

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-013072**Date Inspected:** 04-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Zhu Tian Shu**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:** Orthotropic Box Girder (OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY-1 -TRAVELER RAIL (TR)

This QA Inspector observed the following work in progress:

Flux Cored Arc Welding (FCAW) welding of Repair weld joint 20TR1-017-003. Welder is identified as 216575. ZPMC Quality Control (QC) is identified as Mr. Tian Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair-1. The Repair welding was performed against the Welding Repair Report (WRR) No: B-WR11464 Rev No: 0 and ZPMC Ultrasonic Testing (UT) Report No: B787-UT-12088.

FCAW welding of Repair weld joint 20TR1-017-007. Welder is identified as 216575. ZPMC Quality Control (QC) is identified as Mr. Tian Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair-1. The Repair welding was performed against the Welding Repair Report (WRR) No: B-WR11466 Rev No: 0 and ZPMC Ultrasonic Testing (UT) Report No: B787-UT-12088.

FCAW welding of Repair weld joint 20TR1-018-001. Welder is identified as 250672. ZPMC Quality Control

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(QC) is identified as Mr. Tian Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-FCAW-1G (1F)-Repair-1. The Repair welding was performed against the Welding Repair Report (WRR) No: B-WR11455 Rev No: 0 and ZPMC Ultrasonic Testing (UT) Report No: B787-UT-12089.

FCAW welding of weld joint 20TR2-050-011. Welder is identified as 059450. ZPMC Quality Control (QC) is identified as Mr. Tian Lei. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-TC-U5-F.

BAY-2-FLOORBEAM (FB)

Submerged Arc Welding (SAW) welding of weld joint FB3186-001-007. Welder is identified as 045270. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

SAW welding of weld joint FB3189-001-012. Welder is identified as 250050. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

SAW welding of weld joint FB3193-001-001. Welder is identified as 045265. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2221-B-L2c-S-2.

FCAW welding of weld joint FB3201-001-011. Welder is identified as 045209. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-T-2231-B-U2a-F-1.

BAY-1-TR

During Quality Assurance random in-process observations of the fabrication of Traveler Rail (TR) 20TR1-017, this Caltrans Quality Assurance (QA) inspector discovered the following issue:

- Complete Joint Penetration (CJP) Repair welding was performing without using run-off tabs.
- The use of run-off tabs is specified in AWS D1.5 2002 section 3.12.1.
- The member is identified as a TR, 20TR1-017.
- The welds are a CJP, T joints identified as 20TR1-017-003&007.
- The Repair welding was performing against the Welding Repair Report (WRR): B-WR11464 Rev No: 0 & B-WR11466 Rev No: 0 respectively and Ultrasonic Testing (UT) Report No: B787-UT-12088.
- The welds are joining to the Traveler Rail web to flanges.
- OBG TR-20TR1-017 is located in the Bay-1.

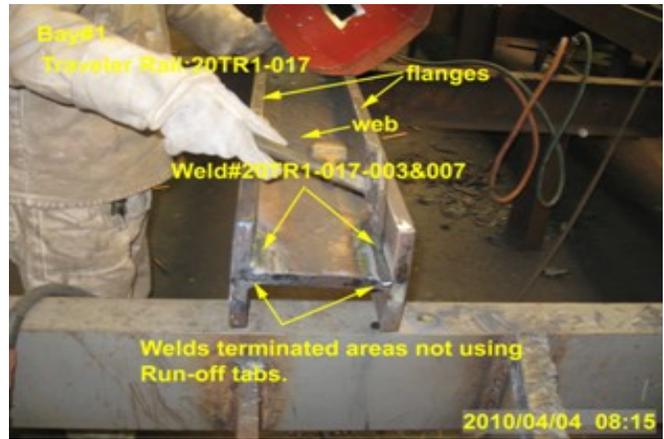
This QA generated an incident report on this date for the above issue, for further details see attached photographs and an incident report.

Applicable reference: American Weld Society (AWS) D1.5 2002 section 3.12.1 "Welds shall be terminated at the end of a joint in a manner that will ensure sound welds. Whenever possible, this shall be done using weld tabs (extension bars and run off plates) placed in a manner that will duplicate the joint detail being welded".

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Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

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 Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

Reviewed By: Miller,Mark

QA Reviewer