

**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 #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029859**Date Inspected:** 28-May-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** USA Hoist, Crest Hill, IL.**Location:** USA Hoist, 1000 Sak Drive

<b>CWI Name:</b>	Not present		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** Tower Elevator guide masts & mounting brackets**Summary of Items Observed:**

This Quality Assurance Inspector (QAI) travelled this day to USA Hoist, 1000 Sak Drive, Crest Hill, IL. for the purpose of performing in-process inspections of Tower Elevator related fabricated members to the requirements of the contract documents.

Upon arrival to USA Hoist, this QAI proceeded to fabrication area of their facility to observe the operations to be performed that day.

This QAI observed the start of the rework (welding) being performed per USA Hoist Engineer, Robert Overbeek, directive to increase the weld sizes of the Tower Elevator guide masts. These weld areas are those of joints of members #1 and #10 where their curved sections form a flare-bevel groove type intersection with their adjacent members. This QAI had previously reported that the welds were undersized with regard to the weld symbols as provided on the drawings, which are not approved as of this date. Mr. Overbeek and Tim Moran were also previously informed by this QAI of the discrepancy at the time of it's discovery, so it could be addressed towards a resolution.

The welder performing the rework repair welding was Matt Wasiqi, ID# "A", utilizing .045" diameter FCAW-G wire as per AWS D1.1 and A5.20. The welding was being performed as per WPS# FCAW3139. There was no Quality Control (QC) Inspector present this day. This QAI performed monitoring of in-process welding, verifying adherence to the WPS parameters. This work is in progress so far, with no members being fully completed this day.

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## WELDING INSPECTION REPORT

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This QAI also revisited USA Hoist's local vendor, General Machine & Tool Co., Joliet, IL., where the bending operations for the Tower Elevator tie-in attachment bracket plates were being performed. It was noted by this QAI after arriving inside the shop, that there was concern among their staff that member #18 (142 pieces total) of drawing #914204 may not be able to be formed acceptably per the design. This concern was due to the (too) close design proximity of bolt holes to the 30 degree and 60 degree respective bends at opposite ends of each plate. A single test sample of the 1/2" plate had been bent per that design drawing to test it's feasibility for production. The resulting plate exhibited distortion of the shape and width of the slotted holes at the side of the holes which were adjacent the bend radii. Most notable of the sample plate's appearance were the depressed areas (below the plate's surface) adjacent the inside radius of the bends, and conversely the protruding areas adjacent the outside radius of the bends. When this QAI was asked by a General Machine representative how they should proceed, the response was a recommendation that USA Hoist's Design Engineer should be consulted as soon as possible for direction.



### Summary of Conversations:

No significant conversations took place.

### 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 SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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**Inspected By:** Morris, Monty

Quality Assurance Inspector

**Reviewed By:** Foerder, Mike

QA Reviewer

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