

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027496**Date Inspected:** 24-Apr-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** On Site**CWI Name:** Bernie Docena**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:** SAS OBG Components**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Art Peterson arrived on site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor the welding operations performed by American Bridge Fluor (ABF) welding personnel. The following observations were:

Segment 13E PP 122.2:

During this Quality Assurance (QA) Inspectors' review of the fit-up operation being performed after the erection of Segment 13 East's Deck Plate Drop-in Sections SA3013A and SA3214, this QA Inspector discovered the following issue:

This QA Inspector observed that the ABF personnel ground into and coped a section out of (3) three Closed U-Ribs with a die grinder where the Closed U-Ribs are PJP welded to the Deck Plate to augment the placement of the unfusible copper backing in preparation for welding the transverse weld splice at PP122.2 on Segment 13E. The ends of the (3) Closed Rib welds interfered with the unfusible backing bar being placed flush to the underside of the deck plate due to the width of the backing bar. The amount of weld and base metal removed was between (6) six and (10) ten millimeters at each location where the Closed U-Ribs are welded to the underside of the deck plate.

This QA Inspector generated an Incident Report on this date and notified METS QA Lead Inspector Danny Reyes and METS QA Task Leader Bill Levell via email for review and disposition of the report due to the

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non-compliance with AWS D1.5-2002 - Section 3.7.5 - Workmanship which states that "The Engineer shall be notified before improperly fitted and welded members are cut apart". See attached photos for further details.

Segment 12E between PP109 and PP109.5 E2 Line - Deck Access Hole:

This QA Inspector observed ABF welder Eddie Brown (Welder ID 9331) performing the fill and cover pass weld operation on the (2nd side) of a complete-joint penetration groove weld per the Shielded Metal Arc Welding (SMAW) process in the (4G) overhead position on the Deck Access Hole (DAH) insert plate welded to the Deck "A" plate between panel point PP109 and PP109.5 along Grid Line E2.

This QA Inspector observed QC Inspector Sal Marino verify prior to the start of the fill and cover pass weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS 1010 Revision 1 using E7018 (1/8") diameter electrode.

This QA Inspector observed that ABF welder Eddie Brown completed the welding on the (2nd side) of the CJP groove weld operation at the end of this QA Inspectors' shift.

PP120 ~ PP124.7 Segment 13E Grid Line E2.0 ~ E2.8 Deck Plate Drop-in Sections

This QA Inspector observed ABF Welder Rick Clayborn (Welder ID 2773) performing the fillet weld operation per the Shielded Metal Arc Welding (SMAW) process in the (2F) horizontal position attaching the blank nuts to the deck plate on Segment 13E for installation of the key plates to adjust the longitudinal weld splice planar offset between the Deck Plate section and Deck Plate Drop-in section at transverse field weld splice 13E/14E on PP125, longitudinal weld splice along Grid E2.5, Grid E2.2 and Grid E2.1.

This QA Inspector observed QC Inspector Bernie Docena verify prior to the start of the fillet weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS F1200A using E7018 (1/8") diameter electrode.

This QA Inspector observed that ABF welder Rick Clayborn was in-process fillet welding the blank nuts to the Deck Plate section and Deck Plate Drop-in section along Grid E2.1 at the end of this QA Inspectors' shift.

PP120 ~ PP124.7 Segment 13E Grid Line E2.0 ~ E2.8 Deck Plate Drop-in Sections

This QA Inspector observed ABF Welder Todd Jackson (Welder ID 4639) performing the fillet weld operation per the Shielded Metal Arc Welding (SMAW) process in the (4F) overhead position to attach the U-Bars to the underside of the deck plate on Segment 13E. The work being performed was to augment the installation of the non-fusible copper backing bar prior to welding the complete-joint penetration (CJP) single V groove butt-joint between the Deck Plate section and Deck Plate Drop-in section at longitudinal field weld splice along Grid E2.8.

This QA Inspector observed QC Inspector Bernie Docena verify prior to the start of the fillet weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwards verified that the

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welding parameters (Amps and Travel Speed) were in accordance with WPS F1200A using E7018 (1/8") diameter electrode.

This QA Inspector observed that ABF welder Todd Jackson completed the fillet welding of the U-Bars to the underside of the Deck Plate section and Deck Plate Drop-in section along Grid E2.8 at the end of this QA Inspectors' shift.



Summary of Conversations:

Only general conversations between this QAI and QC on this date.

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 Nina Choy, 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Peterson, Art

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer
