

**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-011583**Date Inspected:** 19-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 750**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1750**Contractor:** Goodwin Steel, UK**Location:** Trentham, UK

|                                    |                                   |           |            |                                  |                     |           |            |
|------------------------------------|-----------------------------------|-----------|------------|----------------------------------|---------------------|-----------|------------|
| <b>CWI Name:</b>                   | Fred Hawksworth, Applied Services |           |            | <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 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 19 January 2010.

**EXCAVATION MAP REVIEW:**

While this Caltrans QA Inspector was on site, GI, he met with Mr Fred Hawksworth, CWI, of Applied Services, brought in by Goodwin International to perform QC function in regards to our project weld processes, here at Goodwin International, Trentham, as well as Goodwin Steel Castings, Stoke-on-Trent. This QA Inspector had opportunity to observe the efficiency and quality of Mr. Hawksworth, the CWI reviewed this contractor's welder certificates and verified proficiency as it applies to this contract and the ASME Sect IX code. Following the administrative review, Mr Hawksworth proceeded to perform a physical and dimensional check of excavations and NDT reports supporting each excavation. Upon completion of the CWI review the Excavation Maps were hand carried by the Applied Services QC Inspector to Goodwin Steel Castings QC Department for preliminary approval to proceed by Caltrans METS Lead Inspector, Mr Randy Riegler.

**SHOP REVIEW:**

The Caltrans QA Inspector observed Mr. Rory Clay, Dimensional Technician of GI, perform the marking of GG29422-12, dwg 5540-B4-1-M on the layout table. The casting will then be forwarded to begin machining at Stage C of GI's Manufacturing Inspection and Test Plan (MITP) Rev 3. Mr Clay identified this certain casting as

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 2 )

---

---

needing dressing to the as casted surface at the location of, what was, the raiser so as to meet the maximum wall thickness of 35mm (+4-2).

## WELD PROCESS REVIEW:

Weld Supervisor, Steve Young (welder ID # SY911), was observed depositing weld material (build-up) to satisfy the approved repair, in ABF-RFI-001947R00, to two castings, GG31825-4 and GG31825-5. Both classified as Major repairs to be welded using the Shielded Metal Arc Weld (SMAW) process, per WPS04-0120F4B issue 5. Preheat was performed using strip heaters covered with thermal blankets. Preheat and interpass temperatures were verified by welder using Temperature sticks of 170° and 399° Celsius respectively, assuring parameters of WPS are met. Actual Amps and Volts during this observation were 154 and 22.8, respectively. Electrode in use was E7018-1, 4mm. A Travel Speed was observed to be 287mm/minute.

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.

---

|                      |                |                             |
|----------------------|----------------|-----------------------------|
| <b>Inspected By:</b> | Brcic,Michael  | Quality Assurance Inspector |
| <b>Reviewed By:</b>  | Edmondson,Fred | QA Reviewer                 |

---