

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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029973**Date Inspected:** 29-Aug-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** USA Hoist**Location:** Crest Hill, IL

CWI Name:	Robert Zimny		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

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

Bridge No: 34-0006**Component:** SAS Tower Elevator**Summary of Items Observed:**

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at USA Hoist, Crest Hill, IL as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

Today at the USA Hoist fabrication shop, this QA randomly observed USA Hoist Quality Control (QC) Inspector Robert Zimny perform visual inspection on completely fillet/flare bevel welded tower elevator drive assembly. The assembly was previously welded per various USA Hoist shop drawing #916260 (6 sheets), 916251 (5 sheets), 916240, 916232-32 and 916232-10. During the QC inspection, MR. Robert Zimny was noted performing 100% visual inspection on all 1/4" fillet welds and flare bevel welds. After the completion of the inspection, QC has informed this QA that he found the completed welds acceptable to the project requirements while the remaining welds that are being welded will be inspected tomorrow as soon as they are completed. According to Mr. Robert Zimny, he has already completed the inspection on half of the approximately 180 various short weld joints of the tower elevator drive structure as required. During the shift while QC was performing the inspection, this QA also performed random visual and size verification on the fillet welds of the drive structure. The result of the QA verification of the weld joints was deemed in compliance to the project requirements.

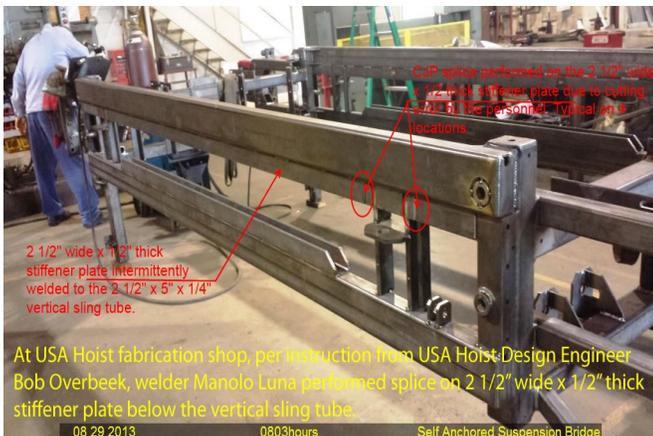
At USA Hoist assembly shop, qualified welder Manolo Luna was observed continuing to perform fillet/flare bevel welding the tower elevator drive structure per USA Hoist shop drawing #916260 (6 sheets), 916251 (5 sheets), 916240, 916232-32 and 916232-10. The welder was noted using the gas shielded Flux Cored Arc Welding (FCAW-G) with 1.1mm E71T-1C Familiarc DW-50 wire electrode and implementing welding procedure specification FCAW 3210 and FCAW 2917. The shielding gas being used was noted a combination of 75% Argon

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and 25% CO2 with flow rate of 38 CFH. During the shift, the working welding parameters were measured 27 volts and 220 amperes which deemed in compliance to the project requirements. This QA randomly checked the workmanship and measured the required ¼” fillet/flare bevel welds which were found in compliance to the requirement.

At the 2 ½” wide x ½” thick stiffener welded to the side of 2 ½” x 5” x ¼” tube steel left/right rear vertical sling tubes per shop drawing 916232-63, the two (2) outer stiffeners and one (1) middle stiffener were noted short and CJP welded a splice pop piece to compensate for the short length dimension. The more than 2” long pop piece spliced to the stiffeners was noted prepped to double bevel with 45 degree bevel and 3/16” deep with 1/8” root opening then welded both sides. Since this was an unscheduled splice, the issue was brought to the attention of USA Hoist Design Engineer Bob Overbeek. Mr. Overbeek informed this QA that there was an error during cutting and that per elevator code they are allowed to do splice. He also added that the splice locations will be incorporated to the “as built” drawing that will be submitted to Caltrans. During the presence of SMR Saied Khan and Gary Thomas who visited the shop, the issue was also brought to their attention. SMR Saied Khan informed this QA that per arrangement of USA Hoist and Caltrans, USA Hoist could make changes as long as the changes made will be incorporated in the “as built” drawing.



Summary of Conversations:

During the shop visit of SMR Gary Thomas and Saied Khan, the issue of the stiffener plate CJP splice was brought to their attention. The joint itself was shown as detailed. According to USA Hoist Design Engineer Bob Overbeek, the change or the CJP splice on the stiffener plate will be incorporated in the "as built" drawing to be submitted to Caltrans.

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.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

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Reviewed By: Foerder, Mike

QA Reviewer