

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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014075**Date Inspected:** 17-May-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**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:** Orthotropic Box Girders (OBG)**Summary of Items Observed:**

Quality Assurance inspector (QA) Michael Foerder was at the American Bridge/Flour (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

1. OBG Field Splice 2E/3E Face C (Inside)
2. OBG Field Splice 3E/4E Face C (Inside)
3. OBG Field Splice 4E/5E Face A (Outside)
4. OBG Field Splice 5E/6E Face A (Outside)

Field Splice 2E/3E Face C (Inside) UT Review

The QA inspector performed a random observation of the status of this weld from the inside surface in order to ascertain if the QC department had completed the visual and NDT for the field splice. The QA inspector discovered several areas which show evidence of further grinding/blending and/or minor welding was performed but there was no distinguishing mark designating the weld as final accepted, however it has been relayed verbally by QC the UT has been performed and accepted previously. Based upon the review performed it appears a few minor areas are still in need of blending and have been identified by the QC department, see digital photos included in the body of this report for clarification. The QA inspector performed an ultrasonic testing (UT) review of a representative portion for face C from the inside surface between approximate Y locations designated 1300mm-2000mm. The QA inspector performed the review utilizing a zero degree transducer in order to check for laminar reflectors and a 70 degree transducer and wedge combination for the shear wave examination. No rejectable indications were noted at the time of review and a TL-6027 will be generated for this item for this date.

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Field Splice 3E/4E Face C (Inside) UT Review

The QA inspector spoke with QC inspector Steve McConnell in regards to the status of this field weld for in process repairs and UT acceptance of the repairs performed previously. Mr. McConnell relayed the repairs made from the outside of the OBG have been reviewed and the majority accepted with repairs still pending from the inside face adjacent to the bottom and side plate (C2 Y=2800) and edge and side plate (C1 Y=200) areas. The majority of the center portion of the weld face has been accepted for UT purposes by the QC department and the QA inspector inquired from the two welders present performing excavations and repairs if it would limit the welders' ability in any way if QA performed a UT review for the center portion of this weld face. The welders relayed it would not hinder or limit their ability to perform the repairs and the QA inspector performed an ultrasonic testing (UT) review of a representative portion for face C from the inside surface in approximate Y location areas (Weld C1) designated 2700 and 5000mm for a total distance of 1.2M. The QA inspector performed the review utilizing a zero degree transducer in order to check for laminar reflectors and a 70 degree transducer and wedge combination for the shear wave examination. No rejectable indications were noted at the time of review and a TL-6027 will be generated for this item for this date.

Field Splice 3E/4E Face C (Inside) Repairs

The QA inspector periodically observed ABF welding personnel Mitch Sittinger and Jordan Hazalaar performing grinding operations in order to excavate and remove rejectable indications previously identified by QC utilizing Ultrasonic Testing (UT). QC inspector Tony Sherwood was noted to be present in order to monitor the progress and adherence to the welding procedure specification designated as ABF-WPS-D1.5-1001 Repair. Mr. Sittinger was noted to be performing the excavations at approximate Y location designated 200mm and proceeded to perform the shielded metal arc welding (SMAW) with QC inspector Tony Sherwood monitoring the adherence to the WPS. This location was completed later in the shift and appeared to be in general conformance with the contract documents.

Welding personnel Jordan Hazalaar was performing several excavations for weld face C2 at approximate Y locations 2400mm (1) and 2800mm (2) with QC inspector Tony Sherwood reviewing the depth, configuration and progress. No welding was performed at these locations during the QA inspectors shift and the items appeared to be progressing in general conformance with the contract documents.

Field Splice 4E/5E Face A (Outside)

Upon arrival of the QA inspector to the weld joint, the QA inspector inquired from ABF personnel John Callaghan how the contractor was preparing to proceed with the welding of the deck plate with the measured off set noted by QC and QA previously. Mr. Callaghan relayed he was not positive at this time on the course of action ABF would be taking, however it was observed ABF welding personnel were cleaning and preparing the weld joint for submerged arc welding (SAW). A short time later it was relayed to the QA inspector Structure Construction informed ABF the deck joint was not acceptable for welding due to the offset in excess of contract requirements. At this time the contractor elected to relocate the welding personnel to other areas and no further work was performed on this weld joint for this date to the knowledge of the QA inspector.

Later in the shift a meeting was noted to take place at the weld joint to discuss the issue with the following individuals noted to be present, Pat Lowry, John Callaghan, Karen Wang, Paul Jefferson, Bill Levell, Rick Bettencourt (arrived later) and Jim Bowers. Paul Jefferson and Karen Wang relayed to the QA inspector after the meeting the contractor was not to weld the joint until it was brought into contract requirements.

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Summary of Conversations:

As noted above in items observed.

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:	Foerder, Mike	Quality Assurance Inspector
Reviewed By:	Levell, Bill	QA Reviewer
