

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-007672**Date Inspected:** 10-Jul-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** Goodwin Steel, UK**Location:** Stoke on Trent, UK**CWI Name:****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 Foundry in Stoke on Trent, England.

Radiography

The QA inspector witnessed radiography performed by Goodwin Steel Castings. Mr. Scott Bennett performed radiography on casting GG29442-1, B11-2-M, a type 2 cable band. The casting was radiographed using a single wall exposure. The radiographs were performed using a 3.2mm effective focal spot size, 8MEV linear accelerator. The source to film distance was maintained at 2,500mm. Number 40 to 100 hole type and Set 1C or 1D wire type image quality indicators were placed source side on each different thickness radiographed. AGFA type D4, D5 and D7 film of various sizes were used for single and composite views to cover the range of thicknesses. Radiography of this casting was not completed on this date but will require further radiography after repair. Applied Inspections performed radiography of the main body outside the suspender grooves.

The QA inspector reviewed radiographic film of casting GG29422-8, B4-1-M with Goodwin Steel Castings NDT Level II technician Mr. Ian Pointon. The film quality and weld quality were reviewed for compliance with Goodwin Steel Castings Radiographic Inspection Procedure RT06-09-020 revision 1. No unacceptable indications were observed. Radiography of this casting was not 100%, only the area along the centerline was radiographed. Mr. Jason Cross of Goodwin Steel Castings reported that the initial GG29422-7, B4-1-M casting had been 100% radiographed and acceptable levels of shrinkage had been identified. Prior to casting the second B4-1-M casting, the casting method was revised to reduce the possibility of shrinkage. Mr. Cross reported that he was in the process of submitting a request for information to Caltrans to allow partial radiography of this casting. See attached digital images for radiographic locations and RADIOGRAPHIC FILM REVIEW

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SUMMARY-CASTINGS (TL-6030) for details.

Repair

QA inspector witnessed buildup welding of castings GG29416-10 and GG29421-1. The welder, Mark Howard, was observed welding in the flat position utilizing approved welding procedure WPS04-0120F4B. Preheat and welding parameters were observed to be within the limits of the WPS. These repairs have received verbal approval by QA, but have not received approval by an independent CWI in accordance with the approved MITP sections Q2 and Q3. This issue was brought to the attention of Jason Cross. Jason Cross reported that he allowed welding to proceed due to an opening in the furnace schedule this Saturday and the approved CWIs were not available to perform the required inspections.

See attached digital image.

Documents received and reviewed

The QA inspector received a copy of the Metal Proving Services "Radiographic Inspection Report" for casting GG29422-2, B4-1-M and GG29441-2, B10-2-F. The Radiographic Reports were reviewed for accuracy and compliance with contract documents. The Radiographic report for GG29441-2, B10-2-F detailed twenty rejectable indications in the casting.



Summary of Conversations:

As noted 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.

Inspected By:	Lanz,Joe	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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