

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-022752**Date Inspected:** 01-Apr-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**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:** OBG Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA Inspector randomly observed the following work in progress in the Bay 10:

SAW welding of weld joint BK17-001-017 located on PCMK OBG bike path cantilever beam. Welder was identified as 040460. QC was identified as ZPMC CWI Li Jun (QC1). Weld variables recorded by QC1 appeared to comply with WPS-B-T-2221-TC-U4a-S as verbally identified by QC1.

SMAW repair welding of weld joint BK17-001-017 located on PCMK OBG bike path cantilever beam. Welders were identified as 057220, 040582. QC was identified as QC1. Weld variables recorded by QC1 appeared to comply with WPS-B-T-2211-TC-U4c as verbally identified by QC1. QC1 informed this QA Inspector that no ZPMC Weld Repair Report existed because the repair welding was in response to ZPMC visual testing (VT). See photo below of ZPMC personnel welding and preheating at the next location of SMAW welding at weld joint BK17-001-017 between passes of SAW welding. Before preheating and SMAW welding, the areas had been ground in response to ZPMC personnel observing indications during VT inspection. Also see photo below of QC1's record of SAW welding as presented to this QA Inspector.

Heat straightening of 25TR1 located on PCMK OBG traveler rail. QC was identified as QC1. Heat treatment variables recorded by QC1 appeared to comply with ZPMC document HSR1(B)-10254 as presented to this QA

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Inspector and verbally identified by QC1.

SMAW welding of weld joint BK009A3-001-009 located on PCMK OBG bike path. Welder was identified as 057220. QC was identified as QC1. Weld variables recorded by QC1 appeared to comply with WPS-B-T-2211-TC-U4c as verbally identified by QC1.

SMAW welding of weld joint BK009A3-001-015 located on PCMK OBG bike path. Welder was identified as 500363. QC was identified as QC1. Weld variables recorded by QC1 appeared to comply with WPS-B-T-2211-TC-U4c as verbally identified by QC1.

SMAW welding of weld joint BK009A5-001-010 located on PCMK OBG bike path. Welder was identified as 040582. QC was identified as QC1. Weld variables recorded by QC1 appeared to comply with WPS-B-T-2211-TC-U4c as verbally identified by QC1.

SMAW welding of weld joint BK009A5-001-018 located on PCMK OBG bike path. Welder was identified as 040581. QC was identified as QC1. Weld variables recorded by QC1 appeared to comply with WPS-B-T-2211-TC-U4c as verbally identified by QC1.

OBG Trial Assembly Area

This QA Inspector randomly observed the following work in progress in the OBG Trial Assembly Area:

FCAW repair welding of weld joints SEG3007C-077, 185, 192 located on PCMK OBG 13AE. Welder was identified as 050242. QC was identified as ABF CWI Bao Qian (QC2). Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Zhan Hai Feng (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-345-FCAW-3G(3F)-ESAB-repair as displayed on ZPMC Weld Repair Report B-WR20555 as presented to this QA Inspector and verbally identified by QCA2.

FCAW welding of weld joints SEG3007AH-081; SEG3007Q-073~076 located on PCMK OBG 13AE. Welder was identified as 055564. QC was identified as QC2. Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-T-2231-ESAB and WPS-B-T-2233-ESAB as verbally identified by QCA2.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Bay 10

Weld position sketch: Weld position sketch

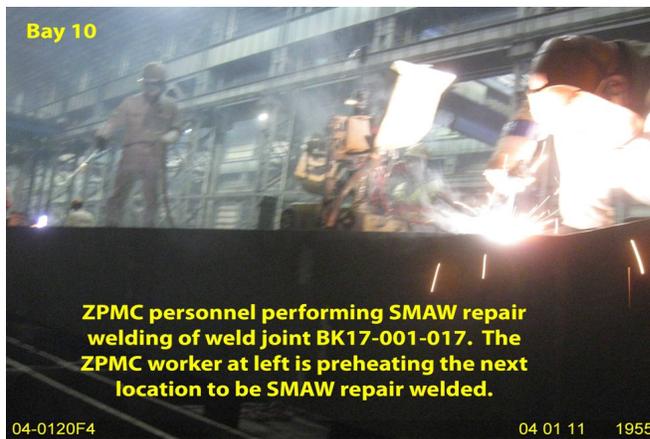
Weld record maintained by QC1 during SAW welding of weld joint BK17-001-017

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The welding process inspection		Part name	Part no.	Location of plate	Plate ID
Check item	Weld no.	BK17-001-017	016		
Weld no.	Weld no.		017		
Welding time					
Electric current		612		615	
Voltage		26.5		27.2	
Welding speed		580		595	
Process		>50		>50	
Welding form		04060		04060	
Welding Type		IG (CJP)			
Welding method		SAW			
Welding code		20			
Electrode brand		B14			
Flux brand		NA			

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Summary of Conversations:

As noted above.

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 Eric Tsang, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Riley, Ken

QA Reviewer