

**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-002168**Date Inspected:** 13-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** Sun Wei/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:** Tower/OBG**Summary of Items Observed:**

## Tower Shop Bay 1

This Quality Assurance (QA) inspector arrived at ZPMC for periodic observation of the Self-Anchored Suspension Tower (SAS) and Orthotropic Bridge Girders (OBG). During the observations it was noted that ZPMC was in the process of welding skin plate number SSD1-SA173 A/K-15A under WPS-B-T-2221-B-U3c-S. ZPMC welding operator Xu Yan was running the new Submerged Arc Welding (SAW) equipment which was equipped with a laser site to ensure proper alignment in the weld joint (see digital photo below). ZPMC Quality Control/Certified Welding Inspector (QC/CWI) An Qing Xiang was observed as being present during the operations to monitor progress and welding parameters. Mr. Xiang also had 3 additional Quality Control personnel in the area for the skin plates to assist in the progress and parameter monitoring. This QA inspector also verified the welding parameters for this location as follows; 600 amps, 33 volts and a travel speed of 460 mm/min. The preheat and interpass temperatures were being monitored by ZPMC and this QA inspector and was noted to be within the tolerances of the WPS being applied.

## Bay 3

During the continued observations at ZPMC this QA inspector observed ZPMC welding in bay 3 for side and bottom plates in multiple stages of fabrication throughout the shop bay that included but was not limited to. Fit-up, CJP splice welds for the WT stiffeners, layout for the locations of the stiffeners. ZPMC had several Quality Control personnel (3) throughout the shop monitoring the different stages and 1 CWI Wu Ming Kai which was observed at the gantry monitoring SP411-001 multi-pass fillet welds being welded under WPS-B-T-2132-3. 3 ZPMC welders were noted at the gantry station for the welding of this side plate.

## Bay 4

This Quality Assurance (QA) inspector arrived at ZPMC for observation of SAS superstructure fabrication. The

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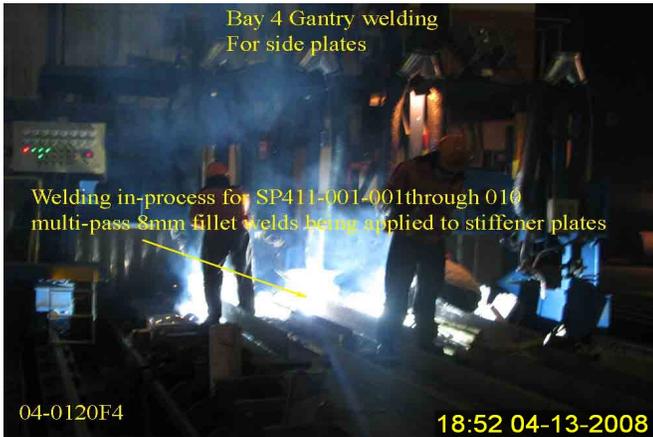
# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

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components observed this day were diaphragm plate splice for component number NSD1-SA276 1A/2A using Submerged Arc Welding (SAW) process according to Welding Procedure Specification (WPS) WPS-B-T-3221-B-U3c-S-1. This QA inspector monitored the final pass being applied for this side of the diaphragm plate splice as ZPMC was to rotate the component 180° to side B for welding distortion control and continue welding. Quality Control/Certified Welding Inspector (QC/CWI) Ye Yong Jun was noted as being present during the process to monitor the progression and welding parameters along with 3 ZPMC QC personnel.



## Summary of Conversations:

As noted within contents 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Riley, Ken Quality Assurance Inspector

**Reviewed By:** Hager, Craig QA Reviewer

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