

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 74.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012733**Date Inspected:** 04-Mar-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 750**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1710**Contractor:** Goodwin Steel, UK**Location:** Trentham, UK

CWI Name:	N/A	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:	Cable Band Castings	

Summary of Items Observed:

The following report is based on Caltrans METS QA Inspector Mr. Mike Brcic's observations at Goodwin International (GI), Trentham, UK on 4 March 2010.

SHOP REVIEW:

While this Caltrans QA Inspector was on site, GI, he had opportunity to review the progress of current castings located in the machine shop. The following castings and their current status, as they were observed this day by the QA Inspector, is reflected here:

~ GG29450-1, a B16-M cable band half, located at station identified as BTD-4, is being machined at what is known as Joint Face, the slots to the inside of the band at the 55mm bolt boss, area D of Manufacturing Inspection and Test Plan (MITP) 12-02-2009 revision 3. (see photo)

~ GG29429-8, B7-1-F cable band half, located at station identified as BTF-2 is being machined at Joint Face, the slots to the inside of the band at the 55mm bolt boss, area D of MITP. adhering to drawing 5540-B7-1-F specifications.

~ EPP68, GG29424-4, GG29425-6, a B5 cable band, located at station identified as TSS-30, is being machined to a final machined condition. It will be then prepared for MPI of remaining machined surfaces yet to be inspected, per stage M2 of MITP.

~ EPP72, GG29422-8 and GG29423-13, B4 cable band, has begun a rough bore machining, per step I2 of the MITP at station known as the Webster Bennett vertical bore.

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~ GG29451-1, Band Clamp B16-1-F, located at station identified as BTD3, is being final machined at end faces, areas known as F and G of MITP.

~ WPP10, GG29428-3 and GG29429-1, a B7 type 1 cable band, was observed at the CMM (Coordinate Measuring Machine) for dimensional verification. This QA Inspector noted a disparity in the spread between stanchion holes, speaking with the CMM technician, on Goodwin International's Quality staff, it was a discrepancy previously known to be caused by an input error deriving from "Set out Dimensions" found in table at grid F12 of drawing 5540-B7-1-F/M. The irregularity that was noted, affect both halves. See photo. Mr. Alan Bentley, Quality Director, is still determining the correct course of action.

REPAIR WELDING

GG29417-10 (B1-1-F) Observed welder D.McDonagh, welder ID DM596, performing Gas Tungsten Arc Welding (GTAW) process using 2.4 mm diameter Filler material (.5% Mo), in a 2G position. Shielding gas in use was 99.9 % pure Argon. Parameters of WPS 271 Rev 1 (casting repair cycle is classified as a Minor), were verified and followed; actual Amps during observation was 155, voltage 16. Temperature of casting was room temperature, 19°C (above 5°C minimum) interpass was below 235°C, confirmed with a temperature melting stick labeled 199C. "Excavation" in work were identified as #9, per the Weld Excavation Map. Observed travel speed and Heat input was 104.5mm/min and 1.4kj respectively. Subsequent passes were adjusted to bring heat input to the acceptable range, the conscientious welder made position changes to assure future passes will be deposited at a pace that will result in an acceptable Heat Input (below 1.3kj and above .8kj). The observed weld parameters that resulted in an acceptable heat input were 16.5Volts, 155Amps, 42 sec travel, and 87mm bead length, which calculates to 1.2kj per min. The weld supervisor, Mr. Steve Young was made aware of the technique shortcoming of said welder, the QA inspector suggested all GTAW welders perform a practice run on scrap material to give the welders an idea of what their heat input will be. Mr. Young appeared very receptive and proactive.

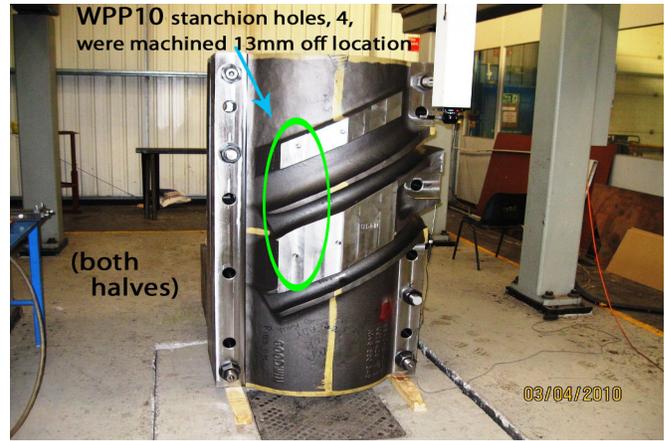
Unless otherwise noted, all observations reported on this date appeared to be in general compliance with applicable contract documents.

Summary of Conversations:

See above for conversations that this QA Inspector was a party to.

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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 Nina Choy, 1(510)385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Brcic,Michael

Quality Assurance Inspector

Reviewed By: Edmondson,Fred

QA Reviewer