

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-015549**Date Inspected:** 23-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1700**Contractor:** Goodwin Steel, UK**Location:** Trentham, UK

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|------------------------------------|------------|----------------------------------|------------|----|
| CWI Name: | N/A | CWI Present: | Yes | No |
| Inspected CWI report: | Yes No N/A | Rod Oven in Use: | Yes No N/A | |
| Electrode to specification: | Yes No N/A | Weld Procedures Followed: | Yes No N/A | |
| Qualified Welders: | Yes No N/A | Verified Joint Fit-up: | Yes No N/A | |
| Approved Drawings: | Yes No N/A | Approved WPS: | Yes No N/A | |
| | | Delayed / Cancelled: | Yes No N/A | |
| Bridge No: | 34-0006 | Component: | 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 observed casting GG29442-2, 5540-B11-2-M being welded. The welder Mr. W. Whyte was using Welding Procedure Specification WPS04-0120F4G. He setup on a piece of scrap steel and the initial weld was made at 26.6 Volts and 210 Amps. The Length of the weld was 240 mm and the time to complete the weld was 44 seconds. This results in a heat input of 1.02 KJ which is outside of the allowable heat input of .6 to .95 KJ. The welding parameters were changed which resulted in the weld being made at 26 volts and 200 amps. The length of the weld was 240 mm and the time to complete the weld was 41 seconds. This results in a heat input of 0.8 KJ and a travel speed of 351 mm per minute which is within the allowable range on the WPS. Excavation 18 was welded using Welding Procedure Specification WPS04-0120F4B, Shielded Metal Arc Welding (SMAW) The weld was made by Mr. W. Whyte using 3.2 mm E7018-1 electrode. The casting was preheated to greater than 160 degrees C. verified by a 177 temperature indicating crayon.

The QA Inspector reviewed the Welder Approval Test Certificate for Mr. W. Whyte, Welder Number W6. This is referred to in ASME Code Section IX as the Welder Performance Qualification Record. This record documents that Mr. Whyte is qualified to make welds using the FCAW process in positions 1G and 3G using Welding Procedure Specification (WPS) WPS04-0120F4G.

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The QA Inspector observed Mr. C. Fallows, Magnetic Particle Test Technician Level II perform magnetic particle testing of Panel Point 20 West consisting of castings GG29432-5, 5540-B8-1-M and GG29433-6, 5540-B8-1-F. The Rough machined internal bore was tested. Mr. Fallows was using a Johnson and Allen AC Yoke serial number C006, and Neoastra Type F prepared bath. Mr. Fallows identified areas on casting GG29433-6, 5540-B8-1-F with indications exceeding acceptance criteria. These area were marked for repair. The QA Inspector did agree with the results of Mr. Fallows inspection.



Summary of Conversations:

No relevant conversations.

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.

Inspected By: Riegler,Randy

Quality Assurance Inspector

Reviewed By: Edmondson,Fred

QA Reviewer