

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-013461**Date Inspected:** 23-Apr-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-2:

The QA Inspector witnessed Production Lead Troy Smith and WID #B62 (Marcus Belgarde), removing 2 sets of protective shrouding. One set of yellow painted shrouds, to protect the stainless steel overlay during transport/future storage and a second set, to prevent damage to the yellow painted shrouds and stainless steel overlay, during the rotation of the Fuse on automatic rollers, for the welding of the CJP weld joint #W4-01. The QA Inspector witnessed OIW first removing the set, which had been used to sit on the automatic rollers, utilizing an air ratchet gun, with an attached socket. The QA Inspector then witnessed OIW utilizing the overhead Bay 3 crane, to lift the shrouds off of the Fuse and place on the Bay 3 shop floor. The QA Inspector then witnessed OIW production removing the 2 piece yellow painted protective shrouds. Lead Troy Smith explained that these shrouds were being removed to check the condition of the stainless steel overlay and to replace the thermal blanket, if needed. The QA Inspector witnessed OIW cut the banding, which tightened the shrouds to the Fuse and then utilizing the overhead Bay 3 crane to lift the shrouds off the Fuse and then placing on the Bay 3 shop floor. After removal of the shrouds, the QA Inspector noted that the thermal blanket had stuck to the overlay in multiple areas on the overlay and was torn in various areas. Lead Troy Smith explained that this was caused by back and forth movement of the Fuse, between the shrouds, during welding of the CJP. The QA Inspector then witnessed OIW Production personell removing the torn thermal blanket and then scraping the stuck blanket off of the overlay. The QA Inspector noted

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that the scrapers being utilized were the plastic type, used for removal of snow and ice from windshields. The QA Inspector noted that OIW production personell were also utilizing clear plastic type scrapers, used for placement into welding helmets, for eye protection during grinding. The QA Inspector noted that no scratching or damage was apparent at this time, caused by the plastic type scrapers.

The QA Inspector was later informed by OIW QC Inspector Jose' Salazar that OIW Production personell had scraped off the areas of stuck thermal blanket and had cleaned the entire surface with acetone. QC Inspector Salazar explained that he had visually inspected the surface and found no scratches or gauges and explained that the surface was acceptable. The QA Inspector then performed visual inspection on the overlay surface and found no apparent scratches or gouges on the overlay.

Lead Troy Smith then explained that swing shift will cut new thermal blanket and place around the Fuse and then the 2 protective yellow shrouds will then be placed and banded together and that OIW will transfer this Fuse to OIW Vancouver facility on 4/26/10. The QA Inspector noted that the assembly will eventually be primed and painted at the facility. See attached pictures below.

Hinge-K Pipe Beam Assembly 102A-3:

The QA Inspector was notified by OIW QC Inspector Jose' Salazar that the Visual and Magnetic Particle Testing (VT/MT) was complete on the Critical Weld Repair (CWR) #2244-024, excavations. The QA Inspector noted that this CWR had been previously submitted and state approval had been granted, to proceed with the repair. QC Inspector Salazar explained that the VT/MT had revealed no rejectable indications in the weld joint #W1-103. QC Inspector Salazar explained that MT rejectable indications, were present in the weld joint #W1-118, which appeared to be small slag inclusions, deposited during the Flux Core Arc welding (FCAW) of this partial penetration weld joint (AWS D1.5 TC-P5-S). See summary of conversations below.

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.

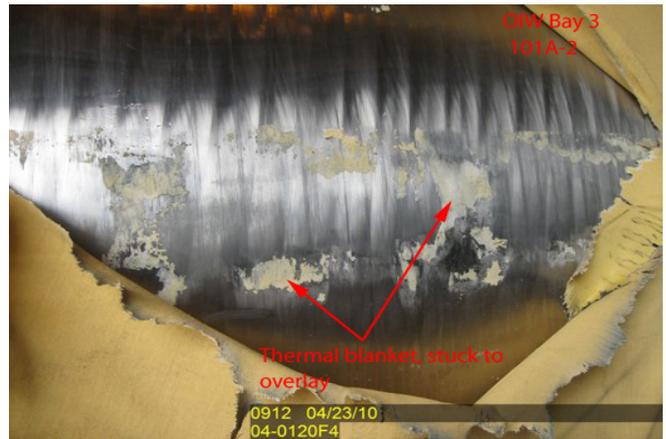
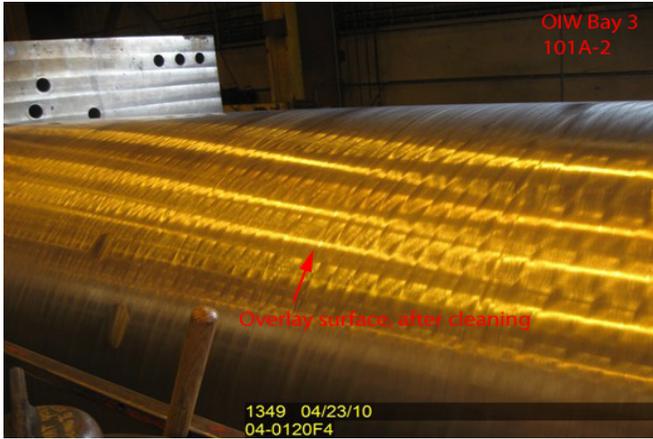
Summary of Conversations:

Lead QA Inspector Joe Adame has notified Robert Mertz and Mohammad Fatemi about the presence of the slag inclusions and OIW's verbal proposal on how to proceed with the repair of the indications, present in the Partial Penetration WJ #W1-118. OIW production has explained that this is the maximum depth that they want to excavate, to access the CWR in the flat position and are proposing to leave the indication. OIW production explained that further excavation on the indications will probably do more harm to the weld and base material and that the repair will have to be then accessed, in the vertical position. The measurements on the excavation are as follows: 40 mm long and 15 mm deep. The slag inclusion is approximately 3 mm long.

QA Inspector Adame explained that OIW has agreed to submit a request and justification for this, prior to proceeding with the repair.

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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
