

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-005389**Date Inspected:** 09-Feb-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, Oregon**CWI Name:** See below**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 1:

QA Inspector Brannon randomly observed OIW personnel continuing in Bay 1 at the CNC mill for facing hinge k pipe beam post tension cap plate (A825M) MK#a109 in preparation for welding.

OIW Fabrication Shop-Bay 2 (Post Heat Straightening):

QA Inspector Brannon randomly observed OIW qualified welder Mr. Rick Hinkle ID#H49 on hinge k pipe beam fuse section A124-9 (HPS 485 W) into acceptable tolerances. Mr. Hinkle was observed using a temperature indicator of 1050°F to insure that the heat straightening process did not exceed 1100 °F. Cause for heat straightening due to the rolling process and welding distortion. Heat straightening is performed by flame straightening using a portable torch mounted on a traveler. Heat straightening randomly observed by QA Inspector Brannon appeared to comply with OIW's Upset Shortening Procedure (Heat Straightening) Procedure SP-006 revision 2. QA Inspector Brannon observed OIW QC CWI Inspector's Mr. Mike Gregson, Mr. Rob Walters, Mr. Pete Hale and Mr. Jose Salazar randomly monitoring the heat straightening process. QA observed 6 heat passes on this date bringing the total number of heat passes for A124-9 to 44.

OIW Fabrication Shop-Bay 3:

QA Inspector Brannon randomly observed OIW qualified welder Mr. Craig Jacobson ID#J6 welding a joining ring stiffener plate MK#a112 (HPS 485 W) to hinge K pipe beam A111-4 (A508 Gr. 4N Class 2). The partial joint

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penetration (PJP) weld is identified as weld joint #W2-10. Mr. Jacobson 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. Mike Gregson, Mr. Rob Walters, Mr. Pete Hale and Mr. Jose Salazar verifying that the pre-heat and welding parameters were in accordance with the Welding Procedure Specification (WPS). Welding parameters observed by QA Inspector Brannon appear to be in general compliance with the approved WPS 4016 revision number 0.

OIW Fabrication Shop-Bay 3:

QC Inspector Jose Salazar informed QA Inspector Brannon that hinge K pipe beam section A111-2 has a submerged arc welding (SAW) arc strike on the ring stiffener base metal of MK#b112 (HPS 485 W). QA Inspector Brannon questioned when the arc strike happened; QC Inspector Salazar stated that is happened on the swing shift. QC Inspector Salazar stated that OIW will submit a critical welding repair (CWR) and place a hold tag on the unit.

OIW Fabrication Shop-Bay 3:

QC Inspector Jose Salazar informed QA Inspector Brannon that OIW would be grinding at hinge K pipe beam section A111-3 (A508 Gr. 4N Class 2) to remove the ultrasonic testing (UT) indication found on 02-05-2009. The complete joint penetration (CJP) weld is identified as weld joint #W2-6. QA Inspector Brannon and QC Inspector Salazar randomly observed OIW personnel excavating by method of grinding. After, grinding had completed QA Inspector Brannon observed QC Inspector Salazar perform visual inspection (VT) and magnetic particle testing (MT) on the excavation area. QC Salazar stated to QA Inspector Brannon that the indication found by (UT) had been removed, but there are additional indications in the weld metal. QC Inspector Salazar then stated that OIW will submit a critical welding repair (CWR) and place a hold tag on the unit.

Material, Equipment, and Labor Tracking:

QA Inspector Brannon performed a verification of personnel at OIW. QA Inspector Brannon observed 1 Supervisor, 4 Quality Control and 4 production personnel on this date.

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



Summary of Conversations:

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As stated within this 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
Reviewed By:	Adame, Joe	QA Reviewer
