

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-001504**Date Inspected:** 20-Feb-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Oregon Iron Works Clackamas, Or.**Location:** Clackamas, OR**CWI Name:** Steve Williams**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**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Joe Adame was present at Oregon Iron Works (OIW) to observe welding being performed on a Procedure Qualification Record for this project. The following observations were recorded.

I. OIW Shop/ Bay 2:

OIW PQR # CS-025: The Quality Assurance (QA) Inspector was present to witness welding being performed on Procedure Qualification Record (PQR) # CS-025. The welding is being attempted with the submerged arc welding process in the flat position (1G). The PQR weld joint is double vee groove weld with a 60° included angle and a closed root. The material being welded is a 100 millimeter (mm) thick A709 grade 485 steel. The PQR is a tubular mock up section of a splice to be performed in production welding. The welding was being performed by OIW welder Craig Jacobsen (WID# J6). On this date, the test piece was rotated to have backgouge work performed on the interior. After backgouge and grinding, QC Inspector Scott Reed inspected the weld root area. The QC Inspector stated that the weld root appeared free of discontinuities. Welding continued on the interior section. OIW Welding Engineer Greg Roberts and Leadman Norm Peterson were observed monitoring welding parameters and timing each weld pass for determination of travel speed. The QA Inspector also performed verification of welding parameters, travel speed and documented all relevant test information. Mr. Peterson continued checking preheat and interpass temperatures with Temperature indicator sticks. At the close of this shift, Mr. Roberts conclude by stating that welding of this PQR testing will continue and be completed tomorrow. Mr. Roberts also stated that OIW plan to perform 1F and 2F fillet weld soundness tests.

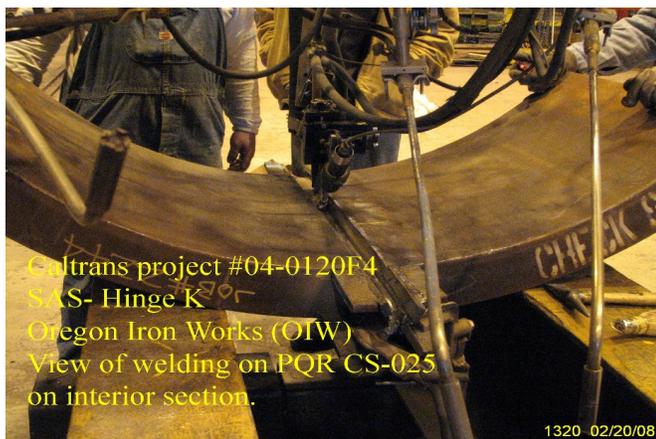
II. OIW QC Office: The QA Inspector met OIW Quality Control Manager (QCM) Steve Williams and Welding

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

Engineer Greg Roberts. The QA Inspector informed Mr. Roberts that the project special provisions describe a minimum of 1.5 kilojoules per mm and a maximum of 3.5 kilojoules per mm. for heat input variables. Mr. Roberts was not aware of the specification listed in the specials. Mr. Roberts also stated that the PQR testing should be within these tolerances. OIW are using customary units for documenting temperature and travel speed. The parties calculated heat input with the current average. The QA Inspector calculated the current heat input at 2.7 kilojoules per mm (after conversion). Average values were- 625 amps, 33 volts and 18 ipm travel speed. The QA Inspector also stressed the importance of metric units to avoid confusion with the special provisions. Mr. Williams agreed and stated that the final report to be submitted for the PQR will be in SI units.

(Attached picture from this observation)



Summary of Conversations:

As noted in the contents of 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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Adame,Joe	Quality Assurance Inspector
Reviewed By:	Wright,Mark	QA Reviewer
