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-010607
Date Inspected: 03-Dec-2009

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

OSM Arrival Time: 1000
OSM Departure Time: 1830
Location: Clackamas, OR

CWI Name: M. Gregson, J. Salazar, S. Barnett

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:

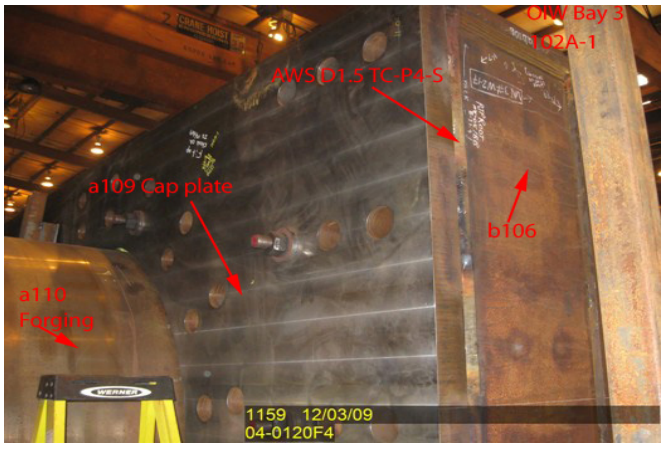
Hinge-K Pipe Beam Assembly 102A-3: 12/3/09
a111-3 Forging to a110-3 Base Plate
QA Inspector noticed that the partial joint penetration and fillet welds, designated as weld joints #W1-01 thru W1-163, were previously completed and OIW production personell were in-process of performing weld clean-up, on the above mentioned stiffeners. QA Inspector spoke with QC Inspector Jose Salazar and Mr. Salazar explained that OIW welder # O6, Mr. Tim O'Brian was continuing to blend the weld start/stops, removing weld spatter and grinding all areas, which were previously marked by OIW QC Inspectors. Mr. Salazar explained that the visual clean-up that was being performed by Mr. O'Brian, was intermittently monitored by Mr. Salazar and areas that were previously marked up and completed, were then visually re-inspected, per AWS D1.5 and contract requirements. QA Inspector noted that the in-process visual testing by OIW QC Inspector Jose Salazar, appeared to be in compliance with AWS D1.5 and contract requirements. See attached picture below.

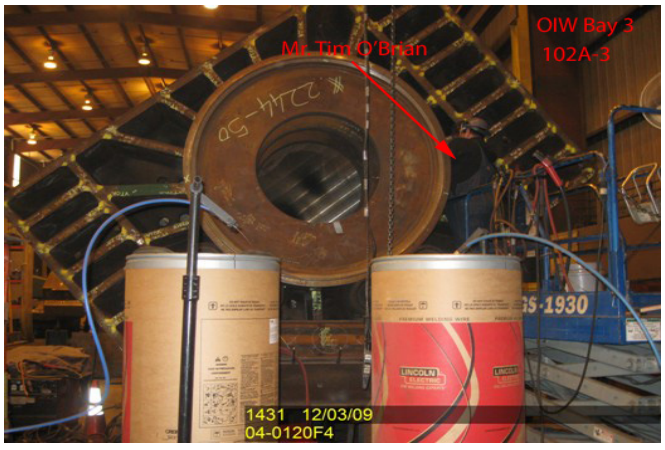
Hinge-K Pipe Beam Assembly 102A-1: 12/3/09
a111-1 Forging to a110-1 Base Plate
QA Inspector randomly noticed that the a109 Post Tension Cap plate had been previously fit-up and the FCAW "intertacking", was complete. QA Inspector spoke with OIW QC Inspector Jose Salazar and Mr. Salazar explained

that the fit-up, between the a109 Post Tension Cap plate and completed HPS 485W stiffeners, had been previously measured and accepted, per AWS D1.5. QA Inspector randomly inserted a taper gauge into each one of the existing rod holes (a109 Cap plate) and noted that there was 100% contact between the a109 Cap plate and stiffeners that were accessible, through these holes. QA Inspector noted that the fit-up, mill to bear surface, was in-compliance with AWS D1.5 and contract requirements. See attached picture below.

Hinge-K Pipe Beam Assembly 102A-4: 12/3/09
a111-4 Forging to a110-4 Base Plate
QA Inspector noted that OIW PM Bill Pender had notified PE Mohammad Fatemi and Lead QA Inspector Joe Adame, on this date, that the 12 each 1 ¾" threaded rods, would be re-inserted into the a109 Post Tension Cap plate and torqued. QA Inspector noted that Mr. Pender stated that OIW will have Mr. Adame present to witness and verify mill to bear condition and OIW will document torque required to achieve this condition.
Note: QA Inspector previously measured the bearing gaps, utilizing a taper gauge and noted that the gaps measured from 0-4mm, with the 4mm gaps present on the radial stiffeners, closest to the forging QA Inspector noted that these gaps, between the a109 Post Tension Cap plate and completed stiffeners, occurred after and/or during the completion of weld joints #W2-19 (a109/a106), W2-20 (a110/a106), W2-23 (a110/ab106) and W2-24 (a109/ab106). QA Inspector and QC Inspector Jose Salazar had previously measured the mill to bear surface, after the above mention weld joints were fit-up/ FCAW tack welded with multiple threaded rods in place, (to prevent movement and distortion of the a109 Cap plate), during welding. QA Inspector previously noted that there was approximately 100% contact between the stiffeners and Cap Plate, in accordance with AWS D1.5 and contract requirements.

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: 2 OIW production personnel and 2 QC Inspectors.
The QA Inspector noted that the following personell were present at AG Machine shop: 1 machinist and 1 supervisor.
The QA Inspector noted that no work was performed at OIW Vancouver paint shop.





Summary of Conversations:
As noted above.

WELDING INSPECTION REPORT

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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