

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-013973**Date Inspected:** 10-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 OIW Lead QC Inspector Michael Gregson performing Ultrasonic Testing (UT) on the previously completed submerged arc welding (SAW) joint, # W4-01. The QA Inspector noted that this was a Complete Joint Penetration (CJP), AWS D1.5 B-U7-S, piece mark Fuse 120A-4 to Forging 102A-4 and that the minimum 72 hr. cooling time, prior to the inspection, had expired. The QA Inspector observed that QC Inspector Gregson was currently performing the inspection from Face "A" on the forging (a111-4) side of the weld axis, utilizing a 70 degree angle Lucite wedge attached to a 2.25 MHz frequency transducer. The QA Inspector noted that per OIW approved procedure that a 60 and 70 degree shear wave inspection will be performed from the Forging side of the weld axis from Face "A" and a 70 degree inspection will be performed from Face "B", from both sides of the weld axis. QC Inspector Gregson explained to the QA Inspector that he had previously performed a calibration utilizing an AWS IIW Type 2 Reference Block, in preparation for the angle beam ultrasonic testing of the weld. QC Inspector Gregson explained that at this time, no rejectable or recordable indications were found. The QA Inspector was present on this swing shift and noted that QC Inspector Gary Mundt was present. QC Inspector Mundt explained to the QA Inspector that he was instructed by Lead QC Inspector Gregson, to continue the UT on the above mentioned weld joint. The QA Inspector informed QC Inspector Mundt that he was not approved to perform UT on the project and any UT which he performs, will be informal testing only. The QA

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Inspector later observed QC Inspector Mundt performing UT on the weld joint. See summary of conversations below, for additional information.

Hinge-K Pipe Beam Assembly 102A-3:

The QA Inspector observed WID #B62 (Marcus Belgarde) performing submerged Arc Welding (SAW) on weld joint (W2-02). 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 plate to b106 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 22 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 performed a pre-heat check and recorded a temperature of 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 noted that the above mentioned SAW appears to be in compliance with the applicable WPS.

The QA Inspector was present on this swing shift and observed no work performed on this assembly.

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:

After being informed by QC Inspector Gary Mundt, that he was preparing to perform Ultrasonic Testing on the weld Joint #W4-01, the QA Inspector spoke with Quality Control Manager Tom Tomovick. The QA Inspector explained to QCM Tomovick that QC Inspector Mundt was neither submitted nor approved to perform UT on the project. QCM Tomovick asked the QA Inspector if this was a final “buy off” of the weld joint and the QA Inspector questioned Mr. Tomavick what he meant by “buy off”. The QA Inspector then informed Mr. Tomovick that the minimum of 72 hrs. had expired, prior to the testing performed by Lead QC Inspector Mike Gregson, earlier in the shift. Mr. Tomovick explained that he could have QC Inspector Mundt submitted and approved in a day.

The QA Inspector informed Lead QA Inspector Joe Adame that QC Inspector Mundt had been instructed to

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perform UT on the project and Mr. Adame explained that he was not approved to perform this testing. QA Inspector Adame later explained to the QA Inspector that QCM Tomovick had submitted a request for QC Inspector Mundt to perform the UT. QA Inspector Adame explained that Robert Mertz has given OIW verbal approval to use QC Inspector Mundt for UT on the project.

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
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Reviewed By:	Adame,Joe	QA Reviewer
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