

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-011495**Date Inspected:** 15-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**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:**

AG Machining (Boring, OR)

Hinge-K Pipe Beam Fuse Assembly 120A-4

On this date, the QA Inspectors Sean Vance and Joe Adame, arrived at AG Machine shop to observe OIW perform the final penetrant testing (PT) and surface finish testing, on the Fuse 120A-4. The QA Inspectors arrived at approximately 0700 and met with OIW QC Inspector Jose Salazar and an AG Machinist. The AG Machinist explained that he had previously arrived at approximately 0330 to apply heat to the Fuse 120A-4, utilizing 2 propane heaters, prior to the penetrant testing to be performed by QC Inspector Salazar. QC Inspector Salazar explained to the QA Inspectors that he had previously arrived at AG at approximately 0630, to verify surface temperature of the Fuse, prior to the penetrant testing. QC Inspector Salazar explained to the QA Inspectors that the final PT testing will be done utilizing OIW's procedure QC-114, sect. 8.0, Water Washable Visible Die Penetrant. QC Inspector Salazar explained that he had brought a profilometer and that the final surface finish, will also be checked, after the final PT is completed. QA Inspectors witnessed Mr. Salazar cleaning the entire Fuse 120A-4 with acetone, to remove all surface irregularities, which would otherwise mask the indications of unacceptable indications.. QA Inspectors witnessed Mr. Salazar performing pre-heat checks, utilizing a digital thermometer and noted that the surface temperature was approximately 75 degrees Fahrenheit (24 C). QA Inspectors witnessed Mr. Salazar then applying DP50 penetrant, utilizing a hand pump sprayer, to approximately one-half of the entire surface finish. QA Inspectors noted that the penetrant was applied evenly and Mr. Salazar explained that the DP 50 will sit for approximately 25-30 minutes (dwell time). QA Inspectors then verified the dwell time to be approximately 25 minutes and noted that Mr. Salazar had started to wipe the penetrant off with lint free rags. QA Inspectors then witnessed Mr. Salazar applying water, with a hand sprayer, to remove the excess DP50. QA Inspectors then witness Mr. Salazar applying D-100 spray can type developer, over the entire

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one-half surface, in a thin uniform coating. QA Inspectors noted that during the application of the D-100, that no relevant indications were present at the time. After approximately 20 minutes dwell time, QA Inspectors witnessed Mr. Salazar performing visual testing on the tested area. Mr. Salazar then explained to QA Inspectors that no relevant indications were present and was acceptable. QA Inspectors then witnessed Mr. Salazar cleaning off the applied developer with a water hose. The QA Inspector noted that Mr. Salazar performed the final PT testing, on the remaining one-half surface, in the same manner as mentioned above. Mr. Salazar explained to the QA Inspector that the remaining one-half was acceptable. QA Inspector noted that Mr. Salazar had performed 100% PT testing on this Fuse 120A-4 and found no rejectable indications. QA Inspector noted that Mr. Salazar appeared to be in compliance with AWS D1.5 visual acceptance criteria and QC-114. The QA Inspector then witnessed QC Inspector Salazar perform the final surface testing, utilizing a profilometer. The QA Inspectors verified that the profilometer had a calibration sticker and had been calibrated by OIW on 12/10/09, with a next due date of 12/10/10. QA Inspectors Sean Vance and Joe Adame then witnessed QC Inspector Salazar perform random testing on the surface finish and noted the surface profile readings averaged .5um. The QA Inspectors witnessed QC Inspector Salazar perform surface finish testing on the previously repaired and smoothed surfaces on the overlay. QC Inspector Salazar explained that some of these areas exceeded the surface finish requirements and that the areas needed additional sanding. The QA Inspectors witnessed AG Machinist perform the sanding with a hand held finish honing stone and applied lubricant to the areas. The QA Inspectors witnessed QC Inspector Salazar test the sanded areas with the profilometer and Mr. Salazar explained that the areas were acceptable, per the finish requirements. QA Inspectors noted that the contract requires a surface finish of .8um. QA Inspectors noted that this surface finish appears to be in compliance with the contract requirements. 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: 5 OIW production personnel and 2 QC Inspectors.

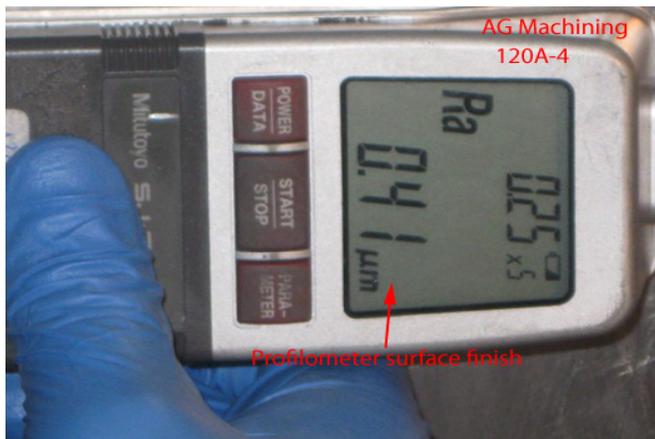
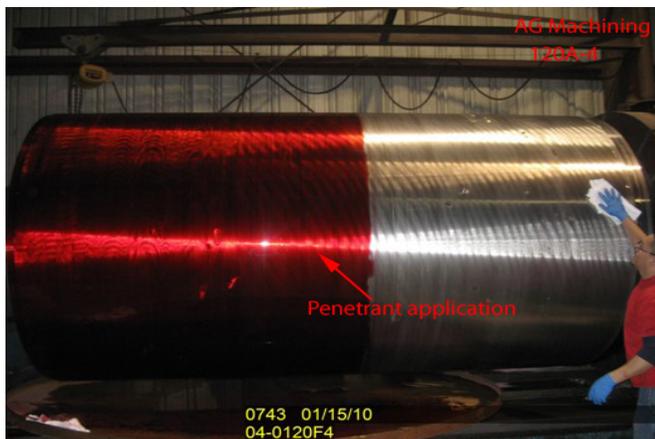
The QA Inspector noted that the following personell were present at AG Machine shop: 1AG machinist, 1 AG supervisor and 1 OIW QC.

The QA Inspector noted that no work was performed at OIW Vancouver paint shop.



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

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