DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 13.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-006755
Date Inspected: 19-May-2009

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Oregon Iron Works Clackamas, Or.

OSM Arrival Time: 2100
OSM Departure Time: 530
Location: Clackamas, Oregon

CWI Name:	William Richie, Mike Gregson			**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:

On this date, Caltrans Quality Assurance Inspector (QA) Sherri Brannon is present at the Oregon Iron Works, Inc. (OIW) jobsite in Clackamas, Oregon for the purpose of observing fabrication of the Hinge K Pipe Beams.

OIW Fabrication Shop-Bay 3 (sub-assembly):
QA Inspector Brannon randomly observed OIW qualified welder Mr. Bounheune Savanh ID#S74 and one helper welding joining stiffener ring MK #a125 (HPS 485 W) to hinge K pipe beam half section MK#a124-9 (HPS 485 W). The fillet welds is identified as weld joint #WM3-04. Mr. Savanh was observed welding in the 2F (horizontal) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. William Richie verifying that the pre-heat of 350°F and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured/observed by QA are as follows: 602 amps, 33.0 volts and a travel speed of 458mm per minute appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0.

OIW Fabrication Shop-Bay 3 (sub-assembly):
QA Inspector Brannon randomly observed OIW qualified welder Mr. Jayson Sinsel Heaton ID#S58 and one helper welding joining stiffener ring MK #a125 (HPS 485 W) to hinge K pipe beam half section MK#a124-9 (HPS 485 W). The fillet welds is identified as weld joint #WM3-04. Mr. Heaton was observed welding in the 2F (horizontal) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. William Richie verifying that the pre-heat of 350°F and welding parameters were in accordance with

the Welding Procedure Specification (WPS). Welding parameters measured/observed by QA are as follows: 602 amps, 33.0 volts and a travel speed of 458mm per minute appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0. Welding completed at weld joint WM3-04.

OIW Fabrication Shop-Bay 3 (sub-assembly):
QA Inspector Brannon randomly observed OIW qualified welder Mr. Jayson Sinsel Heaton ID#S58 and one helper welding root/fill pass's joining stiffener ring MK #b125 (HPS 485 W) to hinge K pipe beam half section MK#a124-9 (HPS 485 W). The partial joint penetration (PJP) groove weld is identified as weld joint #WM3-02. Mr. Heaton was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. William Richie and Mr. Mike Gregson verifying that the pre-heat of 350°F and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured by QA are as follows for root/fill: 450/576 amps, 30.0/33.0 volts and a travel speed of 381/463mm per minute respectively appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0.

QC/QA Inspection (VT/MT):
QA Inspector Brannon observed QC Inspector Mr. Mike Gregson perform visual inspection (VT) and magnetic particle testing (MT) root pass at hinge k pipe beam fuse section a124-9 (HPS 485 W) stiffener ring weld joint WM3-02 partial joint penetration (PJP) weld. QA Inspector Brannon also, performed visual inspection (VT) and magnetic particle testing (MT) root pass at hinge k pipe beam fuse section a124-9 (HPS 485 W) stiffener ring weld joint WM3-02 partial joint penetration (PJP) weld. See Caltrans Magnetic Particle Test Report, TL-6028 dated March 19, 2009 for additional information.

OIW Fabrication Shop-Bay 3 (sub-assembly):
QA Inspector Brannon observed no production activity on Hinge K Pipe Beam sub assemblies noted below for the duration of the shift.
Hinge-K Pipe Beam Sub Assembly, MK#102A-1 - MK#a111-1 forging to MK#a110-1 base plate idle.
Hinge-K Pipe Beam Sub Assembly, MK#102A-2 - MK#a111-2 forging to MK#a110-2 base plate idle.
Hinge-K Pipe Beam Sub Assembly, MK#102A-3 - MK#a111-3 forging to MK#a110-3 base plate idle.
Hinge-K Pipe Beam Sub Assembly, MK#102A-4 - MK#a111-4 forging to MK#a110-4 base plate idle
Note: QA Inspector Brannon also, observed pending critical welding repair (CWR-2244-003) at Mk#102A-1 weld joint W2-13, MK#102A-2 weld joint W2-13 pending 1st time UT repair and MK#102A-3 weld joint W2-13 pending 1st time UT repair..
Hinge-K Pipe Beam Sub Assembly, MK#120A-2 – MK#a124-3 half fuse to MK#a124-11 half fuse.
Note: Inspector Brannon also, observed pending 3rd time repair critical welding repairs (CWR-2244-005) at Mk#120A-2 weld joint WM3-18.

Caltrans Status and Production Tracking:
QA Inspector Brannon also updated Caltrans status and production tracking logs for tracking of check samples, procedure qualification record (PQR), critical weld repairs (CWR), non-critical welding repairs (WRR), completed and in process welding, QC/QA non-destructive testing.

Material, Equipment, and Labor Tracking:

WELDING INSPECTION REPORT

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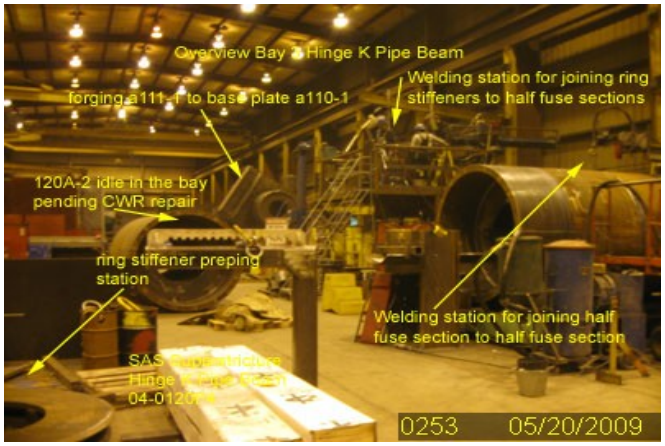
QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 2 Quality Control and 2 production personnel on this date.

The following digital photograph below illustrates observation of the activities being performed.



Summary of Conversations:

As noted within this reprot.

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:	Brannon,Sherri	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer