DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 70.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-004101
Date Inspected: 29-Sep-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Japan Steel Works

OSM Arrival Time: 900
OSM Departure Time: 1700
Location: Muroran, Japan

CWI Name: Kuan Chung

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ 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.

FBARICATION SHOP # 4

On this date the Caltrans Quality Assurance (QA) inspector, Dong J, Shin arrived at JSW fabrication shop number 4 and observed the in process assembly fit-up operation of the structural steel plates to casting of the West Deviation Saddle base W2E1.

NDT

The QA inspector periodically observed The Nikko Inspection Services (NIS) QC/NDT technicians Mr. Yugo Osama and Mr. Atsusi seino perform magnetic particle (MT) testing of tower jacking saddle(T1-3) after rough machined. The MT was performed in accordance with ASTM standard E709, using the yoke method. The yoke utilized appeared to be model VM3, serial numbers 97049. The yoke dead lift was verified with a 4.65kg test plate. The magnetic field was verified with a field indicating gauge (pie gauge). Use with red dry powder. All calibrations appear to meet the minimum requirements of ASTM E709. The testing was evaluated in accordance with the contract special provisions.
The testing was not completed on this date.

NDT(FOUNDRY SHOP)

The QA inspector periodically observed The Nikko Inspection Services (NIS) QC/NDT technicians Mr. Kazuya Kobashi and Mr. Kumagai perform magnetic particle (MT) testing of West Deviation Saddle base W2E2 after PWHT and Tower Jacking Saddle T1-1. The MT was performed in accordance with ASTM standard E709, using the yoke method. The yoke utilized appeared to be model VM3, serial numbers 97049. The yoke dead lift was verified with a 4.65kg test plate. The magnetic field was verified with a field indicating gauge (pie gauge). Use red dry powder. All calibrations appear to meet the minimum requirements of ASTM E709. The testing was evaluated in accordance with the contract special provisions.
The testing was not completed on this date.

MECHANICAL TEST WITNESS
The QA inspector observed two Reduced Section Tensile tests for each test plate in accordance with AWS D1. 5-2002 Section 5.18.1. and one all weld metal tensile test in accordance with AWS D1.5-2002 Section 5.18.4. The test machine Shimazu 1000kn model, serial number I22104400055. Calibration was verified to be due 05-15-2009. JSW QC personnel Mr. Naoya Takahashi verified the specimen dimensions and the testing was performed and results recorded as follows.
Test Plate SW-3-2, sample B1-1, 549MPa tensile, failure was in the base metal, sample B1-2, 543MPa tensile, failure was in the base metal and sample B2-1 (all weld metal), 549Mpa tensile.
The samples were found acceptable in accordance with paragraph 5.19.1. and 5.19.4
Caltrans witness lot number B85-041-08 was assigned to test plate SW-3-2 for tracking purposes.

The QA inspector observed four each Side Bend tests for test plates SW-3-2 accordance with AWS D1.5-2002 paragraph 5.18.3. JSW QC personnel Mr. Naoya Takahashi performed tests and recorded results as acceptable in accordance with paragraph 5.19.2.

The QA inspector observed five each Impact Test samples test temperature at -0°C. The results were 69 joules, five each Impact Test samples test temperature at -20°C. The results were 127 joules, five each Impact Test samples test temperature at -4°C. The results were 116 joules. The samples were found to be acceptable in accordance with paragraph 5.19.5.
Caltrans witness lot number B85-41-08 was assigned to test plate SW-3-2 for tracking purposes.

The QA inspector observed Three each Macro Etch tests for test plates for welding procedure specification WP11-2. JSW QC personnel Mr. Naoya Takahashi performed tests and recorded results as acceptable in accordance with paragraph 5.19.3.

The QA Inspector has reviewed Radiographic testing films, for SW-3-2. Result were acceptable in accordance AWS D1.5 (2002) Sec, 6.

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.

WELDING INSPECTION REPORT

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