

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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027930**Date Inspected:** 06-Jul-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job site**CWI Name:** Steve McConnell**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:**

Quality Assurance Inspector (QAI) Rodney Patterson was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

Electroslag Weld Excavations

This QA observed ABF/JV welding personnel Wai Kitlai #2953 performing an exploratory excavation of the Tower Complete Joint Penetration (CJP) Tee joint shear plate connection designated as ESW- E-045 #24 "F" from Face A. The exploratory excavation was performed to determine the presence of transverse indications observed during the joint Ultrasonic Testing (UT) performed by the QAI and ABF QC inspector Steve McConnell. Due to the presence of weld reinforcement the QAI was unable to size the length and measure the "X" location on the welds in way of the indications observed that were oriented transverse to the weld.

The carbon arc gouging process as well as grinding was used to excavate approximately 2mm-5mm at a time, once near the indications depth. In between excavation passes both QA and QC performed Magnetic Particle Testing (MT) and photographed any observed indications found at that depth. The weld ESW "F" was excavated at the following Y locations on this date. The details of the QA/QC findings are as follows;

ESW "F" Face A from Y=1180~1330 for a transverse indication ultrasonically detected at approximately Y=1245 (+4 AWS db rating.)

Initial Excavation 10mm in depth-No Indications found

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14mm in depth-No Indications found
16mm in depth-One (1) Transverse indication- Length 3mm.
19mm in depth-No Indications found.
22mm in depth-No Indications found.

The transverse indication observed appeared to be in a location not detected during ultrasonic testing. After exploratory ultrasonic testing at the end of the QAI's shift, the sought indication still showed the same ultrasonic response. It was determined that the transverse indications "X" location was approximately 2mm wider than what was currently excavated. The QAI informed the QC inspector that the excavation would need to be widened on the following shift.

ESW "F" Face A from Y=790~960 for a transverse indication ultrasonically detected at approximately Y=900/940 (+16 and +23 AWS db rating.)

Initial Excavation 21mm in depth- one (1) Transverse indication- Length 3mm.
22mm in depth- Two (2) Transverse indication- Length 3mm/4mm.
24mm in depth- one (1) Transverse indication- Length 2mm.
27mm in depth-No Indications found.
28mm in depth-No Indications found.
31mm in depth-No Indications found.

Two (2) of the three (3) indications observed appeared to be in locations not detected during ultrasonic testing.

Indications observed at Y=940 appeared to be in the approximate location detected during ultrasonic testing. The sought depth of the transverse indication at Y=900 was not accomplished during the QAI's shift and further excavation will be needed at a later date.

Please see attached photographs for representative samples of indications observed.

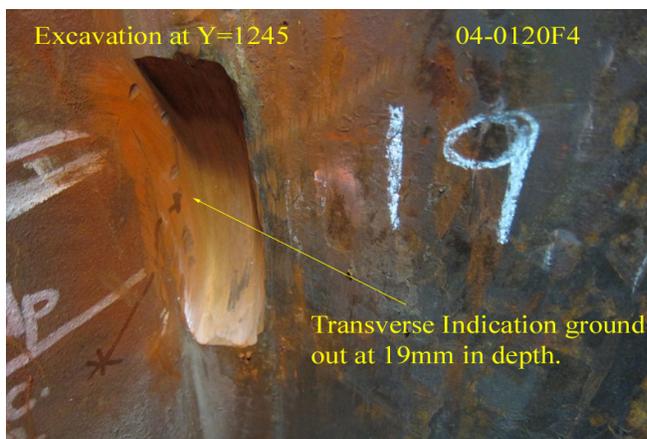
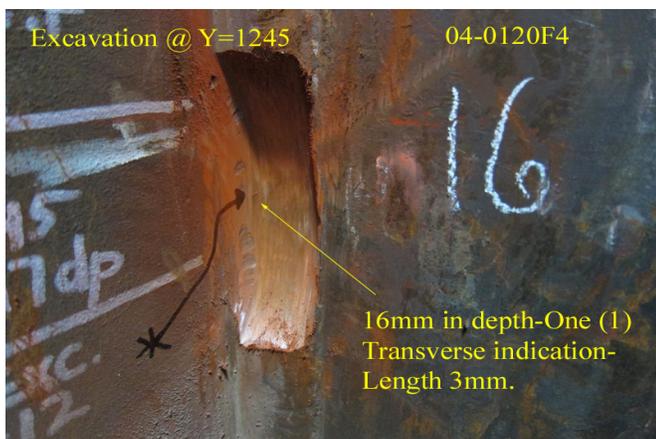
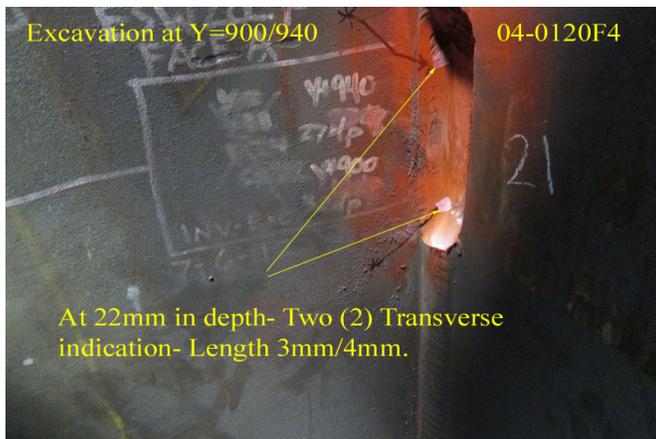
Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations.

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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 Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Patterson,Rodney

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer
