

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-002298**Date Inspected:** 17-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Japan Steel Works**Location:** Muroran, Japan

CWI Name:	Chung Kuan/ Makhmud Ashadi			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:	PQR test plate		

Summary of Items Observed:

PQR qualification welding test (3G):

Caltrans Quality Assurance Inspector (QAI) representative Mr. Wai Pau, travel to Japan Steel Works (JSW) Muroran plant to witness an AWS D1.5 standard PQR qualification welding test. The Japan Steel Work (JSW) Mr. Yoshihiro Itoh introduced CWI inspectors to QAI. The new CWI is Mr. MaKhmud Ashadi from Intertek Testing Services, Japan.

The number of PQR qualification welding test is SJ-2942-WP-2. This PQR was previously rejected by radiographic testing (RT) results due to porosity prior to this retesting effort. The PQR qualification tests utilizing the Shielded Metal Arc Welding (SMAW) process were conducted by welder Mr. Kai Nakasato that was performed in the uphill vertical position (3G) with an electrode at a 10 degree angle above horizontal line when the welder strike the arc and lift the electrode up. This is new welding technique used by JSW to prevent the porosity in the weld.

The material used for the PQR qualification test specimens was reported by JSW Welding Engineer Mr. Takaaki Maruya as ASTM A148 Gr.620-415 (casting) and ASTM A709-HPS-485WT (plate) both having a wall thickness measurement of 50mm. The weld joint design used butt joint, single-V-groove weld with 20mm x 75mm backing bar. The filler metal used in the test is Hoballoy 9018-M with 4mm diameter electrode, made by Hobart Brothers, USA. The electrode certification is 30H438. The SMAW welding and parameters have been monitored and recorded by CWI inspectors Mr. Chung Kuan, Mr. MaKhmud Ashadi and JSW Welding Engineer Mr. Takaaki Maruya which were observed by Caltrans QAI. A total of ten interior filler weld passes (#1 to #10) were completed on this date. The parameters detail check with QAI TL-6032 welding report (1-17-08). The preheat temperature of the test plate is to be held at 120 C overnight for the continuation of the welding at tomorrow. Based on Caltrans QA observation, no discrepancies were noted.

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Summary of Conversations:

Japan Welding Engineer Mr. Takaaki Maruya informed to QAI that PQR SJ-2942-WP-2 will take three days to complete the welding.

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)697-6363, who represents the Office of Structural Materials for your project.

Inspected By:	Pau,Wai	Quality Assurance Inspector
Reviewed By:	Brasel,Ron	QA Reviewer
