

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-013876**Date Inspected:** 03-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 WID #J6 (Craig Jacobson) currently applying pre-heat, utilizing two stationary rosebud torches, on the Weld Joint #W4-01. The QA Inspector noted that this Complete Joint Penetration (AWS D1.5 B-U7-S), was the Fuse 120A-4 to Forging 102A-4. The QA Inspector noted that OIW QC Inspector Jose' Salazar was present on this shift and QC Inspector Salazar explained that he will be notified by production, once the pre-heat is up to the minimum 350 degrees Fahrenheit (177 C), prior to the Submerged Arc Welding (SAW). The QA Inspector observed that the pre-heat was being applied to the weld joint from the outside and QC Inspector Salazar explained that the pre-heat will be checked from the interior of the joint. QC Inspector Salazar explained that the root pass will first be deposited from the interior and then he will then be notified by production, to perform Visual and Magnetic Particle (VT/MT) testing, once the root pass is complete. QC Inspector Salazar explained that once the VT/MT is acceptable, that WID #J6 will continue welding the fill passes, for the remainder of the shift.

The QA Inspector later observed that WID #J6 had started the SAW pass and was approximately three-fourths complete with this root pass. The QA Inspector observed WID #J6 checking the in-process pre-heat temperature, utilizing a Tempilstick indicator and noted that the temperature was approximately 350 degrees Fahrenheit. Per the applicable WPS, this appears to be in compliance with the minimum 350 degrees Fahrenheit required. The QA

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Inspector then spoke with QC Inspector Jose' Salazar and QC Inspector Salazar explained that he had previously recorded in process welding parameters of 405 amps/34.8 volts and a travel speed of 18 inches per minute. The QA Inspector noted that these welding parameters appeared to in compliance with the applicable WPS. QC Inspector later informed the QA Inspector that by the end of shift, WID #J6 had completed the root pass and one fill pass. QC Inspector Salazar explained that he had performed VT/MT on the root pass and found no rejectable indications. QC Inspector Salazar explained that the stationary torches will remain in place to continue the pre-heat and a Swing Shift welder will continue with the SAW fill passes.

The QA Inspector was present on this swing shift and observed WID #B10 (Liem Bui) continuing to perform the SAW, on the above mentioned weld joint. The QA Inspector noted that WID #B10 was currently approved and qualified for this process and position. The QA Inspector observed that OIW QC Inspector Gary Mundt was present on this shift and QC Inspector Mundt explained that WID #B10 will continue the SAW, for the entire shift. QC Inspector Mundt explained that he had recorded welding parameters of 565 amps, 34.8 volts and a travel speed of 18 inches per minute. The QA Inspector randomly verified the parameters and they appeared to be in compliance with the applicable WPS. The QA Inspector then randomly verified the pre-heat temperature was at the minimum of 350 degrees Fahrenheit. See attached picture below of pre-heat application.

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:

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
