

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-030081**Date Inspected:** 26-Sep-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Tony Sherwood, Bernie Docena			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:** SAS Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector Simion Ramirez (QA Inspector) arrived at job site. QA Inspector performed random QA visual testing (VT) and non-destructive testing (NDT) of ongoing ABF production work. QC Inspectors verified joint fit-up and pre-heat and checked electrical welding parameters of each welder at the start of shift and randomly until the end of shift. Welding procedure specifications (WPS) for complete joint penetration (CJP) welds and partial joint penetration (PJP) were available for reference on site. Caltrans QA Inspector random observation of quality control functions are noted below:

Tower Skirt: In Process Welding, Skirt Plate #2, Welds At Jt's #004 East Shaft

ABF personnel continued fit-up and welding of each complete joint penetration (CJP) splice weld noted above.

WPS #ABF-WPS-D15-2030-1 for flux core arc welding (FCAW) was utilized by QC Inspectors. ABF personnel installed backing bar plate (9mm x 38mm), and QC Inspector verified fit-up complied with specified tolerance.

Approved welder installed stringer passes and operated welding equipment within WPS electrical parameters. QA Inspector witnessed QC Inspector magnetic particle testing (MT) the root pass of welds noted above. Be advised that the backing bar for this joint will remain in place, in accordance with RFI# ABF-RFI-003417R00.

- The weld joint fit-up and alignment was checked with a straight edge and bridge cam gauge.
- Pre-heat was performed with a rosebud torch and verified by QC with temperature stick (250°F).
- Welding was performed by approved welders (Kit Li).
- Electrical parameter check results for Kit Li (21.3 volts / 308 amps).
- The weld procedure and joint details utilized (FWT22) are for a complete joint penetration (CJP) weld.
- Electrode utilized is FCAW NR-232, .072" diameter.
- Weld passes were de-slagged by grinder and wire wheel.

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Tower Skirt: NDT, Skirt Plate #2, At Jt's #003 North Shaft Base Plate CJP Splice

Weld crowns are in the as welded condition with 1/8" reinforcing on face side. After 24 hour hold period, QC Inspector performed VT and MT on 100% of exterior face and weld ends, test results accepted. QA Inspector observed QCI perform UT inspection on approximately 25% of CJP weld #003, with test results accepted. QA Inspector performed verification VT and MT and UT on approximately 10% of QC inspected areas, QA test results are in general compliance with project specifications.

Summary of Conversations:

Only general conversation regarding the comments above.

QA observation of QC UT inspection of Base Pl.



QA observation of QC MT CJP Base Pl. splice.



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

Inspected By:	Ramirez, Simion	Quality Assurance Inspector
Reviewed By:	Riley, Ken	QA Reviewer
