

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: 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-012034**Date Inspected:** 11-Feb-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1630**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 102A-3

a111-3 Forging to a110-3 Base Plate

The QA Inspector was notified by OIW QC Inspector Gary Mundt that WID #S74 (Bounheune Savanh), was in process of setting up to perform the Flux-core Arc Welding (FCAW) on the Critical Weld Repairs (CWR) #2244-018. QC Inspector Mundt explained that the FCAW will be performed in accordance with the OIW approved Welding Procedure Specification (WPS) 3051. QC Inspector Mundt explained that he will be present during the entire shift to continuously monitor welding parameters (amps/volts) and pre-heat temperatures, during the CWR. QC Inspector Mundt also explained that the FCAW should be complete on this swing shift and post heat will be applied with a torch, in accordance with the CWR Specific Instructions. The QA Inspector noted that this was 230-315 degrees C.

AG Machining (Boring, OR)

On this date, the QA Inspector arrived at AG Machine Works to witness the final machining on the Fuse 120A-3. Upon arrival, the QA Inspector met with AG Machinist, Stuart Doyle and Mr. Doyle explained that he was currently setting up to perform a machining cut pass. AG Machinist Doyle explained that this cut pass will be set to remove approximately 1 mm of material. The AG Machinist explained that a second cut pass will be taken to

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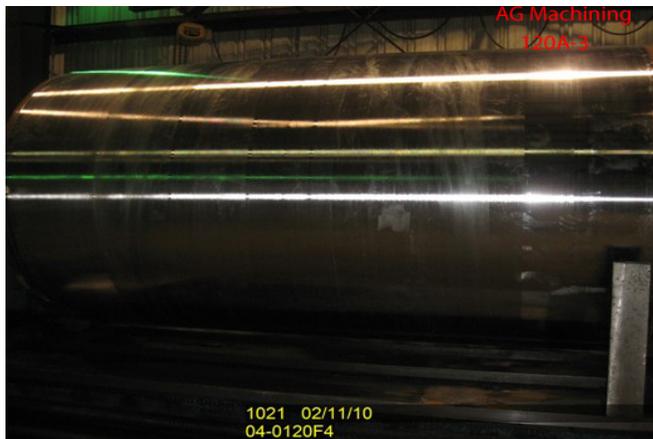
remove approximately .5 mm and this will be the final finished outside diameter. The QA Inspector noted that the contract requires a finished outside diameter of 1920 mm (+/- 1 mm). AG then explained that the final finish honing will be performed with a Superfinisher, after the two cut passes are completed. AG explained that the honing will be performed to finish the overlay to the required .8 um. Mr. Doyle also explained that OIW QC Inspector Jose Salazar and WID #C34 (Mark Craig), had previously arrived in the a.m. to perform weld repairs on 2 spots on the overlay. AG explained that due to the depth of the 2 repair areas, they will not be machined out and OIW had arrived to perform these repairs. The QA Inspector later spoke with QC Inspector Salazar and Mr. Salazar explained that he was present during the welding. QC Inspector Salazar explained that welding procedure specification (WPS 8022), had been utilized for the repairs. QC Inspector Salazar explained that he witnessed Mr. Craig performing the pre-heat required, utilizing a torch and then he recorded a temperature of approximately 175 degrees Fahrenheit, after the pre-heat was complete. The QA Inspector noted that 125 degrees Fahrenheit minimum was required, per WPS 8022. QC Inspector Salazar explained that he witnessed the AG Machinist rotating the fuse assembly to access the weld repair areas in the flat position. QC Inspector Salazar explained that he then observed Mr. Mark Craig performing the GTAW and he recorded the in-process welding parameters of 123 amps and 17 volts. Per the conversation with QC Inspector Salazar, the GTAW mentioned above, appears to be in compliance with the applicable WPS 8022.

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: 2 OIW production personnel and 2 QC Inspectors.

The QA Inspector observed at AG Machine Works: 1 AG Machinist.



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

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Reviewed By: Adame,Joe

QA Reviewer