

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-007226**Date Inspected:** 02-May-2009**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:** Sun Wei / Sun Bo**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**Summary of Items Observed:**

The Caltrans (CT) 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).

Outside at Vertical Milling Machine:

The QA Inspector randomly observed a ZPMC Machine Operator utilizing the Vertical Milling Apparatus to mill the bottom edges of Skin Plates A through E and attached longitudinal stiffeners on Lift 1 South Tower. The attached photograph provides additional detail.

Heavy Equipment Shop Bay 11:

The QA Inspector randomly observed ZPMC welder Li Zhao Qian ID 048810, utilizing the Flux Cored Arc Welding (FCAW) Process with ZPMC Weld Procedure Specification (WPS) WPS-B-T-2132-TC-P4-F in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions and WPS-B-T-2131-TC-P4-F in the 1G/1F (Flat Groove/Flat Fillet) Positions to weld the diagonal corner stiffener over the weld seam between Skin Plates B and C in Lift 2 East Tower Shaft above 80.75M Diaphragm at Weld Joint (WJ) Numbers ESD1-TL7J/L-55/56. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Han Guo Qi ID 059525, utilizing the FCAW Process with

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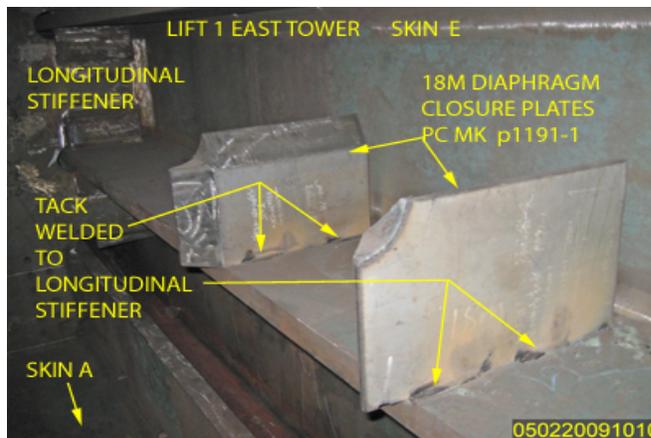
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ZPMC WPS WPS-B-T-2132-TC-P4-F in the 2G/2F (Horizontal Groove/Horizontal Fillet) Positions and WPS-B-T-2131-TC-P4-F in the 1G/1F (Flat Groove/ Flat Fillet) Positions to weld the diagonal corner stiffener over the weld seam between Skin Plates C and D in Lift 2 East Tower Shaft between 80.75M and 77M Diaphragms at WJ ESD1-TL7J/L-58. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC welder Chang Fei ID 069712, utilizing the FCAW Process with ZPMC (WPS) WPS-B-T-4133-3F in the 3F (Vertical Fillet) Position to weld fit lugs to Lift 2 West 43M Diaphragm at Skin B. The QA Inspector randomly observed ZPMC QC monitoring weld parameters. Weld parameters appeared to comply with contract requirements.

The QA Inspector attempted to perform a 100% Visual Inspection (VT) and 15% Magnetic Particle Testing (MT) of the long seam weld between E and A from 15M through 47.6M in Lift 1 East Tower Shaft per ZPMC NDT Notification Sheet 002895. There were several areas that would require grinding. The QA Inspector informed QC that these areas would have to be re-worked and that the long seam weld between E and A from 15M through 47.6M Diaphragms in Lift 1 East Tower Shaft, was not ready for inspection at this time. The QA Inspector also observed that the fill plates, piece mark p1191-1 for 18M Upper and 23M Lower Diaphragms were tack welded to a longitudinal stiffener to allow for grinding the bevel faces and to keep in place while the assembly was being rotated. The attached photograph provides additional detail. The QA Inspector returned to perform a follow up VT, but was not allowed to enter Lift 1 East because ZPMC personnel were preparing to rotate the assembly.

The QA Inspector randomly observed several ZPMC helpers utilizing angle grinders to blend the welds attaching fit lugs to 15M through 47.6M Diaphragms on Skin Plate B of Lift 1 West Tower Shaft. The QA Inspector also randomly observed a ZPMC helper utilizing a hand held cutting torch to remove dogs over fit lugs on 23M upper Diaphragm on Skin Plate B. Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations.

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 Serge Sinevod 13482570045, who represents the Office of Structural Materials for

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your project.

Inspected By:	Franco,Charlie	Quality Assurance Inspector
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Reviewed By:	Clifford,William	QA Reviewer
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