

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027168**Date Inspected:** 06-Feb-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** L & M Industrial Fabricators**Location:** Tangent, Oregon**CWI Name:** Tom Dreyer**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:** Tower Head Chimney**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Art Peterson arrived at L & M Industrial Fabricators between the times noted above to randomly observe Quality Control (QC) personnel monitor the welding operations performed by L & M personnel on chimney parapet walls fabricated to the Tower Heads. The following observations for the extra work being performed to the following contract change order were:

CCO: 196 - Description: Construct parapet walls at the Tower Heads

West Tower Chimney Parapet:

This QA Inspector randomly observed L & M welder Otis Smith (Welder ID #19) performing the multi-pass fillet and partial-joint penetration (PJP) groove weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (3F) and (1G) vertical and flat positions connecting (A11a)- base plate to the Tower Head top plate of the West Tower Head Chimney.

This QA Inspector observed QC Inspector Tom Dreyer verify prior to the start of the weld operation, that the minimum preheat temperature as per the approved WPS was established and afterwards; verified that the welding parameters (Amps, Volts, and Travel Speed) were in accordance with WPS-D1.5-FC-TC-P4-GF-1G and WPS-D1.5-FC-002-3F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

This QA Inspector randomly observed L & M welder Bradford Schroyer (Welder ID #16) performing the multi-pass fillet and partial-joint penetration (PJP) groove weld operation per the Flux Cored Arc Welding

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(FCAW-G) gas shielding process in the (3F) and (3G) vertical position connecting (A12a)- base plate to the Tower Head top plate of the West Tower Head Chimney.

This QA Inspector observed QC Inspector Tom Dreyer verify prior to the start of the weld operation, that the minimum preheat temperature as per the approved WPS was established and afterwards; verified that the welding parameters (Amps, Volts, and Travel Speed) were in accordance with WPS-D1.5-FC-TC-P4-GF-3G and WPS-D1.5-FC-002-3F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

East Tower Chimney Parapet:

This QA Inspector randomly observed L & M welder Jake Schuld (Welder ID #17) performing the partial-joint penetration (PJP) groove weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (3G) vertical position connecting (A11a ~ A12a) base plate to base plate of the East Tower Head Chimney Parapet.

This QA Inspector observed QC Inspector Tom Dreyer verify prior to the start of the weld operation, that the minimum preheat temperature as per the approved WPS was established and afterwards; verified that the welding parameters (Amps, Volts, and Travel Speed) were in accordance with WPS-D1.5-FC-TC-P4-GF-1G and WPS-D1.5-FC-002-3F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

This QA Inspector randomly observed L & M welder David Harrington (Welder ID #34) performing the multi-pass fillet and partial-joint penetration (PJP) groove weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (3F) and (1G) vertical and flat positions connecting (A11a)- base plate to the Tower Head top plate of the East Tower Head Chimney.

This QA Inspector observed QC Inspector Tom Dreyer verify prior to the start of the weld operation, that the minimum preheat temperature as per the approved WPS was established and afterwards; verified that the welding parameters (Amps, Volts, and Travel Speed) were in accordance with WPS-D1.5-FC-TC-P4-GF-3G and WPS-D1.5-FC-002-3F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

North Tower Chimney Parapet:

This QA Inspector observed L & M Industrial Fabricators Quality Control (QC) NDT Inspector Leo Jim performing NDT Magnetic Particle Test (MT) inspection on the complete-joint penetration (CJP), partial-joint penetration (PJP), and fillet welds on Parapet Wall A5 (internal) and Parapet Wall A6 (external) on the North Tower Chimney Parapet. The NDT was performed in accordance with L & M Industrial Fabricator's Weld Quality Control Plan (WQCP) - ABF Submittal 2510 Rev. 1. The weld joint numbers inspected and the QC NDT Inspector's test results were:

A5 Wall:

A5a- base plate fillet welded to Tower Head Top plate-(internal)- No MT Longitudinal or Transverse Indications detected.

A5b wall plate CJP corner joint welded to A5a- base plate-(internal)- No MT Longitudinal or Transverse

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Indications detected.

A5d- top plate PJP corner joint welded to A5b wall plate-(internal)- No MT Longitudinal or Transverse

Indications detected.

A5e, A5f, A5g, and A5h-stiffeners are welded to A5a base plate and to the A5b wall plate, and also to the A5d top plate-(internal)- (1) MT Longitudinal Centerline Indication detected on A5g-stiffener to A5a-base plate for the full width of stiffener plate -(140) mm.

A6 Wall:

A6a base plate PJP corner-joint welded to Tower Head top plate-(external)- Repair #1 - "Y" Location (820 ~ 830) mm- (Longitudinal indication that was detected on 1/27/12)- No MT Longitudinal or Transverse Indications detected and the repair area plus (50) mm on both sides of the repair were examined.



Summary of Conversations:

Only general conversations between QC and QA 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