

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-002458**Date Inspected:** 17-Apr-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2330**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Le Feng/Wu Zhi Feng**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:**

The Caltrans Quality Assurance (QA) Inspector Roscoe Dixon was present at the time requested to randomly observe welding and associated operations being performed for the Orthotropic Box Girders (OBG), and Tower.

New Tower Shop Bay # 1:

The QA Inspector observed welding operators Chen Hongxia, ID 040460 and Yun Chuan Jin ID 0503060 performing the Submerged Arc Welding Process (SAW) utilizing WPS) WPS-B-T-2221-B-U3L-S-1 in the 1G (Groove) position to weld fill and cap passes for a complete joint penetration (CJP) weld joint for tower skin plate P123 (S) + P124 (S) weld joint designated as SSD-SA16 E/G 1 A was being welded by operator Chen Hongxia, and skin plate P126 (S) + P128 (S) weld joint designated as SSD-SA16 E/G 1 A was being welded by operator Yun Chuan Jin.

The QA Inspector visually verified a single electrode was being utilized for the fill weld passes, and the filler metal was JW-3 with a diameter of 4.8 millimeters.

The Flux was verified as JF-B, the base material listed on the (WPS) as grade 345. The QA Inspector observed and noted that during the welding operation the ZPMC welding operators would before welding over previous deposited weld pass utilized the proper cleaning method to remove slag prior to resuming the welding operation.

The QA Inspector observed that during the shift ZPMC CWI, Xu Le Feng and various ZPMC CAWI Inspectors monitoring the electrical parameters, travel speed and weld interpass temperatures at this station.

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Both weld joints listed above were completed during the QA Inspector's shift, the welding generally appeared to conform to contract specifications.

Bay 3:

The QA Inspector randomly observed ZPMC Welding Operator Gu Cai Hong ID 053748, performing the Submerged Arc Welding (SAW Process utilizing ZPMC Weld Procedure Specification (WPS) WPS-B-T-2221-BL2-C-S-1 to complete filler weld passes to weld side plate components PL601A + PL1601B, the part numbers were designated as SP751A, and SP751B.

The QA Inspector visually verified a single electrode was being utilized for the filler passes and the filler metal being used was JW-3 with a diameter of 4.8 millimeters.

The weld joints randomly observed being welded during this QA Inspector's shift included: SP751-001-061 and SP525-001-099.

The QA Inspector observed that during the shift ZPMC CWI, Wu Zhi Feng and various ZPMC CAWI Inspectors monitoring the electrical parameters, travel speed and weld interpass temperatures at this welding station.

The work being performed was in progress generally appeared to conform to contract specifications.

Bay 4:

The QA Inspector randomly observed ZPMC Welding Operator Jiang Jing ID 046830 WPS) WPS-B-T-3221-BU3-C-S-1 in the 1F (Flat) position to weld the root passe for SA276 (S)+P284(S), weld joint SSD1-SA276-1A12A.

The QA Inspector visually verified a single electrode was being utilized to complete the root pass. the filler metal was LA-85 with a diameter of 4.8 millimeters.

The Flux was verified as MIL800-HPN1, the base material listed on the (WPS) as HPS 485WT2 Shear Link grade 485. The QA Inspector observed and noted that during the welding operation the ZPMC welding operator would before welding over previous deposited weld pass utilized the proper cleaning method to remove slag prior to resuming the welding operation.

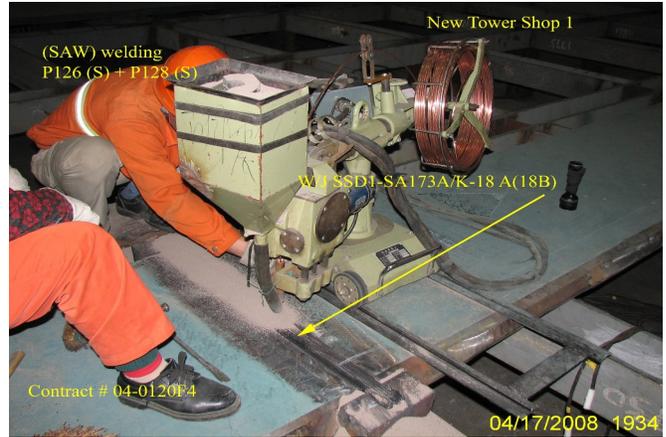
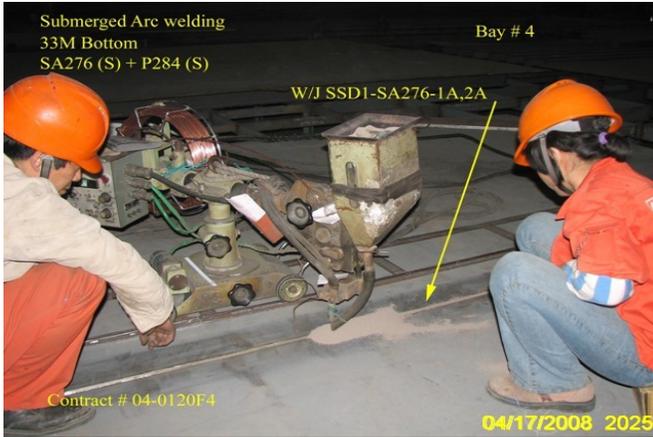
The QA Inspector observed that during the shift ZPMC CWI, Zhao Chow Sun and various ZPMC CAWI Inspectors monitoring the electrical parameters, travel speed and weld interpass temperatures at this welding station.

The QA Inspector randomly observed ZPMC Non-Destructive Testing (NDT) Technician Zhou Dongyun, utilizing the Magnetic Particle Testing (MT) Method, to examine the Tower Skin plate Weld Joint (WJ) Number SSS1-SA173A/F-13 A at three locations along the weld..

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Mr. Zhou informed the QA Inspector that side B had been MT inspected previously, and that no indication were observed during the MT Inspections. Mr. Zhou Dongyun marked the plate with paint stick on side A as MT OK. The QA Inspector was also able to verify MT OK markings on side B.



Summary of Conversations:

As noted within the report shown 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: Dixon,Roscoe

Quality Assurance Inspector

Reviewed By: Hager,Craig

QA Reviewer