

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 #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001058**Date Inspected:** 30-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 1400**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2300**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Lee Chan Woo**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:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Ken Jobes, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, to randomly monitor welding and Quality Control (QC) functions. While on site, the QA Inspector observed and/or discovered the following:

The Caltrans QA Inspector observed fitting and tacking of OBG Floor Beam Weld No. FB002-01-023, utilizing the semi-automatic Flux Cored Arc Welding (FCAW) process in the flat groove (1G) welding position. Both members being tacked were 12 mm thick, ASTM A709-345-T2 base material. Welding Procedure No. WPS-B-T-2231-U2-F-1 was being used. The QA Inspector observed that the minimum specified preheat of 10° C was being applied.

The QA Inspector observed the drilling of holes in beams for WT stiffeners using Template No. WT265Y. The QA Inspector verified the hole spacing on one of several members. The member verified was Piece Mark RS17D, shown on Drawing No. RS17D. Other reference drawings are BP5 and BP005.

The QA Inspector observed the fitting and tacking of WT stiffeners to Bottom Plate BP006 using the semi-automatic FCAW welding process in the horizontal fillet (2F) welding position. Two of the Weld Nos. were BP006-01-008 and BP006-01-009. The stiffener base material was ASTM A709-345 and the plate base material (Piece Mark PL37A) was 20 mm thick ASTM A709-345-T2-X. The welding procedure No. being used was WPS-B-T-2132-1, which required a minimum preheat of 10° C. The QA Inspector noted that preheat was being applied, although it did not appear that the temperature was being measured. The tack welder was Li Shuliang (I. D. No. 048801). The closest CWI, Lee Chan Woo was working approximately fifty meters from this work and the

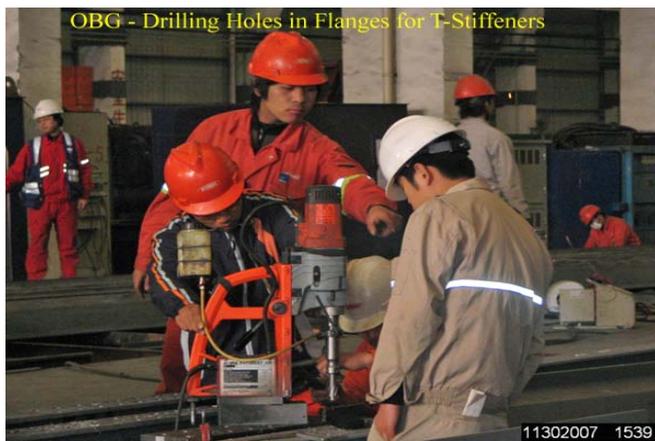
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man recording the parameters was not a CWI.

The QA Inspector also observed the semi-automatic FCAW repair of a machine Submerged Arc Weld (SAW) of a splice on Side Plate 051. The Weld No. was SP051-01-001. The welding operator for the SAW was recorded as Jang Jingteng (I.D. No. 046830) and the welding procedure No. was WPS-B-T-2221-B-L2c-S-1. The QA Inspector did not observe the Submerged Arc Welding of this joint. The FCAW repair was made by Li Zhaoqian (I. D. 048810) using WPS-345-FCAW-1G(1F)-Repair. The repair was documented as being for undercut. The QA Inspector observed that ZPMC CWI Lee Chan Woo was present during the repair welding.

All observations appeared to meet the requirements of the job specifications.



Summary of Conversations:

As identified within the contents of this report.

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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By: Jobes, Kenneth

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer