

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-016376**Date Inspected:** 18-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**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:** OBG**Summary of Items Observed:**

CWI Inspectors: Mr. Liu Hua Jie, Mr. Sun Zi Wang

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. This QA Inspector observed the following:

OBG Segment Trial Assembly

ABF has recently completed ultrasonic inspections of various "hold back" welds on OBG segments 9CW, 9DW and 9EW and the weld reports welds were presented to Caltrans QA for Inspections. The following is a list of the UT reports and the weld numbers that were inspected by this QA Inspector this shift:

UT report UT-9W-074, weld CA062-002, 9CW deck plate to edge plate adjacent to 9DW.

UT report UT-9W-075, weld SEG055*-049, 9DW deck plate to edge plate adjacent to 9CW.

UT report UT-9W-076, weld CA062-001, 9CW side plate to edge plate adjacent to 9DW.

UT report UT-9W-077, weld SEG055A-046, 9DW side plate to edge plate adjacent to 9CW.

UT report UT-9W-079, weld CA067-002, 9EW deck plate to edge plate adjacent to 9DW.

UT report UT-9W-080, weld CA065-005, 9DW side plate to edge plate adjacent to 9EW.

UT report UT-9W-081, weld CA067-001, 9DW side plate to edge plate adjacent to 9EW.

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This QA Inspector performed random visual and ultrasonic inspections utilizing scanning patterns A, B, C and D (AWS D1.5 Fig 6.7). ABF has indicated unacceptable ultrasonic indications in reports -74, and 81 and no additional rejectable indications were observed. Note: These inspections were documented and tracked on "Verification Witness Request" documents. See the TL-6027 UT report for additional information concerning this inspection.

Blast Shop 2

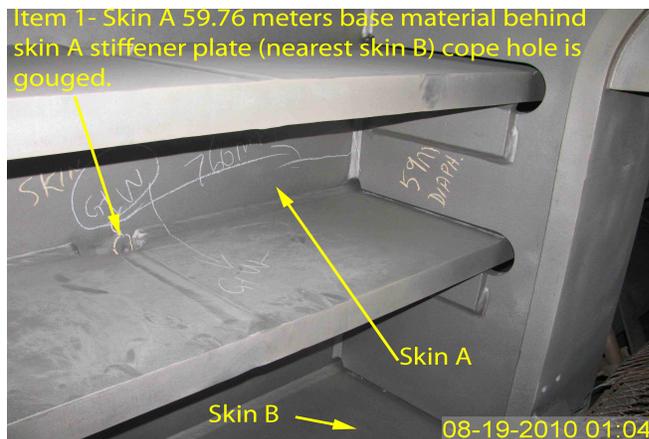
ZPMC requested Caltrans personnel to perform visual inspections of South Tower Lift 2 between the 50 meter elevation and the 65M upper double diaphragm on August 19, 2010 at around 00:30 hours following the initial pre-blast cleaning of the steel surfaces. Caltrans QA Inspector Ken Riley and this QA Inspector performed random visual inspections of these areas.

This QA Inspector visually observed approximately 30 locations that required grinding to resolve visual weld spatter, arc strikes, shallow nicks, scrapes, and other minor surface rejections and three locations which require weld repairs. ABF and ZPMC Inspectors also performed visual inspections of the areas indicated above and a total of ten areas were identified as needing weld repairs. A "Blast Inspection" incident report has been issued to document these repairs and below is a total list of the weld repairs that were observed by all Inspectors.

- 1- Skin "A" 59.76 meters base material gouge behind skin "A" stiffener plate (nearest skin "B") cope hole.
- 2- Fit lug porosity in weld SSD1-TL5C/L-78 to 53 meter diaphragm.
- 3- 53 meter upper diaphragm to skin plate "E" weld SSD1-TL5C/L-214 has porosity.
- 4- 53 meter corner plate to upper diaphragm weld SSD1-TL5C/L-200 has porosity.
- 5- Skin "E" base metal gouge 100 mm from 56 meter diaphragm near weld SSD1-TL5D/L-53.
- 6- 59 meter diaphragm, across from skin "A" has a base material gouge.
- 7- Skin "E" has porosity at 62 meter diaphragm cope hole adjacent to skin "D".
- 8- 62 meter diaphragm fit lug weld SSD1-TL5E/L-46 has porosity.
- 9- 65 meter lower diaphragm fit lug weld SSD1-TL5E/L-67 has porosity.
- 10- 65 meter lower diaphragm fit lug weld SSD1-TL5E/L-70 has porosity.

Item #11 was added to address a 150mm x 150mm piece of steel which is wedged behind 65 meter lower diaphragm near fit lug weld SSD1-TL5E/L-77.

For further information, please see the attached pictures below



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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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul	Quality Assurance Inspector
Reviewed By:	Carreon,Albert	QA Reviewer
