

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-011340**Date Inspected:** 03-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**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 and Tower**Summary of Items Observed:**

CWI Inspectors: Mr. Yang Li, Mr. Liu Fa Wen

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG BAY 5

This QA Inspector observed ZPMC welder Ms. Song Aiyong, stencil 215689 is using flux cored welding process WPS-345-FCAW-2G(2F)-Repair add weld material to extend the length of traveler rails 10TR3-012 and 10TR1-017. This QA Inspector observed a welding current of approximately 285 amps and 30.0 volts and Ms. Song Aiyong appears to be certified to make this weld. This QA Inspector observed that Ms. Song Aiyong is depositing weld passes two different traveler rail weld joints and this allows additional time for each of the weld joints to cool prior to depositing additional weld material. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Li Yuan Zheng, stencil 217185 is using flux cored welding process WPS-345-FCAW-2G(2F)-Repair add weld material to extend the length of traveler rails 10TR3-012 and 10TR1-017. This QA Inspector observed a welding current of approximately 270 amps and 30.5 volts and Mr. Li Yuan Zheng appears to be certified to make this weld. This QA Inspector observed that Mr. Li Yuan Zheng is

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depositing weld passes two different traveler rail weld joints and this allows additional time for each of the weld joints to cool prior to depositing additional weld material. Items observed on this date appeared to generally comply with applicable contract documents.

Segment Assembly

This QA Inspector observed ZPMC welder Mr. Hu Yanming, stencil 62092 is using shielded metal arc procedure WPS-B-P-2114 to install temporary alignment plates at the weld joint between the exterior bottom plates of OBG segments 6CE and 7AE. This QA Inspector measured a welding current of approximately 160 amps. This QA Inspector asked CWI Mr. Li Wang what is the required base material preheat temperature that is required by this welding procedure and Mr. Li Wang informed this QA Inspector that the minimum temperature is 65 degrees Celsius. This QA Inspector asked Mr. Li Wang how ZPMC QA personnel have been measuring this base material temperature and he informed this QA Inspector that they have been using a laser temperature indicating device. This QA asked Mr. Li Wang where this laser temperature indicating device was located and he informed this QA Inspector that the laser temperature indicating device is inside the westbound segment. Mr. Li Wang obtained the laser temperature indicating device from the interior of the segment and he used it to confirm the base material has been preheated as required by the welding procedure specification. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Hu Yanming, stencil 62092 is using shielded metal arc procedure WPS-B-P-2114 to install temporary alignment plates at the weld joint between the exterior side plates, on the counterweight side of OBG segments 6CE and 7AE. This QA Inspector measured a welding current of approximately 165 amps. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welders Mr. Liu Qing Fu, stencil 49779 and Mr. Tang Huai, stencil 205775 had both been using shielded metal arc procedure WPS-B-P-2111 to install temporary alignment plates at the weld joint between the exterior top deck between OBG segments 6CE and 7AE. This QA Inspector observed both welders appear to be certified to make these tack welds. Items observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

See 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 Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

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| Inspected By: | Dawson,Paul | Quality Assurance Inspector |
| Reviewed By: | Carreon,Albert | QA Reviewer |
