

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 #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012795**Date Inspected:** 22-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** M. Gregson, J. Salazar**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:** Hinge K Pipe Beams**Summary of Items Observed:**

The Quality Assurance Inspector Sean Vance arrived on site at Oregon Iron Works, Inc (OIW) in Clackamas, OR, to randomly observe the in process welding of the Hinge K Pipe Beam assemblies. The QA Inspector arrived on site to randomly observe the OIW Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

AG Machining (Boring, OR)

On this date, the QA Inspector arrived at AG Machine shop to observe OIW continue to perform the final Penetrant Testing (PT), on the Fuse 120A-7. The QA Inspector arrived at approximately 0900 and met with OIW QC Inspector Jose´ Salazar and an AG Machinist. Upon arriving, the AG Machinist explained that he had previously setup 2 propane heaters, to heat the remaining one-half fuse to the required minimum temperature of 70 degrees Fahrenheit (21 C), prior to the PT.

The QA Inspector then witnessed QC Inspector Salazar setting up to perform the Final Penetrant Testing (PT), on the Fuse 120A-7. QC Inspector Salazar explained to the QA Inspector that the final PT testing on the remaining one-half Fuse will be performed, utilizing OIW's procedure QC-114, sect. 8.0, Water Washable Visible Die Penetrant. The QA Inspector then witnessed QC Inspector cleaning approximately one-half of the Fuse overlay surface with acetone, to remove all surface irregularities, which would otherwise mask the indications of unacceptable indications. The QA Inspector witnessed QC Inspector Salazar performing pre-heat checks, utilizing a digital thermometer and noted that the surface temperature was approximately 74 degrees Fahrenheit (22 C). The QA Inspector witnessed QC Inspector Salazar then applying DP50 penetrant, utilizing a hand pump sprayer, on the Fuse overlay. The QA Inspector noted that the penetrant was applied evenly and QC Inspector Salazar explained that the DP 50 will sit for approximately 25-30 minutes (dwell time). The QA Inspector then verified the dwell

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time to be approximately 25 minutes and noted that QC Inspector had started to wipe the penetrant off with lint free rags. The QA Inspector then witnessed QC Inspector Salazar applying water, with a hand sprayer, to remove the excess DP50. The QA Inspector then witness QC Inspector Salazar applying D-100 spray can type developer, over the entire one-half surface, in a thin uniform coating. The QA Inspector noted that during the application of the D-100, that no relevant indications were present at the time. After approximately 20 minutes dwell time, the QA Inspector witnessed QC Inspector Salazar performing visual testing on the tested area. QC Inspector Salazar then explained that that no relevant indications were present and the PT was acceptable, on this one half of the Fuse. The QA Inspector then witnessed QC Inspector Salazar cleaning off the applied developer with a water hose. The QA Inspector noted that the PT testing appeared to be in compliance with AWS D1.5 visual acceptance criteria and QC-114. See attached pictures below.

Material, Equipment, and Labor Tracking (MELT)

QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project. The QA Inspector observed at Oregon Iron Works: 2 OIW production personnel and 1 QC Inspector. The QA Inspector observed at AG Machine Works: 1 AG Machinist, 1 AG Supervisor and 1 OIW QC.



Summary of Conversations:

As noted above.

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 Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer
