

**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-027254**Date Inspected:** 01-Mar-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 Fabrication**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 Chimney Parapet**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 the fabrication of tower chimney parapet walls. 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 Bradford Schroyer (Welder ID #16) performing the fillet weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (2F) horizontal position connecting interior plate- (A12h) to stiffener plate- (A12j) for the West Tower Chimney parapet wall. This QA Inspector observed QC Inspector Tom Dreyer 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, Volts and Travel Speed) were in accordance with WPS-D1.5-FC-005-2F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

The welding operation was completed on this stiffener plate and the workmanship on this date appeared to be in general compliance with the contract specifications.

**East Tower Chimney Parapet:**

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## WELDING INSPECTION REPORT

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This QA Inspector randomly observed L & M welder Jake Schuld (Welder ID #17) performing the fillet weld operation per the Flux Cored Arc Welding (FCAW-G) gas shielding process in the (3F) vertical position connecting stiffener plates- (A13e and A13f) to top plate- (A13d) and to base plate- (A13a) of the East Tower Chimney parapet wall. This QA Inspector observed QC Inspector Tom Dreyer 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, Volts and Travel Speed) were in accordance with WPS-D1. 5-FC-002-3F using Hobart Excel Arc E71T-1 (.052") diameter electrode.

The welding operation was completed at these locations and the workmanship on this date appeared to be in general compliance with the contract specifications.

This QA Inspector performed ultrasonic test (UT) verification inspection on the complete-joint penetration (CJP) corner-joint groove weld on the East Tower Chimney Parapet wall after Quality Control (QC) performed their final NDT as per CCO 196 and the contract specifications. The following UT was performed at the following weld location.

UT: Exterior Side of A11 Wall

A11b- Wall plate to A11a- base plate CJP corner-joint groove weld - 10% of the weld length inside of QC's test area from "Y" location 587 mm ~ 974 mm.

The UT verification inspection performed on this date appeared to be in general compliance with AWS D1.5-2002 Table 6.3 for the 16 mm thick corner-joint weld. See TL-6027 Ultrasonic Test Report for further details of the UT inspection.

This QA Inspector performed magnetic-particle test (MT) verification inspection on the complete-joint penetration (CJP) corner-joint groove weld and partial-joint penetration (PJP) corner-joint groove weld on the West Tower Chimney Parapet wall after Quality Control (QC) performed their final NDT as per CCO 196 and the contract specifications. The following MT was performed at the following weld locations.

MT: Exterior Side of A11 Wall

A11b- Wall plate to A11a- base plate CJP corner-joint groove weld - 10% of the weld length inside of QC's test area from "Y" location 0 mm ~ 1530 mm.

A11a- base plate to Tower Head Top plate PJP corner-joint groove weld - 10% of the weld length inside of QC's test area from "Y" location 0 mm ~ 1530 mm.

The MT verification inspection performed on this date appeared to be in general compliance with AWS D1.5-2002 Section 6.26 for the 16 mm thick corner-joint weld. See TL-6028 Magnetic-Particle Test Report for further details of the MT inspection.

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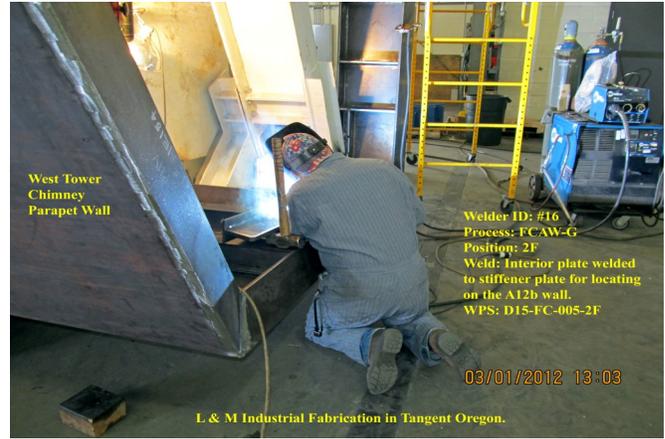
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# WELDING INSPECTION REPORT

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## Summary of Conversations:

Only general conversations between this QA 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.

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**Inspected By:** Peterson, Art

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer