

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019900**Date Inspected:** 21-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 730**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Goodwin Steel, UK**Location:** Trentham, UK

<b>CWI Name:</b>	N/A	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
		<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006	<b>Component:</b>	Cable Band	

**Summary of Items Observed:**

The following report is based on METS observations at Goodwin International, Trentham, UK on this date.

The QA inspector reviewed a copy of the Goodwin Steel Castings "Weld Excavation Map" for casting GG29424-5(R2), B5-1-M. The Weld Excavation Map was reviewed for accuracy and compliance with contract documents. This third repair cycle is a major repair and requires post weld heat treatment. Caltrans Lot Number B243-014-11 was assigned for tracking purposes.

The QA inspector reviewed a copy of the Goodwin Steel Castings "Weld Excavation Map" for casting GG29428-1, B7-1-M. The Weld Excavation Map was reviewed for accuracy and compliance with contract documents. This initial repair cycle is a major repair and requires post weld heat treatment. Caltrans Lot Number B243-013-11 was assigned for tracking purposes.

The QA Inspector observed Mr. A. Bentley, QC Director verifying the cable band for panel point 54 east bound on the layout table for layout of the repair of the alignment of the suspender rope grooves. This cable band is comprised of casting GG29428-2 drawing 5540-B7-1-M, and GG29429-11 drawing 5540-B7-1-F. The resulting alignment of the suspender rope grooves is estimated to be as follows measured from the end of the assembled cable band to the center of the bottom of the radius for the suspender rope. The results are as follows:

	5540-B7-1-M	5540-B7-1-F
Bottom Groove:	885.1 mm	889 mm
Top Groove	1268 mm	1272 mm

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This would indicate that the alignment of the suspender rope grooves axially will be within the allowable tolerance of 4 mm.

The QA Inspector observed welding of Casting GG29437-5, Drawing Number 5540-B9-1-F. The welding was being performed by Mr. Dan McDonagh. Mr. McDonagh was using WPS04-0120F4 Issue 5. The welding was being performed at 187 amps. The filler metal was AWS A5.1 E7018-1. These are within the allowable range of the WPS. Welding was being performed in the 1G position. Mr. McDonagh was using a Tempilstik to verify the preheat at greater than 160 degrees.

QA inspector observed fettling of weld repairs on casting GG29429-3 drawing number 5540-B7-1-F. Following completion of dressing of the weld repair, Goodwin International NDT Level II technician Mr. Chris Fallows was observed performing Magnetic Particle testing (MT) of the repaired areas. The wet visible magnetic particle test technique using an AC Yoke was performed in accordance with ASTM standard E709 and Goodwin Steel Castings Magnetic Particle Procedure for Cable Band Castings MT06-09-02 revision 5. AC Yoke Serial Number C006, Supramore 4 black batch number A270410 prepared suspension and neopaint NPT16 batch 090003729 white paint were used. All relevant indications were evaluated by Mr. Fallows in accordance with Goodwin Steel Castings Magnetic Particle Procedure for Cable Band Castings, MT06-09-02 revision 5. Mr. Fallows did not identify any rejectable indications. The testing was completed on this date and the Quality Assurance Inspector did concur with Mr. Fallows's inspection results.



### Summary of Conversations:

Relevant conversations are documented above

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

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**Inspected By:** Riegler,Randy

Quality Assurance Inspector

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**Reviewed By:** Edmondson, Fred

QA Reviewer