

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-004269**Date Inspected:** 14-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai China**CWI Name:** Huang Wen-pang**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/ Tower**Summary of Items Observed:**

UT inspection Verification

This QA inspector received notification from ZPMC QC department for NDT witness document numbers 1196 and 1197. This QA Inspector arrived in bay 7 to perform the required verification and observed ZPMC UT technician Ma Jilong performing UT testing on welds FB015-018-043 and FB010-019-043 these welds had rejectable indications in both each weldment contained 5 indications within the 670mm length. This QA inspector proceeded with welds FB012-017-043 and FB015-022-043 after ZPMC had completed their testing and accepted the welds. During the QA review it appeared that the weldments were within compliance of the contract documents at the time of review. This QA inspector then proceeded to OBG bay 8 for continued UT verifications of floor beams and found that out of the 12 components listed (2 welds per component 24 total for verification) that 6 welds were still in-process from ZPMC and 9 had been rejected by ZPMC also. This QA inspector performed the QA review on the remaining welds (10 total) after ZPMC had completed these areas and accepted the weldments. The welds tested were FB003-107-104, FB048-001-006, FB056-003-023, FB070-001-007, FB005-016-044, FB014-016-044, FB013-015-043 and 044, FB004-015-044 and FB057-001-006 and 023. At the time of the QA review the weld appeared to be within compliance of the contract documents. A TL-6027 shall be generated for these locations.

OBG Bay 4 tower components

During this QA inspector random observations it was observed in OBG bay 4 for the tower components that ZPMC currently has four (4) double diaphragms in multiple stages of fabrication. The location and elevations are WSD1- 33 and 43 Meters and NSD1- 23 and 43 Meter elevations. ZPMC was currently performing heat straightening and grinding on NSD1-23M under HSR1 (T)-4802 with a maximum heat of 650°C. NSD1-43M was observed were ZPMC was using automatic flame cutting equipment to cut the required bevels on the diaphragms.

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The other 2 double diaphragms were idle. ZPMC was also in the process of Heat Straightening various Side plates under the approved heat straightening procedures.

OBG Bay 1

The Caltrans QA observed ZPMC has approximately thirty (30) to forty (40) workers performing various functions relative to the fabrication of the OBG Deck Panels. These functions include; closed rib milling, PJP weld joint beveling, drilling thru holes, press forming, closed rib splice welding, closed rib diaphragm fit-up and FCAW welding of splices, closed rib to deck plate fit-up and tack welding and the PJP welding of closed ribs to deck plates. Deck Plates at the gantry stations were, Gantry-1, - Caltrans QA observed deck panel DP393-001 had been welded and was sitting idle at this station. Gantry-2, - Caltrans QA observed deck panel DP310-001 was tack welded and ready for welding after the PMT to be welded and accepted. Tack weld table had DP575-001 had the closed ribs welded to the deck plate with the SAW process and ZPMC was fitting the 35mm thick stiffener plates to the deck panel.

OBG Bay 3

This Caltrans QA observed ZPMC continuing with the fabrication of various Side, Bottom and Edge Panels designated for the SAS OBG. The general fabrication of said items consist of removal of coatings from weld joint areas, cutting, splitting of "W" shape beams for "T" stiffeners, splicing of plates, fitting, tack welding and welding. Various T stiffeners were in the beginning stage of being spliced a total of 8 were observed from bevel prep, fit-up to welding in process. This QA inspector observed ZPMC fitting several side plates at this location that included SP440-001, SP444-001 and SP454-001 this plates had the "T" stiffeners being tack welded to the plate. ZPMC's CWI Wu Ming Kai was observed as being present within this shop to monitor the in process welding and inspection of the completed weldments.

Summary of Conversations:

As noted 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 Peter Dautermann, 1-500-219-9593, who represents the Office of Structural Materials for your project.

Inspected By:	Riley, Ken	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer
