

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027989**Date Inspected:** 17-Jul-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job site**CWI Name:** Jesse Cayabyab**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 Wen Han Yu #6317 performing an exploratory excavation of an Electroslag Weld ESW "B" from face A. The exploratory excavation was performed to compare the AWS decibel rating to the actual indication observed due to the attenuation of sound in the coarse grained welds. The indications that were excavated were discovered by the joint QA/QC inspection team on a previous shift. The joint inspection team utilized the supplemental UT procedure SE-UT-D1.5-CT-108-ESW-R5 for the inspection of electroslag welds; however the use of the pitch-catch ultrasonic testing has not been utilized to date.

The carbon arc gouging process as well as grinding was used to excavate approximately 2mm at a time once near the indications depth. In between excavation passes both QAI and QC inspector Jesse Cayabyab performed Magnetic Particle Testing (MT) and photographed any observed indications found at the achieved depth. The weld ESW "B" was excavated at the following Y locations on this date. The details of the QA/QC findings were recorded on a joint inspection form for ESW weld excavations and are as follows;

ESW "B" Face A from Y=8030~8250 for a longitudinal recordable indication ultrasonically detected at approximately Y=8090 (+6 AWS db rating.)

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Existing excavation from the previous shift- One (1) longitudinal indication observed, measured to be 25mm in length. The indication was ground until the QA/QC team was unable to detect with magnetic particle inspection at a depth of 39mm.

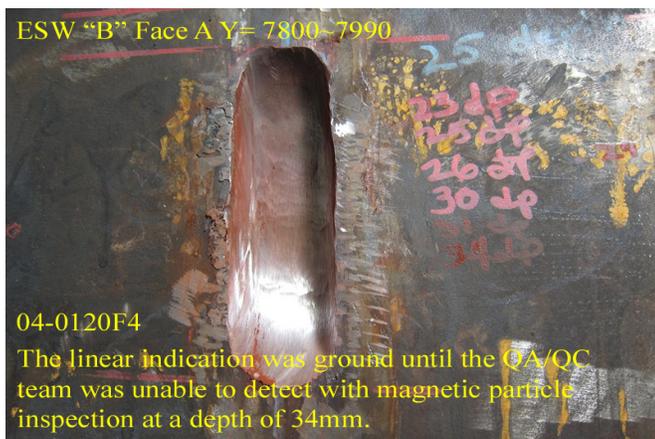
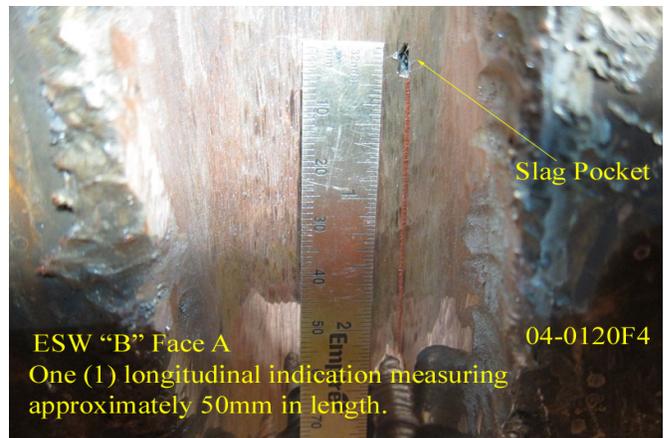
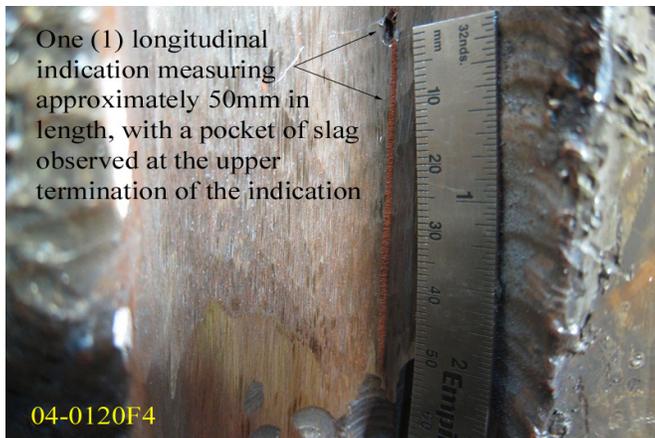
ESW "B" Face A from Y=7800~7990 for a longitudinal recordable indication ultrasonically detected at approximately Y=7860 (+5 AWS db rating.)

Initial excavation 23mm in depth- One (1) longitudinal indication measuring approximately 50mm in length, with a pocket of slag observed at the upper termination of the indication. The linear indication was ground until the QA/QC team was unable to detect with magnetic particle inspection at a depth of 34mm. The QA/QC team was unable to photo document the excavation at 2mm intervals due to over grinding by ABF personnel between 25mm~29mm in depth.

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

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

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<b>Inspected By:</b>	Patterson,Rodney	Quality Assurance Inspector
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<b>Reviewed By:</b>	Levell,Bill	QA Reviewer
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