

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 #: 74.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012254**Date Inspected:** 15-Feb-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 750**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1740**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 15 February 2010.

DOCUMENT PACKAGE REVIEW

Document packages for the following castings, by Panel Point, were presented for review prior to dispatch to South Staff Coatings for metalization/paint.

~ EPP108 (GG29416-7, GG29417-6) package documents were in order and met requirements of contract documents.

~ WPP110 (GG29416-6, GG29417-9) package documents were in order and met requirements of contract documents.

~ WPP104 (GG29416-5, GG29417-4) package was returned due to need of RFI or repair of excessive wall thickness identified during dimensional inspection. It was determined by Mr. Alan Bentley to keep back this cable band until such time that a direction to proceed is determined.

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 1G position. Shielding gas in use was 99.9 % pure Argon. Parameters of WPS 271 Rev 1 (casting repair cycle is classified as a Minor),

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were verified and followed; actual Amps during observation was 155, voltage 16. Temperature of casting was room temperature, 20°C (above 5°C minimum) interpass was below 235°C, confirmed with a temperature melting stick labeled 199°C. "Excavation" in work were identified as #16, per the Weld Excavation Map. Observed travel speed and Heat input was 124.5mm/min and 1.24Kj respectively.

NDT WITNESS

Same QA inspector observed Magnetic Particle Inspection (MPI) of Cable Band Castings, steps J2, per Manufacturing Inspection Test Plan (MITP) 12-02-2009. Area under test was newly machined rough bore, identified as area E in MITP. QA Inspector witnessed inspection by Mr. Chris Fallows, Level II MT, of Goodwin Intl, performed on the following castings:

~ WPP096, 5540-B5-1-M/F (GG29424-6, GG29425-4); Rough machined Bore, area E of MITP, no defects noted.

~ WPP094, 5540-B3-1-M/F (GG29420-17, GG29421-4); Rough machined Bore, area E of MITP, no defects noted. One excavation left by foundry, with the expectation it would be removed by machining, has remained after rough machining, on Male casting, Ident -17, depth of excavation is approximately 3mm. With only 1mm being removed by final machining of bore, welding will therefore be required. It is the intention of Goodwin International to submit weld map for repair.

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 5, ASTM E709 and contract documents.

MACHINE SHOP REVIEW

While on site, machine shop, GI, this inspector had opportunity to review status of work in progress. The following castings were chucked up and in process of being machined:

~ WPP056, 5540-B6-1, GG29426-5, GG29427-4; Rough bore per step I2 of Stage I, MITP.

~ GG29422-14, 5540-B4-1-M; Joint faces, area D per F4 of Stage F, MITP.

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

Summary of Conversations:

No pertinent conversations occurred this day that this QA 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

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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
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Reviewed By:	Edmondson,Fred	QA Reviewer
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