

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-014266**Date Inspected:** 19-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR

CWI Name:	M. Gregson, J. Salazar, G. Mundt	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 101A-4:

The QA Inspector observed that no activity was performed on day shift, on this assembly.

The QA Inspector was present on this swing shift and spoke with OIW QC Inspector Gary Mundt. QC Inspector Mundt explained to the QA Inspector that 1 OIW production helper will be performing grinding activities on the assembly. The QA Inspector later observed a production helper grinding on the Partial Joint Penetration (PJP) weld joints # W2-01, W2-02, W2-17, W2-18, W2-19, W2-20, W2-23 and W2-24. The QA Inspector observed that the helper was utilizing a hand held mechanical, Makita brand grinder with an attached 9" circular disc. The QA Inspector observed that the grinding was being performed from an idle scissor lift, which was previously moved next to access the weld joint and that the assembly was being slowly rotated as the grinding was being completed. The QA Inspector observed the helper randomly checking the areas which were ground with a bridge cam gauge. The QA Inspector noted that these weld joints were the a106/ab106 HPS 485 W stiffeners to a109/a110 Post Tension Cap and Base plate. The QA Inspector observed that OIW QC Inspectors had previously marked the weld joint during final visual inspection, for excessive reinforcement.

The QA Inspector also observed the helper performing grinding on the Post Tension and Base plate flame cut edges, which were previously marked by OIW QC Inspectors.

QC Inspector Mundt explained to the QA Inspector that the grinding will probably continue the entire shift and the

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weld joints and flame cut edges will eventually be visually inspected by QC. The QA Inspector noted that per AWS D1.5, a maximum of 3 mm weld reinforcement is acceptable.

Hinge-K Pipe Beam Assembly 102A-3:

The QA Inspector observed WID # B62 (Marcus Belgarde) performing submerged Arc Welding (SAW) on weld joint (W2-20). The QA Inspector observed that WID # B62 was performing the SAW in the flat position and was currently qualified for this. The QA Inspector noted that this weld joint was a partial penetration, AWS D1.5 TC-P4-S, a110 Base Cap plate to a106 HPS 485 W stiffener. The QA Inspector observed that OIW QC Inspector Jose' Salazar was present at the time of welding and QC Inspector Salazar explained that he was intermittently checking the welding parameter amps, volts, travel speed and pre-heat temperatures. The QA Inspector randomly observed QC Inspector verify welding amperage of 650 amps, 33.8 volts and a travel speed of 21 inches per minute. The QA Inspector observed that the fill passes were currently in process and that the parameters were in compliance with the applicable Welding Procedure Specification (WPS) 4020. The QA Inspector then randomly performed a pre-heat check and noted that the temperature was approximately 350 degrees Fahrenheit.

The QA Inspector observed that OIW Production Lead Troy Smith was present on this shift and Lead Troy Smith explained that the SAW will continue throughout the entire shift.

The QA Inspector was present on this swing shift and spoke with OIW QC Inspector Gary Mundt. QC Inspector Mundt explained to the QA Inspector that 1 OIW production helper will be performing grinding activities on the assembly. The QA Inspector later observed a production helper grinding on the Partial Joint Penetration (PJP) weld joints # W2-01, W2-02, W2-17 and W2-18. The QA Inspector observed that the helper was utilizing a hand held mechanical, Makita brand grinder with an attached 9" circular disc. The QA Inspector observed that the grinding was being performed from a parked scissor lift next to the weld joint. The QA Inspector observed the helper randomly checking the areas which were ground with a bridge cam gauge. The QA Inspector noted that these weld joints were the a106/ab106 HPS 485 W stiffeners to a109/a110 Post Tension Cap and Base plate. The QA Inspector observed that OIW QC Inspectors had previously marked the weld joint during final visual inspection, for excessive reinforcement.

The QA Inspector also observed the helper performing grinding on the Post Tension and Base plate flame cut edges, which were previously marked by OIW Q Inspectors.

QC Inspector Mundt explained to the QA Inspector that the grinding will probably continue the entire shift and the weld joints and flame cut edges will eventually be visually inspected by QC. The QA Inspector noted that per AWS D1.5, a maximum of 3 mm weld reinforcement is acceptable.

Material, Equipment, and Labor Tracking (MELT)

QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project. The QA Inspector observed at Oregon Iron Works: 4 OIW production personnel and 2 QC Inspectors.

Summary of Conversations:

The QA Inspector was informed by OIW QC Inspector Jose Salazar that QCM Tom Tomovick has completed the non-critical Weld Repair Report (2244-10-04), which was then submitted to OIW Project Manager Bill Pender. QC Inspector Salazar explained that PM Bill Pender has reviewed the WRR and given approval to start welding. The QA Inspector noted that this was for the excavation and repair on the area on Weld Joint # W4-01, Repair # 2, which incorrect filler metal was used for the repair. QC Inspector Salazar provided the QA Inspector a copy of the WRR. QC Inspector Salazar explained that he has given OIW Production Lead Troy Smith a copy of the WRR and notice of approval to start the repair. QC Inspector Salazar explained that at this time, he does not know when production will start.

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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
