

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-028520**Date Inspected:** 05-Oct-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job site**CWI Name:** N/A**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 ESW**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:

QA Ultrasonic Testing Verification (ESW "V")

The QAI was provided by the QA Task Leader, a list of transverse indications from the QC final ultrasonic Testing reports to verify. The testing was performed in way of locations on the Tower Electroslag 80mm-100mm butt weld designated as ESW "V" from face A. The locations confirmed by the QAI on this date were in way of locations randomly selected by ABF management and ABF QC staff that may, at a later date, have core samples removed from the weld to analyze the metallurgical properties of the transverse indications. All ultrasonic testing performed on this date was done in accordance with AWS D1.5-2002, section 6, table 6.4 and supplemental UT procedure SE-UT-D1.5-CT-108-ESW-R5; however the use of the pitch catch ultrasonic testing method was not utilized on this date. Due to the presence of weld reinforcement the QAI was unable to size the length and measure the exact "X" location on the welds in way of the indications oriented transverse to the weld. The QAI's findings are as follows;

Y=1345, Sound Path=123, Depth from Face A=42, AWS db Rating = +19

Y=1435, Sound Path=117, Depth from Face A=40, AWS db Rating = +7

Y=1540, Sound Path=118, Depth from Face A=40, AWS db Rating = +15

Y=1820, Sound Path=191, Depth from Face A=65, AWS db Rating = +13

Y=2310, Sound Path=107, Depth from Face A=36, AWS db Rating = +10

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Y=2620, Sound Path=126, Depth from Face A=43, AWS db Rating = +16

Y=3680, Sound Path=124, Depth from Face A=42, AWS db Rating = +8

Y=6755, Sound Path=139, Depth from Face A=47, AWS db Rating = +15

Y=7690, Sound Path=89, Depth from Face A=30, AWS db Rating = +4

Y=7900, Sound Path=160, Depth from Face A=54, AWS db Rating = +20

The indications observed at Y=1820 and Y=7900 were evaluated from the 100mm in thickness side of the weld axis all other indications noted were evaluated from the 80mm in thickness side of the weld axis.

The indications observed at Y=1345 and Y=1435 were in way of previous repairs to the Electroslag weld using Shielded Metal Arc Welding. The ABF QC lead Lenard Cross was informed of the Y locations in way of repairs who then stated they would remove them from the list of possible locations to analyze.

The indications observed at Y=1345, 1435, 1540, 2310, 2620 and 3680 were plotted to have a difference in Y location by as much as 10mm than the marks made by ABF QC on the material.

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

Summary of Conversations:

Conversations relevant to the work being performed.

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 Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

Inspected By:	Patterson,Rodney	Quality Assurance Inspector
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Reviewed By:	Reyes,Danny	QA Reviewer
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