

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-008107**Date Inspected:** 03-Aug-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 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: 8/3/09

a111-1 Forging to a110-1 Base Plate

QA Inspector noticed this assembly 102A-1 had been previously placed in position and welder #B6, Mr. Yuriy Bannikov, was in process of performing submerged arc welding, on the c107 stiffener plate to a111-1 forging, designated as weld joint # W1-163, in the flat position. QA Inspector verified Mr. Bannikov was currently qualified for this process/position and noted that Mr. Bannikov was utilizing OIW approved welding procedure specification (WPS 4020). QA Inspector randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit and noticed QC Inspector Steve Barnett was present to monitor in-process welding parameters (amps/volts). QA Inspector noted that Mr. Barnett had previously recorded in-process welding parameters of 420 amps and 31 volts, which appears to be in compliance with the applicable welding procedure specification. QA Inspector noticed welder #V7, Mr. Vincent Vue, was in process of performing submerged arc welding, on the c108 stiffener plate to a111-1 forging, designated as weld joint # W1-157, in the flat position. QA Inspector verified Mr. Vue was currently qualified for this process/position and noted that Mr. Vue was utilizing OIW

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approved welding procedure specification (WPS 4020). QA Inspector randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit and noticed QC Inspector Steve Barnett was present to monitor in-process welding parameters (amps/volts). QA Inspector noted that Mr. Barnett had previously recorded in-process welding parameters of 420 amps and 31 volts, which appears to be in compliance with the applicable welding procedure specification.

Hinge-K Pipe Beam Assembly 102A-3: 8/3/09

a111-3 Forging to a110-3 Base Plate

QA Inspector noticed welder #B28, Mr. Mikhail Bannikov, was in-process of flux core arc welding (FCAW) on the critical weld repair (CWR 2244-006), a111-3 forging to a110-3 base plate, designated as weld joint #WM3-18, in the vertical position. QA Inspector noted that this critical weld repair was previously excavated, 100% visual/magnetic was performed and no rejectable indications were found. QA Inspector noticed QC Inspector Steve Barnett was present and Mr. Barnett had recorded in-process welding parameters of 240 amps/25 volts and pre-heat temperatures of 350 degrees Fahrenheit, which is in accordance to the applicable welding procedure specification (WPS 3048). QA Inspector randomly recorded pre-heat temperatures of approximately 350 degrees Fahrenheit and verified Mr. Bannikov was currently qualified for this welding process/position. QA Inspector noted that Mr. Bannikov appeared to be in compliance with AWS D1.5 and WPS 3048, on this date.

Hinge-K Pipe Beam Fuse Assembly 120A-8: 8/3/09

a124-8 Half Fuse to a124-16 Half Fuse

QA Inspector randomly witnessed welder #B10, Mr. Liem Bui, perform submerged arc welding (SAW) on CJP (AWS D1.5 B-U3c-S), half fuse pipe assembly, (piece mark identified as a124-8), to half fuse pipe assembly, (piece mark identified as a124-16), weld joint #WM3-18, in the flat position (1G). QA Inspector spoke with QC Inspector Steve Barnett and Mr. Barnett explained that the OIW welder #B10 was performing submerged arc welding in accordance with the OIW approved welding procedure specification (WPS 4020).

QA Inspector noticed QC Inspector Steve Barnett was present and monitoring in-process welding parameters (amps/volts) and pre-heat temperatures, verifying Mr. Bui was in compliance with the applicable welding procedure specification (WPS 4020). QA Inspector noted that QC Inspector Steve Barnett had recorded in-process welding parameters of 565 amps/35 volts and travels speed at 457mm/min.

QA Inspector verified Mr. Bui was currently qualified for this welding process/position and performed a random pre-heat check and recorded temperatures of approximately 350 degrees Fahrenheit, which is in compliance with the OIW welding procedure specification (WPS 4020).

OIW Fabrication Shop-Bay 6 (ESW Overlay Process)

Hinge-K Pipe Beam Fuse Assembly 120A-1: 8/3/09

a124-6 Half Fuse to a124-7 Half Fuse

QA Inspector noticed that the stainless steel overlay welding was in-process, on this fuse assembly 120A-1. QA Inspector witnessed welder #S74, Mr. Bounheune Savanh, performing electro slag welding (ESW) in the flat position, utilizing Soudokay brand Soudotape 316L stainless steel consumable strip. QA Inspector noted that the first/second overlay weld passes were 100% complete and the third layers were in-process, approximately 20% complete. QA Inspector noticed QC Inspector Steve Barnett was present on this date, to verify in-process welding parameters (amps/volts) and monitor in-process continuous pre-heat temperatures. QA Inspector spoke with QC Inspector Steve Barnett and Mr. Barnett explained that welding amps were recorded as 1200 amps/25.9 volts, with travel speed at 210 mm/minute and a pre-heat temperature of approximately 70 degrees Fahrenheit. QA Inspector

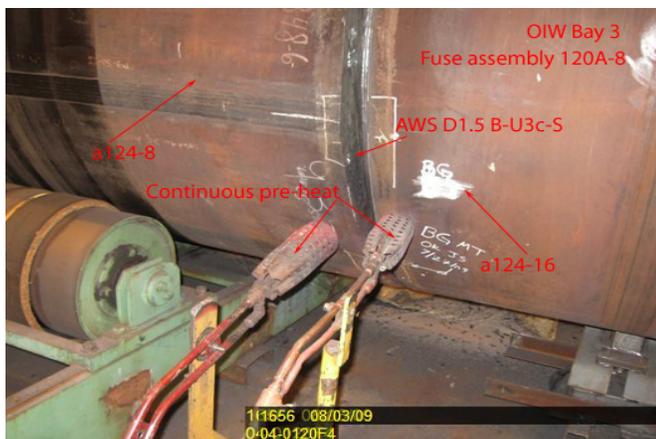
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verified Mr. Bounheune Savanh was currently qualified for this welding process/position and randomly recorded pre-heat temperatures of approximately 70 degrees Fahrenheit. QA Inspector noted that Mr. Bounheune Savanh appeared to be in compliance with the applicable approved welding procedure specification (WPS 7003).

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: 5 OIW production personnel and 1 QC Inspector.



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

Reviewed By: Adame, Joe

QA Reviewer
