

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-001993**Date Inspected:** 22-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1500**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2200**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Zhao Gang Luan**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 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 OBG

The QA Inspector made a random observation to this shop and observed that ZPMC personnel were in the process of performing submerged arc welding (SAW) for a splice weld on bottom panel segment designation SEG17A-004 (BP14A-BP15A) 4A-D6W (see digital picture below). The QA Inspector reviewed the CWI welding inspection report provided by ZPMC CWI Zhao Gang Luan and noted 627 amperes for the welding current, 31.6 volts and 485 mm for the recorded travel speed. The QA Inspector performed a random measurement of the welding parameters observing little variation from the information mentioned above. The QA Inspector observed Mr. Zhao Gang Luan perform a measurement of the interpass temperature with a hand held thermal heat gun and record approximately 162 degrees Celsius. The interpass temperature was verified in several locations along the weld length with little variation from the recorded measurement mentioned above. The QA Inspector was informed by ABF QC Inspection personnel Wang Cheng that the welding is being performed to the requirements of welding procedure specification (WPS)-B-T-223(2) 1T. The welder at this location was identified as Wang Lan Ying, identification 045265 and was welding two cover passes at the time of this observation. The welding and workmanship randomly observed at this location appeared to comply with the noted WPS and the contract specifications.

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Bay 3

The QA Inspector performed random observations in bay 3 and observed ZPMC personnel performing fit-up and tack welding operations for T rib stiffeners on several side panel assemblies. The QA Inspector observed four (4ea) welders throughout the bay performing the tack welding with the Shielded Metal Arc Welding (SMAW) process and additional personnel performing grinding and preparatory work on the tack welds. The QA Inspector observed ZPMC certified weld inspector (CWI) Wu Ming Kai performing general inspection coverage for bay 3. No further welding was observed in bay 3 on this date. The Work in progress appeared to comply with the contract specifications.

Bay 4

The QA Inspector observed ZPMC CWI personnel Wu Ming Kai performing visual inspection for the T rib partial joint penetration (PJP) welds on side panel designation SP092-001. The QA Inspector also performed a random observation of the completed PJP welds and observed that the work appeared to comply with the contract specifications.

Bay 7

The QA Inspector observed ZPMC personnel performing ultrasonic testing (UT) for weld repairs on the 30mm triangular shaped OBG diaphragm plates. The UT was being performed for a 1800 mm complete joint penetration (CJP) transitional weld within areas that were previously rejected by UT and then repaired. The QA Inspector observed the personnel using a 70 degree shear transducer to perform the inspection. A total of eight (8ea) diaphragm plates were accepted. The diaphragm plates are designated as FB015-012-026(R2), FB009-006-026(R1), FB015-009-026(R1), FB015-006-026(R1), FB015-007-026(R2), FB009-003-026(R1), FB011-003-026(R1), FB011-007-026(R1). The QA Inspector relayed this information to night shift QA Inspector Mike Hasslar and a daily Caltrans turnover log.



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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Inspected By:	Leach,Ed	Quality Assurance Inspector
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Reviewed By:	Carreon,Albert	QA Reviewer
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