

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 #: 13.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-006695**Date Inspected:** 12-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2230**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR

CWI Name:	Steve Barnett		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	Yes	No	N/A
Verified Joint Fit-up:	Yes	No	N/A
Approved WPS:	Yes	No	N/A
Delayed / Cancelled:	Yes	No	N/A

Bridge No: 34-0006**Component:** Hinge-K Components**Summary of Items Observed:**

Summary of Items Observed: On this date, Caltrans Quality Assurance Inspector (QA) Clete Henke was present at Oregon Iron Works, Inc. (OIW) in Clackamas, OR for observation of fabrication of the Hinge K Pipe Beams and related activities including in process welding and OIW Quality Control (QC) visual and nondestructive testing. The following observations were recorded:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-5:

a125 stiffener ring to a124-9 Fuse

The QA Inspector intermittently monitored OIW welder Bui Liem (WID B10) during in progress Submerged Arc Welding (SAW) at weld joint WM3-03 joining a125 stiffener ring to a124-9 Fuse Section. The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of completed root passes at weld WM3-03. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT at the location noted above finding the root pass to be in general compliance with contract documents. The QA Inspector intermittently observed as welder B10 continued to deposit SAW fill and cover passes in the flat (1G) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing two torches. An OIW helper was observed assisting welder B10 during SAW process. The QA Inspector observed OIW QC Inspector Steve Barnett regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature of 350deg F appeared to be in general compliance with the contract requirements -- (28 volts, 360 amperes, 406 mm/min travel speed).

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Hinge-K Pipe Beam Base Assembly 102A-1:

a111-1 forging to a110-4 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-2:

a111-2 forging to a110-2 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-3:

a111-3 forging to a110-3 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Base Assembly 102A-4:

a111-4 forging to a110-1 base plate

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift. OIW QC Inspector Steve Barnett contacted the QA Inspector and stated that he was preparing continue 100% Ultrasonic Testing (UT) of complete joint penetration (CJP) weld joining a111-4 tubular forging with a110-1 base plate identified as W2-12 & W2-13. Mr. Barnett was observed performing the testing described above from face "B" with a 60° shear wave scan intermittently for the remainder of the shift; testing was substantially complete by shift change.

Hinge-K Pipe Beam Fuse Assembly 120A-1:

a124-6 to a124-7

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Hinge-K Pipe Beam Fuse Assembly 120A-2:

a124-3 to a124-11

The QA Inspector noted upon arrival that excavation and weld preparation had been completed for 120A-2 (R1) repair location. OIW QC Inspector Steve Barnett notified the QA Inspector that he was preparing to perform Magnetic Particle (MT) and Visual Testing (VT) at the excavated and prepared location. The QA Inspector observed as Mr. Barnett performed the testing described above and noted that he indicated no rejectable indications were located. The QA Inspector subsequently performed 100% VT at the location, finding that a weldable profile had been achieved and locating no apparent rejectable indications. OIW welder B28 subsequently initiated SAW root and fill passes at the location noted above in the flat (1G) position in accordance with approved welding procedure 4020. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing a torch. The QA Inspector performed 100% VT of the completed root, finding the root pass to be in general compliance with contract documents. OIW QC Inspector Steve Barnett was observed regularly monitoring and recording the in process SAW parameters. The QA Inspector also intermittently observed in process welding parameters and determined that the SAW parameters and minimum preheat/interpass temperature appeared to be in general compliance with the contract requirements. Repair welding was in-process at shift change. The QA Inspector spoke with graveyard shift QA Inspector Sherri Brannon during turnover regarding monitoring of required post-heat.

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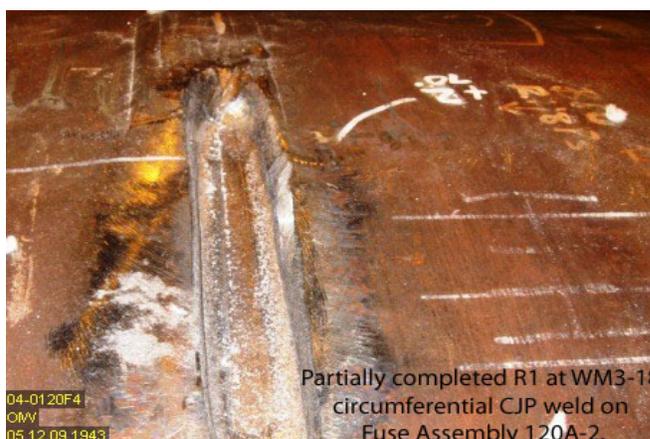
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Hinge-K Pipe Beam Fuse Assembly 120A-4:
a124-13 to a124-4

The QA Inspector observed no production activity on the assembly noted above for the duration of the shift.

Material, Equipment, and Labor Tracking:

The QA Inspector performed verification of personnel involved with this project and equipment in use. The QA Inspector accounted for 3 OIW production personnel and 1 Quality Control Inspector present on this date.



Summary of Conversations:

As noted in the body of the report.

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.

Inspected By:	Henke,Clete	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer
