

**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-002642**Date Inspected:** 25-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1430**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Testino			<b>CWI Present:</b>	Yes	No	
<b>Inspected CWI report:</b>	Yes	No	N/A	<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A	<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A	<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A	<b>Approved WPS:</b>	Yes	No	N/A
				<b>Delayed / Cancelled:</b>	Yes	No	N/A
<b>Bridge No:</b>	34-0006			<b>Component:</b>	OBG/Deck Panels		

**Summary of Items Observed:**

On this date, Caltrans Office of Structural Materials (OSM) Quality Assurance (QA) Inspector Edward Leach was present to randomly observe and document the welding and Quality Control (QC) functions performed by ZPMC personnel relative to the fabrication of SAS Superstructure project. While on site, the QA Inspector noted the following work.

**New Tower Shop-Bay 3**

The QA Inspector observed that ZPMC personnel completed final magnetic particle testing (MT) and visual testing (VT) after repairs were complete for deck panel designations DP063-001 and DP020-001. Both deck panels were signed off by ZPMC on this date. The QA Inspector also performed VT and MT for DP063-001 and DP020-001 after ZPMC. While performing VT on weld joint 009 for DP063-001, the QA Inspector observed overlap in two areas where repairs were already made. These areas were marked up and the QA Inspector notified ZPMC CWI personnel Wang Wai. Mr. Wai instructed ZPMC personnel to remove the overlap by grinding. Both areas of overlap were removed by grinding, re-inspected and appeared to comply with the contract specifications. The MT was performed on repaired sections of weld joint 2 for both deck panels, covering approximately 15% of the total repairs that were completed by ZPMC. The completed work appeared to comply with the contract specifications.

Later in the shift, the QA Inspector observed ZPMC MT personnel perform final MT for repaired sections of DP014-001. The MT was still in process as of the end of second shift.

The QA Inspector also observed ZPMC MT personnel perform MT for six (6ea) areas on DP051-001, beginning at weld joint 001, 002, 005, 006, 009 and 010. These areas were previously marked by ABF QC personnel for

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# WELDING INSPECTION REPORT

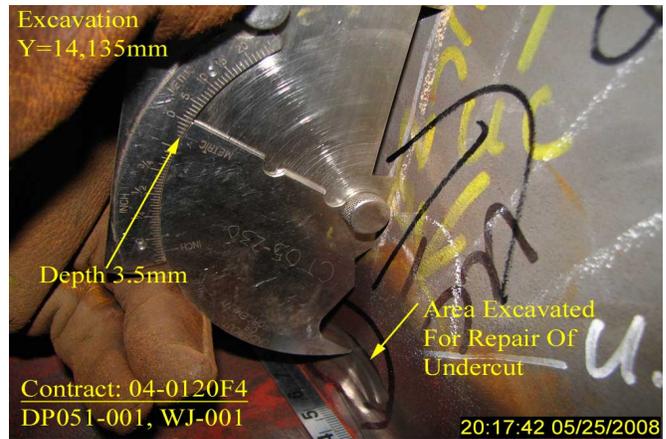
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undercut and were excavated by grinding at this time. The QA Inspector observed that the top half area of each excavation was into the base material while the bottom half was into the top toe area of the weld. The QA Inspector took dimensional measurements of each excavation, observing depths between 2mm and 3.5mm into the base material. The QA Inspector had to measure the Y coordinates backwards, beginning at WJ-001, progressing right to left to WJ-010. The other end of the deck panel was not accessible. The QA Inspector inquired about the status of these repairs to ZPMC QC personnel Wang Lu (Testino). Mr. Wang Lu informed the QA Inspector that ZPMC has already written a critical weld repair (CWR) for this work, but does not have a copy on hand for review.

As of 5/25/08, ZPMC has not submitted a copy of the CWR to Caltrans and was observed on second shift proceeding with welding at their own risk. The QA Inspector later informed second shift Task Leader Albert Carreon that ZPMC proceeded with base metal weld repairs before engineering approval was given. The QA Inspector later generated a TL-0015 incident report regarding this issue. The following digital images below detail the extent of the base metal gouges. All six areas were similar in shape, depth, location and length.



## Summary of Conversations:

As noted above in report.

## 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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<b>Inspected By:</b>	Leach,Ed	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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