

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-006697**Date Inspected:** 12-May-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 2100**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 530**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, Oregon**CWI Name:** Steve Barnett, Jon Nickolich**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:**

On this date, Caltrans Quality Assurance Inspector (QA) Sherri Brannon is present at the Oregon Iron Works, Inc. (OIW) jobsite in Clackamas, Oregon for the purpose of observing fabrication of the Hinge K Pipe Beams.

OIW Fabrication Shop-Bay 3 (sub-assembly):

QA Inspector Brannon randomly observed OIW qualified welder Mr. Liam Bui ID#B10 and one helper welding fill pass joining stiffener ring MK #a125 (HPS 485 W) to hinge K pipe beam half section MK#a124-9 (HPS 485 W). The partial joint penetration (PJP) groove weld is identified as weld joint #WM3-03. Mr. Bui was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector's Mr. Steve Barnett and Mr. Jon Nickolich verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters measured by QA are as follows: 575 amps, 33.1 volts and a travel speed of 483mm per minute appear to be in conformance with approved welding procedure specification WPS 4020 revision number 0.

OIW Fabrication Shop-Bay 3 (UT Repair CWR-2244-004):

QA Inspector Brannon observed OIW welder Mr. Bounheune Savanh ID#S74 repair welding CWR-2244-004 hinge K pipe beam fuse section 120A-2 (HPS 485 W). The complete joint penetration (CJP) weld is identified as weld joint #WM3-18. Mr. Savanh was observed welding in the 1G (flat) position utilizing submerged arc welding (SAW) process with a 2.4mm diameter electrode, filler metal brand Lincoln Electric LA85 class F9A4-Eni5-G-H2. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. Steve Barnett verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

observed by QA Inspector Brannon appear to be in general compliance with the approved WPS 4020 revision number 0.

OIW Fabrication Shop-Bay 3 (UT Repair CWR-2244-004):

After completion of the repair QA observed qualified welder Mr. Jayson Sinsel Heaton ID#S58 using a flame torch and temperature indicators (Tempilstik) to maintain the heating temperature between 450 degrees Fahrenheit to 600 degrees Fahrenheit for the post weld heat treatment (PWHT) as required. QA Inspector Brannon observed the OIW QC CWI Inspector Mr. Jon Nickolich monitoring the PWHT. OIW maintained the post weld heat treatment (PWHT) for 2 hours as required. After, completion of the PWHT OIW placed k-wool over the repair.

OIW Fabrication Shop-Bay

QA Inspector Brannon was informed by QC Mr. Jon Nickolich that he has completed 100% VT/MT at hinge k pipe beam sub assembly fuse section 120A-3 after rough machining (HPS 485 W) and found no indications.

Quality Assurance Inspection (VT/MT):

QA Inspector Brannon performed visual inspection (VT) and magnetic particle testing (MT) at hinge k pipe beam sub assembly fuse section 120A-3 after rough machining (HPS 485 W) and complete joint penetration (CJP) sub assembly section 120A-3 inside and outside diameter weld joint WM3-18. See Caltrans Magnetic Particle Test Report, TL-6028 dated March 12, 2009 for additional information.

Caltrans Status and Production Tracking:

QA Inspector Brannon also updated Caltrans status and production tracking logs for tracking of check samples, procedure qualification record (PQR), critical weld repairs (CWR), non-critical welding repairs (WRR), completed and in process welding, QC/QA non-destructive testing.

Material, Equipment, and Labor Tracking:

QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 2 Quality Control and 3 production personnel on this date.

The following digital photograph below illustrates observation of the activities being performed.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Summary of Conversations:

No relevant conversations to report.

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:	Brannon, Sherri	Quality Assurance Inspector
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Reviewed By:	Adame, Joe	QA Reviewer
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