

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-006139**Date Inspected:** 08-Apr-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:**

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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-4:

a111-4 Forging to a110-4 Base Plate

QA Inspector randomly witnessed OIW welder #J6, Mr. Craig Jacobsen perform backgouge on completed submerged arc welding (SAW) root pass, joint designated as CJP (AWS D1.5 TC-U9a-S). As shown in picture below.....

QA Inspector noticed that this weld joint was a pipe beam base plate, piece mark identified as a110-4 to pipe forging, identified as piece mark a111-4.

QA Inspector spoke with QC Inspector Mike Gregson and Mr. Gregson explained that the OIW welder #J6 had completed welding this root pass according to the OIW approved welding procedure specification (WPS 4016). Mr. Gregson also explained that the in-process welding parameters (amps/volts) and appropriate pre-heat temperatures, were monitored by a qualified QC Inspector and were in compliance with this applicable welding procedure specification.

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Hinge-K Pipe Beam Fuse Sub-Assembly 120A-10

a125 Stiffener Ring to a124-10 Fuse

QA Inspector randomly witnessed OIW welder #O6, Mr. Tim O'Brian perform flux-core arc welding (FCAW) of weld root pass on internal ring stiffener, piece mark identified as a125, to half fuse pipe assembly, piece mark identified as a124-10. QA Inspector noticed this particular weld joint was designated as a partial joint penetration (PJP AWS D1.5 TC-P5-S) and Mr. Tim O'Brian was welding in the flat position (1G).

QA Inspector spoke with Mr. Tim O'Brian and Mr. Tim O'Brian explained that the remaining weld passes would be completed with the submerged arc welding (SAW) process and QA Inspector noticed a constant pre-heat to maintain a minimum of 350 degrees fahrenheit, which is in accordance with the applicable OIW approved welding procedure specification (WPS 4020).

QA Inspector spoke with QC Inspector Mike Gregson and Mr. Gregson explained that the OIW welder #O6, had completed welding this root pass according to the OIW approved welding procedure specification (WPS 4020). Mr. Gregson also explained that the in-process welding parameters (amps/volts) and appropriate pre-heat temperatures, were monitored by a qualified QC Inspector and were in compliance with this applicable welding procedure specification.

Hinge-K Pipe Beam Fuse Assembly 120A-2

a124-3 Half Fuse to a124-11 Half Fuse

QA Inspector randomly witnessed welder #S53, Mr. Jerry Shepherd, perform pre-heating on half fuse pipe sub-assembly, piece mark identified as a124-3 to half fuse pipe sub-assembly, piece mark identified as a124-11, as shown in picture below.....

QA Inspector noticed this butt weld joint was designated as a complete joint penetration (CJP AWS D1.5 B-U3c-S) and had been previously tack welded by Mr. Shepherd, as shown in picture below.....

QA Inspector spoke with Mr. Jerry Shepherd and Mr. Shepherd explained that once the minimum pre-heat temperature of 350 degrees fahrenheit was reached, the submerged arc welding of the weld root pass, would continue.

QA Inspector spoke with QC Inspector Mike Gregson and Mr. Gregson explained that a qualified QC Inspector would be present to monitor in-process welding parameters (amps/volts) and in-process pre-heat temperatures, to verify they are in compliance with the applicable OIW approved welding procedure specification (WPS 4020).

QA Inspector reviewed the appropriate OIW approved drawing on this particular assembly and noticed that once this (CJP AWS D1.5 B-U3c-S) butt weld is completed, this assembly would be designated as pipe fuse assembly 120A-2.

Material, Equipment, and Labor Tracking

QA Inspector Sean Vance performed a verification of personnel at Oregon Iron Works, Inc. and witnessed 6 OIW production personell and 2 QC.

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Summary of Conversations:

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
