

**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 #: 74.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010586**Date Inspected:** 03-Dec-2009**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Goodwin Steel, UK**OSM Arrival Time:** 830**OSM Departure Time:** 1730**Location:** Stoke-on-Trent, UK

<b>CWI Name:</b>	N/A	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<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 Steel Castings, Hanley, Stoke on Trent, UK on this date.

The QA inspector reviewed Goodwin Steel Castings "Weld Excavation Map" for casting GG29428-6, B7/M-6. 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 B243-318-09 was assigned for tracking purposes.

The QA inspector reviewed Goodwin Steel Castings "Weld Excavation Map" for casting GG29420-10, B3/M-10 R1. The Weld Excavation Map was reviewed for accuracy and compliance with contract documents. This second repair cycle is a major repair and requires post weld heat treatment. Caltrans Lot Number B243-319-09 was assigned for tracking purposes.

The QA inspector reviewed Goodwin Steel Castings "Weld Excavation Map" for casting GG29419-6, B2/F-6 R2. 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. This is the initial repair at the location documented on the weld map. Caltrans Lot Number B243-320-09 was assigned for tracking purposes.

The QA inspector reviewed Goodwin Steel Castings "Weld Excavation Map" for casting GG29427-8, B6/F-8 R2. 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 B243-321-09 was assigned for tracking purposes.

---

---

## WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

tracking purposes.

The QA inspector reviewed Goodwin Steel Castings “Weld Excavation Map” for casting GG29422-9, B4/M-9 R1. The Weld Excavation Map was reviewed for accuracy and compliance with contract documents. This second repair cycle is a major repair and requires post weld heat treatment. Caltrans Lot Number B243-322-09 was assigned for tracking purposes.

The QA inspector observed , Goodwin Steel Castings NDT Level II technician Mr. Alan Banks perform Visual Inspection and Magnetic Particle testing (MT) of Cable Band casting GG29444-1, B13-2-M. This was performed at the completion of weld repair of this casting. The MT was performed in accordance with ASTM standard E709 and Goodwin Steel Castings Magnetic Particle Procedure for Cable Band Castings MT06-09-02 revision 4, using the prod method with leach magnet contacts. Wet florescent magnetic particles were utilized. The direct current magnetizing current appeared to be approximately 1,600 amps. All relevant indications were evaluated by Mr. Banks in accordance with ASTM E125 and Goodwin Steel Castings Magnetic Particle Procedure for Cable Band Castings, MT06-09-02 revision 4. Indications found to be rejectable in accordance with MT-06-09-02 were marked for repair and reported. The testing was completed on this date and the Quality Assurance Inspector did concur with Mr. Bank’s inspection results. Visual inspection by Mr. Banks included verification of the dimensions related to the suspender rope grooves.

The QA Inspector observed that casting GG29441-2 was returned from Applied Inspection following completion of Radiography of the the suspender rope groove flanges. The following locations were radiographed and are awaiting interpretation by Goodwin Steel Castings:

- Band D location 3-4
- Band F locations 1-2, 2-3, 3-4, 4-5
- Band H locations 1-2, 2-3, 3-4
- Band K locations 1-2, 2-3, and 3-4

The QA Inspector observed Adam Migas performing weld repair of Casting GG29445-1, Drawing Number B13-2-F. Mr. Migas was using WPS04-0120F4B Rev 5. Preheat was verified with a 170 degree Centigrade temp stick. Mr. Migas was observed using 3.2 mm E7018-1 electrode in the flat position at 105 amps.

### Summary of Conversations:

Relevant conversations are included 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.

---

<b>Inspected By:</b>	Riegler,Randy	Quality Assurance Inspector
<b>Reviewed By:</b>	Edmondson,Fred	QA Reviewer

---