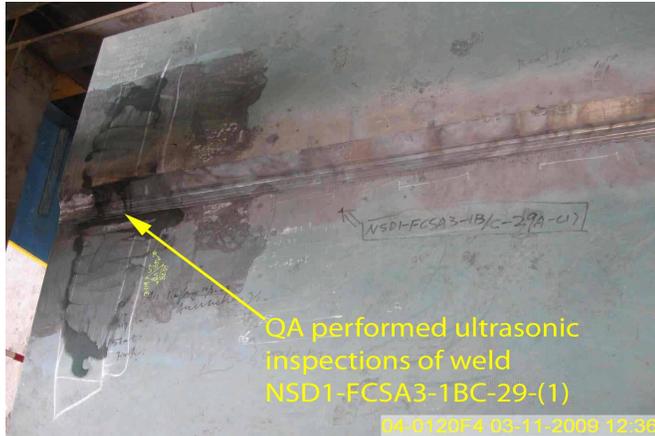
The QA Inspector observed ZPMC welder Mr. Lu Hou Jin, stencil 040333 is using welding procedure WPS-B-T-3212-TC-U5b to make a shielded metal arc groove weld on shear link weld WDI-A467-23M-1B. The QA Inspector observed ZPMC CWI Mr. Wu Ming Kai measuring Mr. Lu Hou Jin to have a welding current of 250 amps. Prior to welding the QA Inspector observed ZPMC personnel to be using electric heating elements to preheat the base material of the complete joint penetration weld joint and adjacent base material. Items observed by the QA Inspector appear to comply with project specifications.

This QA Inspector performed random ultrasonic inspections of approximately 50 percent length of Shear Link complete joint penetration butt welds NDI-A467-47.6m-2-4B, NDI-A467-53m-2-2, NDI-A467-65m-2-2, NDI-A467-77m-2-4, NDI-A468-33m-2-2, NDI-A468-28m-2-4 and NDI-A468-33m-2-2. These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that was ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. For additional information on this inspection see the TL6027 Ultrasonic Test Report.

This QA Inspector performed random ultrasonic inspections of approximately 20 percent length of West Tower Lift 2 Skin plate D stiffener to skin plate welds NSD1-FCSA3-1B/C-11, NSD1-FCSA3-1B/C-26 and NSD1-FCSA3-1B/C-29-(1). These welds had previously been ultrasonically inspected and accepted by ZPMC inspection personnel. The QA Inspector observed the welds that was ultrasonically inspected by this QA Inspector appear to comply with AWS D1.5 UT requirements. The QA Inspector observed ZPMC ultrasonic inspection personnel have identified weld NSD1-FCSA3-1B/C-29 as being ultrasonically rejected. For additional information on this inspection see the TL6027 Ultrasonic Test Report and the photograph below. The QA Inspector observed ZPMC has not issued a Notification of Witness Inspection document to inform Caltrans personnel that these inspections would be performed. The QA Inspector informed ZPMC QC representative Mr. Ken Zhang that no Notification of Witness Inspection document appears to have been issued. Approximately one hour later ZPMC issued Notification of Witness Inspection document #002226 which lists these welds are ready for ultrasonic inspections.

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Summary of Conversations:

See above.

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 phone: 134-8257-0045 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
