

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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026099**Date Inspected:** 29-Jul-2011**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 Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

Vessel Zhenghua #19

This QA Inspector randomly observed the following on the Vessel Zhenghua #19 in response to Bolting Inspection Notification Sheet No. 00710:

Item 1 - OBG Segment 13AE/13BE/13CE, cable tray brackets to BP stiffeners:

ZPMC workers performed final ASTM A325M bolt tightening verification of bolt sets noted below at the direction of ZPMC QC Xu Jin Long (QC1) using ZPMC calibrated wrench #X02-426. No less than 10% of the ASTM A325 bolt sets at each connection were torque tested. QC1 provided this QA Inspector with the following information regarding the bolt sets installed at this location. This QA Inspector observed ZPMC's Bolt Test Log for SFOBB (RoCap list), listing the RoCap Set numbers, bolt set size, and the NM test result for torque tightening purposes. The information presented by QC1 and listed below appeared to this QA Inspector to match the RoCap list as follows:

Bolt sets - RC Set No. DHGM200014 – M20x55 – test result 420NM

Bolt sets - RC Set No. DHGM200017 – M20x65 – test result 347NM

The torque of the above noted bolt sets was verified by torque testing with the above noted calibrated wrench with the wrench setting displayed as 420NM for the M20x55 bolt sets and the M20x65 bolt sets at the direction of QC1.

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Based on the information above this QA Inspector concurred with QC1 for the issuance of green tag numbers.

This QA Inspector randomly also observed the following work in progress on the Vessel Zhenghua #19:

SMAW welding of weld joint SEG3014S-074, 079, 080 located on PCMK OBG 13BW. Welders ere identified as 047864, 045196. QC was identified as ZPMC CWI Li Yan Hua (QC2). Assisting QC2 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Zhang Lin (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-P-2212-TC-U4b-FCM-1 as verbally identified by QCA2.

During random observations of bolting operations on the vessel Zhenhua #19 in OBG Lift 14W, this Caltrans QA Inspector also observed the following issues:

Four bolted connections with debris and un-ground temporary tack welds trapped between the faying surfaces. Full contact of the faying surfaces was not achieved. This QA observed ZPMC workers tightening bolt assemblies with an air impact wrench and checking the tightness with a torque wrench. Neither the bolt sets nor the steel were marked for snug tightness. This QA observed these conditions at the following locations:

- PP128.3 upper corner connection-X4825G to X4963K with X4981B connection plate.
- PP128.3 lower corner connection-X4825H to X4963L with X4981B connection plate.
- PP128.7 upper corner connection-X4835G to X4963K with X4981M connection plate.
- PP128.7 lower corner connection-X4835H to X4963L with X4981M connection plate.

This QA Inspector generated an Incident Report concerning the above noted issues. No ZPMC QC nor ABF representatives were in the area.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

As noted 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, 150-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer
