

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-007491**Date Inspected:** 30-Jun-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-8:

a125 stiffener ring to a124-8 Fuse

The QA Inspector noted upon arrival that Fuse Section a124-16 had been removed from the production welding fixture and replaced by a124-8. OIW personnel were engaged in fit-up and preheat for the first a125 stiffener to fuse section connection for the initial few hours of the shift. OIW QC Inspector Steve Barnett contacted the QA Inspector at about 1930 hrs and stated that he was prepared to perform fit-up inspection for weld joint designated WM3-16 on Fuse Section a124-8. The QA Inspector observed as Mr. Barnett performed the inspection described above and noted that he accepted fit-up with no pick up requested. The QA Inspector performed visual inspection of the fit-up as well, including bevel angle and root gap, finding it to be in general compliance with contract requirements. The QA Inspector subsequently intermittently monitored OIW welder Bounheune Savanh (WID S74) during in progress Submerged Arc Welding (SAW) at weld joint WM3-16. The referenced connection joins a125 stiffener ring to a124-8 Fuse Section. The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of the completed root pass at weld WM3-16. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT & 10% MT verification at the location noted above finding the root pass to be in general

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compliance with contract documents. Please reference TL-6028 report for this date for details. Welder S74 deposited SAW fill and cover passes in the flat (1G) position in accordance with approved welding procedure 4020 at the location referenced above. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing two torches. An OIW helper was observed assisting welder S74 during SAW process. The QA Inspector observed OIW QC Inspector 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 appeared to be in general compliance with the contract requirements -- (35.5 volts, 585 amperes, 457mm/min travel speed).

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

a124-3 to a124-11

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-5:

a124-14 to a124-2

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

Hinge-K Pipe Beam Fuse Sub-Assembly 120A-6:

A124-9 to a124-1

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-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-4:

a111-4 forging to a110-4 base plate

The QA Inspector intermittently monitored OIW welder Bui Liem (WID B10) during in progress Submerged Arc Welding (SAW) at weld joints W1-90 & W1-93. The referenced connection joins radial stiffeners c108 & f108 to a106 & a107 stiffeners respectively. The QA Inspector observed as OIW QC Inspector Steve Barnett performed Magnetic particle Testing (MT) and Visual Inspection (VT) of ground tack welds and subsequently the completed root pass at weld W1-90. Mr. Barnett stated that he had located no rejectable indications. The QA Inspector subsequently performed 100% VT & 50% MT verification at the location noted above finding the root pass to be in general compliance with contract documents. Please reference TL-6028 report for this date for details. 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. The QA Inspector noted the OIW welder was maintaining continuous preheat utilizing a torch. Weld joint W1-90 was completed during the shift and weld joint W1-93 was in-process at shift turnover. The QA Inspector observed OIW QC Inspector 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 appeared to be in general compliance with the contract requirements -- (W1-82: 35 volts, 585 amperes, 432mm/min travel speed).

Hinge-K Pipe Beam Fuse Assembly 120A-3:

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

OIW Fabrication Shop-Bay 6

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
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Reviewed By:	Adame,Joe	QA Reviewer
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