

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-012040**Date Inspected:** 12-Jan-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:** Wang Chuan Qing, Tu Jun**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:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad 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:

BAY 10 SOUTH TOWER LIFT 2 SKIN A LADDERS

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

E76-53M-5-S (VT ONLY)

E76-53M-6-S (VT ONLY)

E74-65M-1-S (VT ONLY)

E74-65M-2-S (VT ONLY)

E74-65M-3-S (VT & MT)

E74-77M-1-S (VT ONLY)

E74-77M-2-S (VT ONLY)

E74-77M-3-S (VT ONLY)

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BAY 11 EAST TOWER LIFT 4 DIAGONAL PLATE TO SKIN AND DIAPHRAGM

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

ESTL4-2B/L-3, 2
ESTL4-2C/L-1, 75
ESTL4-2G/L-75
ESTL4-2I/L-1, 71
ESTL4-2J/L-1, 71
ESTL4-2I/L-7 (FIT LUG @135M AFTER REPAIR)
ESTL4-2B/L-7 (MT LINEAR INDICATION OF APPROX 20mm IN LENGTH OBSERVED)
ESTL4-2F/L-72 (MT LINEAR INDICATION OF APPROX 30mm IN LENGTH OBSERVED)
ESTL4-2F/L-73 (MT LINEAR INDICATIONS OF APPROX 10mm & 8mm IN LENGTH OBSERVED)
ESTL4-2H/L-1 (MT LINEAR INDICATIONS OF APPROX 12mm, 9mm & 6mm IN LENGTH OBSERVED)
ESTL4-2H/L-70 (MT LINEAR INDICATIONS OF APPROX 13mm & 10mm; AND TRANSVERSE INDICATIONS OF 8mm & 5mm IN LENGTH OBSERVED)
ESTL4-2K/L-1 (MT LINEAR INDICATION OF APPROX 13mm IN LENGTH OBSERVED)
ESTL4-2K/L-2 (MT TRANSVERSE INDICATIONS OF APPROX 8mm & 6mm IN LENGTH OBSERVED)

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 10

NORTH TOWER LIFT 5 BEARING PLATE REPAIR

SMAW welding of weld joint 4A/B (Repair) located on ND1-BPSA5-3.

Welder is identified as 040582. ZPMC QC is identified as Jiang La Mei.

The welding variables recorded by QC appeared to comply with WPS-485-SMAW-1G(1F)-REPAIR.

NORTH TOWER LIFT 4 B/C CORNER SEAM REPAIR

SMAW welding of weld joint 3A/B (Repair) located on NSTL4-3B/L.

Welder is identified as 056200. ZPMC CWI is identified as Mr. Du Zhi Qun.

The welding variables recorded by QC appeared to comply with WPS-345-SMAW-4G(4F)-REPAIR.

SOUTH TOWER LIFT 2 SKIN B PADEYE

SMAW welding of weld joint 3 located on SSD1-SA163B/D.

Welder is identified as 066413. ZPMC QC is identified as Mr. Yuan Hui Gang.

The welding variables recorded by QC appeared to comply with WPS-B-P-2114-PADEYE.

During the Quality Assurance(QA) Magnetic Particle Testing (MT) review of welds located in East Tower lift 4, this Quality Assurance (QA) Inspector discovered Linear indications on the following welds:

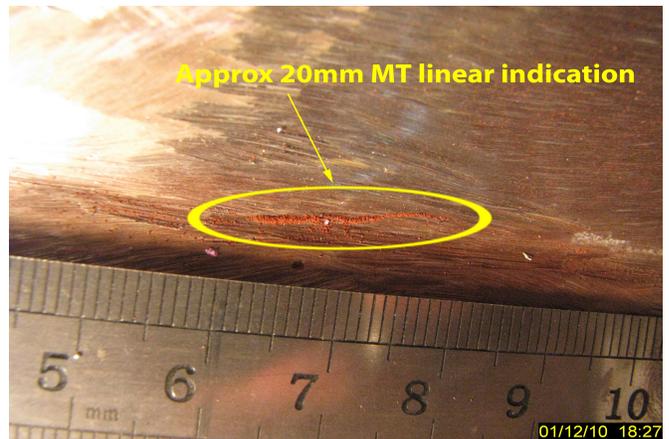
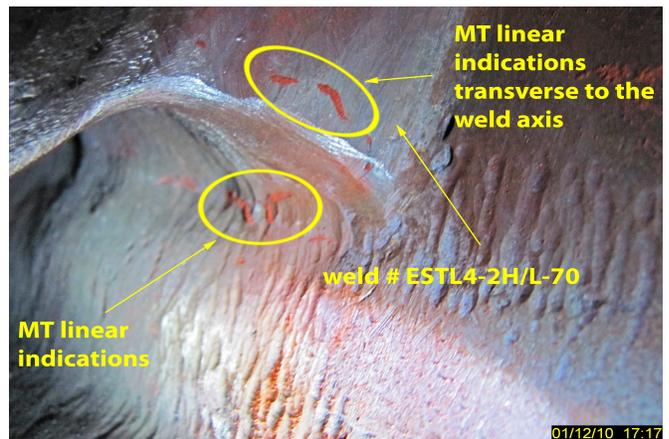
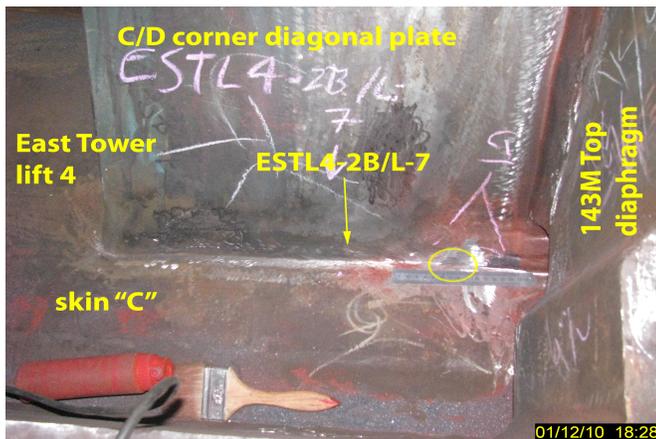
-Weld #ESTL4-2B/L-7: One (1) longitudinal linear indication measuring approximately 20mm in length.

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- Weld #ESTL4-2F/L-72: One (1) longitudinal linear indication measuring approximately 30mm in length.
 - Weld #ESTL4-2F/L-73: Two (2) transverse linear indications measuring approximately 10mm and 8mm in length.
 - Weld #ESTL4-2H/L-1: Three (3) longitudinal linear indications measuring approximately 12mm, 9mm and 6mm in length.
 - Weld #ESTL4-2H/L-70: Two (2) longitudinal linear indications measuring approximately 13mm and 10mm in length and two (2) transverse linear indications measuring approximately 8mm and 5mm in length.
 - Weld #ESTL4-2K/L-1: One (1) longitudinal linear indication measuring approximately 13mm in length.
 - Weld #ESTL4-2K/L-2: Two (2) transverse linear indications measuring approximately 8mm and 6mm in length.
 - For details, see Magnetic particle Testing (MT) report generated by this QA for this date.
 - All material is designated as non-Seismic Performance Critical Member (non-SPCM).
 - East tower, lift 4 is located in Tower Bay 11.
- The Notice of Witness Inspection Number (NWIT) is 005049. The indications are located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC's QC personnel are required to perform 100% MT inspection of these welds. See attached photos for additional information.

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



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Summary of Conversations:

Only general conversation was held between QA and 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 Skyler Guest : 15000422360, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
