

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 70.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003314**Date Inspected:** 24-Jul-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** Japan Steel Works**Location:** Muroran, Japan**CWI Name:** Kuan Chung**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:** Tower, Jacking and Deviation Saddle**Summary of Items Observed:**

The following report is based on METS observations at Japan Steel Works (JSW) in Muroran Japan. Current work: Casting, machining and repair of Saddles.

PQR WITNESS

At 1000 hours, the Caltrans Quality Assurance (QA) inspector arrived at JSW fabrication shop number 4 and observed a procedure qualification test designated GJ6-3402, SW-11-2 performed by JWS welding personnel Mr. K. Kobayashi ID 08-5023 and Mr. Yamashita ID 78-4195. The welding was performed utilizing the Flux Core Arc Welding Process in the Flat (1G) position. The filler metal appeared to be TM-55, E70T-5CJH4, AWS designation A5.20, 1.6 mm diameter. The welding was performed per the AWS D1.5, 2002 Section 5.13 requirements. The Intertek QC inspectors, Mr. Kuan Chung checked welding parameter and recorded the preheat and interpass temperatures, the average amperage, voltage and the travel speed for all weld passes. The QA inspector observed that the welder Mr. K. Kobayashi (A Shift) and Mr. M. Yamashita (B Shift) ground each weld pass to a smooth bright finish prior to starting the next weld pass. The welding of this plate was completed on this date. The QA inspector noted that the welding appeared to meet the minimum requirements of AWS D1.5-2002 and the contract documents. Not completed this day.

Fabrication Shop # 4

On this date the QA representative Dong J, Shin arrived at Japan Steel Works (JSW) of Muroran Japan and traveled to JSW fabrication shop # 4, QA Inspector observed Mr. K. Kobayashi repair welding on W2-E1 location

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that were ground to remove indications at rib plate to base plate run out tab removal locations and excessive ground areas. The repair welding was performed utilizing the Shield Metal Arc Welding(SMAW) process with as per the welding procedure specification (WPS) SW-4-1 and SW-4-2. The welding was performed in the 1G (Flat) and 2G(Horizontal) positions. The filler metal utilized was identified as 4.0 mm, AWS E9018-M, Brand name HOBALLOY. The welding parameters and heat control were monitored by Intertek Testing Services Quality Control (QC) inspector Mr. Chung-Fu Kuan at periodic intervals. The minimum preheat temperature of 118 degrees Celsius and maximum inter pass temperature of 260 degrees Celsius was verified to meet the WPS requirements by Mr. Kuan and the QA inspector utilizing Digital thermometer. This data was entered into the QC inspector's daily log, identifying the location on a weld map. The welding was continued to night shift. Visually general welding appears to meet the minimum requirements of the welding procedure specification and contract documents.

NDT Inspection (Foundry Shop)

On this date the QA representative Dong J, Shin traveled to JSW foundry shop, QA Inspector observed NISC NDT Technician Mr. K,Nishida and Mr. M, Wada performed Magnetic Particle testing on Casting W2E1. MT was performed after Post Weld Heat Treatment. The magnetic particle testing was performed with a yoke using AC current with red particles. The QA Inspector checked the Yoke calibration date and the field indication gauge. The results appear to meet ASTM E-709 requirements.

NDT Inspection (Fabrication shop # 4)

On this date the QA representative Dong J, Shin traveled to JSW fabrication shop # 4, QA Inspector observed NISC NDT technician Mr. K. Kobayashi and Mr. R. Kumagai perform Magnetic Particle testing on run out tab removal areas. The magnetic particle testing was with a yoke using AC current with red particles.

Summary of Conversations:

No specific 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 Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Shin,DJ	Quality Assurance Inspector
Reviewed By:	Lanz,Joe	QA Reviewer
