

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-010434**Date Inspected:** 24-Nov-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1600**Contractor:** Goodwin Steel, UK**Location:** Trentham, UK

CWI Name:	N/A		
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:** Cable Band Castings**Summary of Items Observed:**

The following report is based on METS Caltrans QA Inspector Mike Brcic's observations at Goodwin International, Trentham, England, UK on 24 November 2009.

REPAIR WELDING

This Inspector was on site to witness the start of welding being performed by Goodwin International. Along with this QA inspector, Mr Clive Ellis, Weld Engineer for Goodwin International and Mr Steve Young, Weld shop Supervisor discussed weld parameters and qualified processes to be used in weld repairs. It was made clear which welders had been approved per the RFI and what processes they had been submitted for. Upon completion of the meeting, this METS Inspector felt confident, as did all present to proceed with weld repairs, both SMAW and GTAW. Below are observations witness by same QA Inspector.

* GG29417-2 (B1-1-F) Observed welder W. Whyte, welder ID W6, perform Gas Tungsten Arc Welding (GTAW) process using 2.4 mm diameter filler material .5% Mo, in a 1G position. Parameters of WPS 271 Rev 1 (casting repair cycle is classified as a Minor), were verified and followed; actual Amp range during observation was 167, voltage 16. Temperature of casting was room temperature, 20°C (above 5°C minimum) interpass was below 235°C, confirmed with temperature sticks. Excavation in work was identified as #27, per the Weld Excavation Map.

This QA inspector was requested to witness Magnetic Particle Inspection (MPI) of Cable Band Castings, steps G2

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and G3, per Manufacturing Inspection Test Plan (MITP) 12-02-2009.

Areas under test were of newly machined areas called Joint and Spot faces, identified as areas C and D in MITP. Inspector witnessed inspection by Mr. Chris Fallows, Level II MT, of Goodwin Intl, performed on the following castings:

5540-B5-1-M (GG29424-3), machined Spot face and Joint face, areas C and D of MITP, no defects noted.

5540-B5-1-M (GG29424-4), machined Spot face and Joint face, areas C and D of MITP, defect noted outboard of top bolt boss located on top side Spot face, area C of casting.

Method employed was Fluorescent Particle applied by aerosol, longitudinal magnetism induced by way of a contour probe, AC power. Particles were applied during induction of magnetism, making it the Continuous Method, as per Goodwin Procedure MT06-09-02 rev 4, ASTM E709 and contract documents.

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

Summary of Conversations:

No significant conversations took place that this Caltrans Inspector was a party to.

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
