

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-001851**Date Inspected:** 18-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 600**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi and Xu Le Tong**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 side & deck panels / 89 mockup**Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall 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:

New OBG Assembly area

No welding took place in this bay today.

OBG bay 1

QA observed ZPMC qualified welding personnel welding the root pass joining the U ribs to deck panel DP-272-001 using the automated Gas Metal Arc Welding (GMAW) process. It was noted by QA that the gantry operator shut down the machine about 3" short of the end of the joint on U ribs U-35 and U41 which made it necessary to restart the welding process. After completion of the welds on the above mentioned ribs ZPMC Quality Control inspectors (QC) instructed ZPMC personnel to blend the restart areas by grinding back to the original weld profile. QA observed QC visually inspecting the welds for their entire length including the blended areas mentioned above. The welds appeared to meet the requirements of D1.5 2002 and the contract documents.

QA observed ZPMC qualified welding personnel perform the Submerged Arc Welding (SAW) PMT for deck panels DP 272-001 and DP 083-001. ZPMC QC visually inspected the welds and they appeared to be in conformance with the contract documents. ZPMC welding personnel then proceeded to weld the cap passes

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joining the U ribs to deck panel DP 272-001 using the SAW process.

QA and QC monitored the welding process continuously throughout the day. The welding parameters as measured with the calibrated gages on the machines appeared to be in conformance with the posted WPS's.

GMAW

Volts: 30 – 31 Amps: 350 – 370 Travel Speed: 544 mmpm

SAW

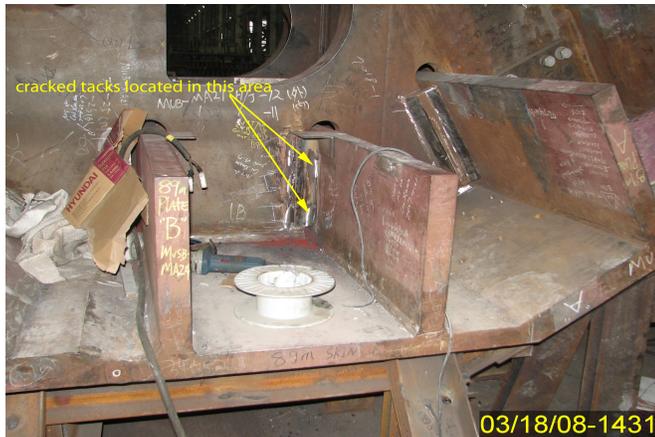
Volts: 24.6 – 24.8 Amps: 679 - 680 Travel Speed: 510 mmpm

Refer to production deck panel weld log dated 03/18/08 for DP 272-001 for more details.

QA departed this area before welding was completed for deck panel DP 272-001.

89 mock up

QA arrived in this area at a approximately 1430 hrs to observe the removal and Magnetic particle Testing (MT) of two cracked tacks discovered by ZPMC Quality Control personnel. QA observed two cracked tacks joining part numbers P676-1 to P531-2. QC CWI inspector identified as Xu Le Tong informed QA that ZPMC intended to remove and replace the entire bar (part # P676-1). QA observed ZPMC welding personnel remove the part via carbon arc gouging process. After the part was removed ZPMC's QC MT'ed the material in the effected area. MT appeared to indicate that the material exhibited no signs of any discontinuities. ZPMC welding personnel commenced the preheating process in accordance with the posted WPS's in preparation for re-tacking the new part in position. QA departed the area before ZPMC commenced tack welding. See attached photos for more detail of the effected area.



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

Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
