

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-011892**Date Inspected:** 10-Feb-2010**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:** Li Yang**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:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Shrikant Utekar 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:

**TRIAL ASSEMBLY YARD**

This QA Inspector randomly observed the following work in progress.

**OBG SEGMENT 7BW**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 068917 performing Shielded Metal Arc Welding process for weld SEG035-044 located on PCMK corner weld between deck panel and edge panel (cross beam side). ZPMC QC Mr. Li Yang monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-TC-U4B-FCM-1.

**OBG SEGMENT 7CW**

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 069683 performing Shielded Metal Arc Welding process for weld CA035-006 located on PCMK corner weld between deck panel and edge panel (cross beam side). ZPMC QC Mr. Li Yang monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-P-2214-TC-U4B-FCM-1.

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# WELDING INSPECTION REPORT

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## OBG SEGMENT 7AW-7BW

This Quality Assurance (QA) Inspector observed ZPMC qualified welder 066746 performing Flux Cored Arc Welding process for weld BP-089-001-41 located on PCMK bottom panel 'T' stiffener to 'T' stiffener at bottom panel splice weld between OBG segment 7AW and 7BW. ZPMC QC Mr. Li Yang monitoring this welding. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233-B-U2-F.

## OBG SEGMENT 7CW

This Quality Assurance (QA) Inspector observed ZPMC personnel performing heat straitening on top flange of longitudinal diaphragm in between panel point 47 and 48(cross beam side). Heat straitening report identified as HSR1 (B)-8121. See attached photo.

## UTRASONIC INSPECTION

### OBG SEGMENT # 5 WEST

This Q.A Inspector performed Ultrasonic Testing of approximately 10% of the area previously tested and accepted by ZPMC Quality control personnel. This QA Inspector generated a (U.T) report for this date. The members are identified as edge panel 'T' rib stiffener. Weld Designation is as follows.

EP-043-001-015

During the inspection this Quality Assurance (QA) Inspector observed a class 'A' indication with indication rating +10db. Regarding this issue this Quality Assurance (QA) Inspector informed to lead inspector, Lead inspector called to ZPMC NDT inspector. ZPMC performed ultrasonic inspection on same weld and they found indication with rating 13db. According to lead inspector ZPMC will repair this weld without issuing incident report.

## ULTRASONIC INSPECTION

### OBG SEGMENT 5BW- 5CW

This Quality Assurance (QA) Inspector performed conventional UT (Ultrasonic Testing) in conjunction with ABF Ultrasonic Testing (UT) department for detection of planar transverse indication.

Ultrasonic Testing (UT) performed on repair areas of the weld between side panel and bottom panel (cross beam side). Weld number was identified as SEG026A-005, SEG025A-008. Ultrasonic inspection performed utilizing scanning pattern A, B, C and D (Fig 6.7). American Bridge Fluor (ABF) request number was 02092010-1.

No significant indication were found

## MAGNETIC PARTICLE INSPECTION

### OBG SEGMENT 5BW- 5CW

This QA Inspector Witnessed ABF personal performing Magnetic particle Testing (MT) on weld between side panel and bottom panel (cross beam side) weld are identified as -005, SEG025A-008. American Bridge Fluor (ABF) request number was 02092010-1.

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# WELDING INSPECTION REPORT

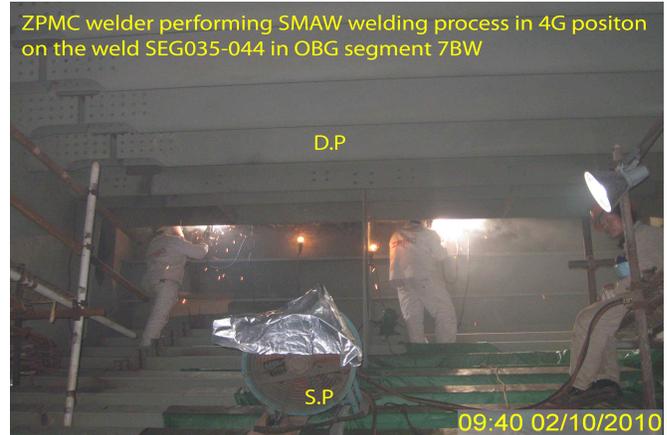
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No Indications were observed during MT

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



## Summary of Conversations:

Only general conversation was held between QA and QC concerning Ultrasonic inspection

## 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, +(86) 1500 042 2372, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Utekar,Shrikant	Quality Assurance Inspector
<b>Reviewed By:</b>	Dawson,Paul	QA Reviewer

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