

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-030080
Date Inspected: 27-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 Welds, Skirt Base Plate At Jt's #004 & #002, Skirt Plate #2 #156 S. Shaft
ABF personnel continued fit-up and welding of joints #002 CJP and #156 PJP splice weld noted above. Weld #004 was completed at 1000 hours. WPS #ABF-WPS-D15-2030-1 and ABF-D15-2140-3 for flux core arc welding (FCAW) was utilized by QC Inspectors. ABF personnel installed backing bar plate (9mm x 38mm) at base plate, and QC Inspector verified fit-up complied with specified tolerance. Approved welder installed stringer passes and operated welding equipment within WPS electrical parameters. 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 & Rich Clayborn).
- Electrical parameter check results for Kit Li (21.2 volts / 300 amps), Rick Clayborn (21.5V / 270A).
- The weld procedure and joint details utilized (FWT22) is CJP weld, (FWT19) is for PJP weld.
- Electrode utilized is FCAW NR-232, .072" diameter.

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- Weld passes were de-slagged by grinder and wire wheel.

Tower Skirt: NDT, Skirt Plate #2, At Jt's #154 West Shaft, 154 North Shaft, Skirt Base Plate #002

Weld crowns were ground to a flush smooth contour. After 24 hour hold period, QC Inspector performed VT and MT on approximately 25% of PJP exterior weld surface, QC test results are acceptable. QA Inspector witnessed QC Inspector magnetic particle testing (MT) the root pass of CJP weld #002 noted above. QA Inspector performed verification MT on 10% of QC inspected areas, QA test results comply with project specifications.

Summary of Conversations:

Only general conversation regarding the comments above.

Dog & pin wedges utilized to fit-up skirt base pl.



QA observation of QC 25% MT of 3G skirt 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