

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-030069**Date Inspected:** 18-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:	Bernie Docena, Tony Sherwood	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 on going ABF production work and monitored the contractor quality control operations.

Tower Skirt: Skirt Plate #2, Weld Jt's #157 North Shaft

ABF personnel continued fit-up and welding of each partial joint penetration (PJP) splice weld noted above. The welding procedure specification (WPS) #ABF-WPS-D15-2140-3 for flux core arc welding (FCAW) was available for reference on site by QC Inspectors. QC Inspector verified joint fit-up and pre-heat. QC Inspector verified electrical welding parameters of each welder at the start of shift and randomly until the end of shift. QA Inspector witnessed the root passes of the welds above magnetic particle tested (MT) by QC Inspector. Fill and cover passes were installed in the groove on the exterior face. Be advised that locations where the root gap exceed 5mm and up to 8mm maximum the contractor utilized steel backing (9mm x 38mm), in accordance with RFI#

ABF-RFI-003417R02. Vertical weld joint 157 north shaft remains in progress. Weld reinforcing must still be ground flush or contoured upon conclusion of welding.

- The weld joint fit-up and alignment was check with a straight edge and bridge cam gauge.
- A rosebud torch was used to pre-heat and verified by QC with temperature stick (200°F).
- Welding was performed by approved welders (Kit Li).
- The weld procedure and joint detail FWT21 are for a partial joint penetration (PJP) weld.
- FCAW electrode is NR-232, .072" diameter.
- Weld passes were de-slagged by grinder and wire wheel.

WELDING INSPECTION REPORT

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Tower Ring Beam West Shaft @ Level 9: Weld Jt's #150 (Web) & #151 (Flange)

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

The welding procedure specification (WPS) #ABF-WPS-D15-2030-3 for flux core arc welding (FCAW) was available for reference on site by QC Inspectors. QC Inspector verified electrical welding parameters at the start of shift and randomly until the end of shift. The weld backing was removed by air arc and the weld was back gouged to sound material. QC inspected the back gouged weld areas with MT and VT. The back gouged web was welded with shielded metal arc weld (SMAW) procedure ABF-WPS-D15-1110B. Weld crowns were ground to a smooth contour. Upon cooling to ambient temperature QC Inspector performed VT, MT and UT on web and flange, all test results are in general compliance.

- The weld joint fit-up and alignment was check with a straight edge and bridge cam gauge.
- Preheat was performed by rosebud torch and verified with temperature stick (200°F).
- Welding was performed by approved welder (Rick Clayborn)
- The weld procedure and joint details referenced (FWT23 & FWT24) are for a CJP weld.
- Electrodes utilized are FCAW NR-232, .072", except at web back weld SMAW E7018 MR 1/8" was used.

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

Summary of Conversations:

Only general conversation regarding the comments above and general welding.

QC MT of ring beam back gouged root areas.



QC UT of ring beam web and flange ground flush.



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