**DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

# WELDING INSPECTION REPORT

**Resident Engineer:** Pursell, Gary
**Address:** 333 Burma Road
**City:** Oakland, CA 94607

**Report No:** WIR-010390
**Date Inspected:** 04-Nov-2009

**Project Name:** SAS Superstructure
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV
**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

**OSM Arrival Time:** 700
**OSM Departure Time:** 1900
**Location:** Shanghai, China

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| **CWI Name:** | Chen Xi | | | **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 Crossbeams

**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG CROSS BEAM CB1

This crossbeam appears to be complete and has been loaded on the ship.

OBG CROSS BEAM CB2

This crossbeam appears to be complete and has been loaded on the ship.

OBG CROSS BEAM CB3

This crossbeam appears to be complete and has been loaded on the ship.

OBG CROSS BEAM CB5

This QA received notification that ABF QA inspectors have performed Ultrasonic Testing (UT) of welds CB201A-005-005 and CB201A-005-017 using scanning pattern D per AWS D1.5 2002 figure 6.7. The written

procedure identified as “Transverse segment assembly splice Ultrasonic Testing Procedure for compliance to AWS D1.5 2002, section 6.26.3.2 detection of transverse planar discontinuities with significant flaw height dimension” specifies that level II UT technicians are required to receive additional UT training specific to this procedure. Caltrans QA Mr. Gary Richmond was assigned to train this QA to the scanning technique, procedure and evaluation of the above mentioned welds. This QA noted that ABF inspectors appear to have marked and rejected 12 indications on weld CB201A-005-005. This QA observed Mr. Richmond perform UT of the entire length of this weld with the exception of a portion of this weld approximately 600mm in length that could not be scanned due to interference with one of the stands that this crossbeam is sitting on. This QA noted that several of Mr. Richmonds findings appeared to conflict with ABF UT technicians findings.

OBG CROSS BEAM CB9

This QA observed ZPMC qualified welding personnel identified as 019006 perform FCAW welding on weld joint identified as CB202G-022-165. ZPMC QC identified as Mr. Liu Chuan Gang was present to monitor the welding process. The welding parameters as measured using QC’s calibrated instruments appeared to be in general compliance with WPS-B-T-2132.

OBG CROSS BEAM CB11

This QA observed that no significant work was being performed on this crossbeam during the time QA was present.

OBG CROSS BEAM CB16

This QA observed that ZPMC is continuing to fit this crossbeam together. Currently they have the side and intermediate panels fit and tack welded to the deck panel and are in the process of fitting the floor beam sections to the deck panel.

Unless otherwise noted, all work observed on this date appeared to be in general compliance with the applicable contract documents.

**Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

**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:** | Hall,Steven | Quality Assurance Inspector |
| **Reviewed By:** | Patterson,Rodney | QA Reviewer |