

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-003960**Date Inspected:** 26-Aug-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See below**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:** Tower & OBG**Summary of Items Observed:**

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

OBG Bay 4:

The QA Inspector randomly observed ZPMC welders Han Hongwen ID Number 200149 and Li Shuqiang ID Number 053609, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-4132, to weld Tower Diaphragm Flange Plate Assembly SSD1-SA269 to 23M Bottom Diaphragm SA287 at WJ SSD1-SA287-2. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Sha Zhi monitoring weld parameters. The QA Inspector also randomly monitored weld parameters and recorded them as follows: 312 amps, 30.5 volts with a travel speed 308 millimeters(mm) per minute for Mr. Han and 305 amps, 31.2 volts with a travel speed of 309 mm/min for Mr. Li. The weld parameters appeared to comply with contract requirements. The QA Inspector randomly observed a crack in one area of the root pass and several other areas where the weld had blown through. These areas had a gap greater than 5 mm but less than 8 mm. ZPMC QC was monitoring the welding but was not aware of the crack nor overly concerned with the blow through. The QA Inspector informed Mr. Sha of the problems and Mr. Sha directed the welders to remove the effected areas of the root pass and to change the technique to allow for bridging the larger gaps. The attached photograph provides additional detail.

The QA Inspector randomly observed ZPMC welder Shang Feng ID Number 049769 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 2G (Horizontal Groove) Position with ZPMC WPS

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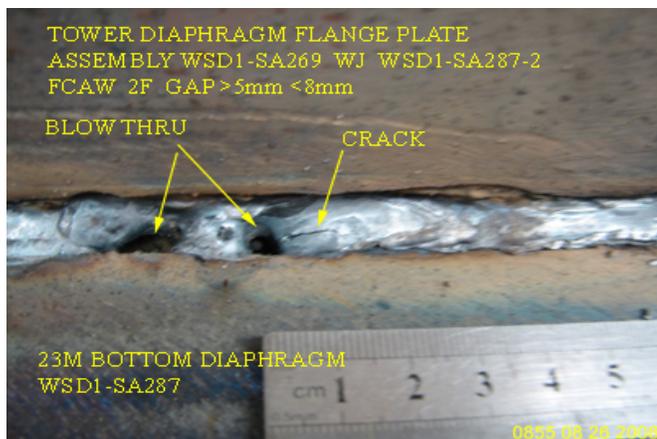
WPS-345-2G(2F)-Repairs, to perform in process repairs to WJ ESDI-SA313-1 attaching the Tower Diaphragm Flange Plate Assembly to 15M(E) Tower Diaphragm SA313. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. The weld parameters appeared to comply with contract requirements. The attached photograph provides additional detail.

OBG Bay 7:

The QA Inspector randomly observed ZPMC welder Wang Li ID Number 044772, utilizing the SMAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-P-2211-B-U2 to tack weld a 30 mm end section to the 12 mm center section of Floor Beam Diaphragm Sub-Assembly FB005-018 at WJ 002. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring weld parameters. The weld parameters appeared to comply with contract requirements.

Bay 8:

The QA Inspector randomly observed ZPMC welders Gao Dong Liang ID Number 048714, Yu Jian Guo ID Number 048433 and Jiang You Sheng ID Number 045240, utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with ZPMC WPS WPS-B-T-4132, to weld Tower Diaphragm Flange Plate Assembly at WJ WSD1-SA316 to 28M Top Diaphragm. The QA Inspector randomly observed ZPMC QC under the supervision of ZPMC CWI Liu Huajie monitoring weld parameters. The weld parameters appeared to comply with contract requirements.



Summary of Conversations:

As noted in the above body of this 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 Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By: Franco, Charlie

Quality Assurance Inspector

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Reviewed By: Carreon,Albert

QA Reviewer