

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-006885**Date Inspected:** 22-May-2009**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:** Mike Gregson, Rob Walters**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:

OIW Fabrication Shop-Bay 3

Hinge-K Pipe Beam Assembly 102A-1: 5/22/09

a111-1 Forging to a110-1 Base Plate

QA Inspector noticed this assembly 102A-1 was currently sitting idle, with a pending critical weld repair on weld joint #W2-12/W2-13.

Hinge-K Pipe Beam Assembly 102A-2: 5/22/09

a111-2 Forging to a110-2 Base Plate

QA Inspector noticed this assembly 102A-2 was sitting idle, with a pending non-critical weld repair.

Hinge-K Pipe Beam Assembly 102A-3: 5/22/09

a111-3 Forging to a110-3 Base Plate

QA Inspector noticed this assembly 102A-3 was sitting idle, with a pending non-critical weld repair.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Hinge-K Pipe Beam Assembly 102A-4: 5/22/09

a111-4 Forging to a110-4 Base Plate

QA Inspector noticed this assembly 102A-4 was sitting idle, with a pending non-critical weld repair.

Hinge-K Pipe Beam Fuse Assembly 120A-1: 5/22/09

a124-6 Half Fuse to a124-7 Half Fuse

QA Inspector noticed this fuse assembly 120A-1 was sitting idle in OIW Bay 6, pending the stainless steel overlay process.

Hinge-K Pipe Beam Fuse Assembly 120A-2: 5/22/09

a124-3 Half Fuse to a124-11 Half Fuse

QA Inspector noticed this fuse assembly 120A-2 was sitting idle, with a pending third time critical weld repair.

Hinge-K Pipe Beam Fuse Assembly 120A-3: 5/22/09

a124-12 Half Fuse to a124-10 Half Fuse

QA Inspector noticed that OIW production personell had placed this fuse assembly 120A-3 in welding positioner and was setting up welding machine in preparation for the stainless steel overlay welding process. See picture below.

Hinge-K Pipe Beam Fuse Assembly 120A-4: 5/22/09

a124-13 Half Fuse to a124-4 Half Fuse

QA Inspector noticed this fuse assembly 120A-4 had been loaded onto a trailer and was transferred to A&G, in preparation for the rough machining process. QA Inspector noted that OIW project manager Bill Pender and OIW Machinist would be arriving on 5/26/09 to verify lathe set-up and document the circumference and variations of flatness, before releasing A&G to start rough machining. QA Inspector noted that once A&G completes the rough machining and fuse assembly 120A-4 arrives back to OIW, OIW QC Inspectors will perform 100% final ultrasonic weld inspection on the CJP butt splice.

Hinge-K Pipe Beam Fuse Assembly 120A-5: 5/22/09

a124-14 Half Fuse to a124-2 Half Fuse

QA Inspector noticed that welder # T6, Mr. Craig Jacobsen had previously completed the submerged arc welding on the a124-14 half fuse to a124-2 half fuse, CJP weld splice, designated as weld joint #WM3-18. QA Inspector noticed this assembly 120A-5 was sitting idle, pending 100% preliminary ultrasonic weld inspection on the CJP splice.

Hinge-K Pipe Beam Sub-Assembly a124-1: 5/22/09

a125 & b125 Ring Stiffeners to a124-1 Half Fuse

QA Inspector randomly witnessed OIW welder #O6, Mr. Tim O'Brian, performing submerged arc welding on the a125 internal ring stiffener to a124-1 half fuse, designated as weld joint #WM3-16

QA Inspector noticed the submerged arc welding was being performed in the flat position and verified Mr. Tim O'Brian was currently qualified for this welding process/position and randomly recorded pre-heat temperatures of approximately 350 F, which is in accordance with the applicable welding procedure specification (WPS 4020). QA Inspector randomly recorded in-process welding parameters of 580 amps and 29 volts and noticed that QC Inspector Rob Walters was present to randomly verify in-process welding parameters (amps/volts) and pre-heat

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

temperatures. QA Inspector noted that the submerged arc welding being performed by Mr. Tim O'Brian, appeared to be in compliance with the applicable welding procedure specification (WPS 4020).

Hinge-K Pipe Beam Sub-Assembly a124-9: 5/22/09

a125 & b125 Ring Stiffeners to a124-9 Half Fuse

QA Inspector noticed the submerged arc welding was complete on the internal ring stiffeners and this assembly a124-9 was sitting idle.

OIW South Storage Yard: 5/22/09

QA Inspector noticed the following half-fuse sub assemblies were sitting idle, pending submerged arc welding on the internal stiffener rings, piece marks identified as a125 & b125: See picture below.

a124-5, a124-8, a124-15 and a124-16.

Material, Equipment, and Labor Tracking

QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project.

The QA Inspector observed at Oregon Iron Works: 6 OIW production personnel and 2 QC Inspectors.



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.

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