

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

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-016563**Date Inspected:** 30-Aug-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

<b>CWI Name:</b>	Mr. Huang min / Mr. Li Jia	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes	No N/A
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes	No N/A
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes	No N/A
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes	No N/A
		<b>Delayed / Cancelled:</b>	Yes	No N/A
<b>Bridge No:</b>	34-0006	<b>Component:</b>	Orthotropic Box Girder (OBG)	

**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

BAY- 2

The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 006527.

**Magnetic Particle Testing (MT)**

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated MT report for this date. The members are identified as OBG Floor beam weld Components. Total number of welds MT Tested: 50 No's. The weld designations are review as follows:

1. FB3194-001-009,010,013,014,027,028,033,034,039,040,045~048,051`054,061,062,067~069,071,075,076,083.
2. FB3235-001-005,006,015,016,018~020,029,030,035~040,043,049~052,059,060,061.

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The following Non Destructive Testing (NDT) Inspection carried out as per the ZPMC submitted Notification No. 006533.

## Ultrasonic Testing (UT)

This QA performed UT of approximately 10% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated UT report for this date. The members are identified as OBG Cross beam CB18 Side plate weld Components. Total number of welds UT Tested: 02 No's. The weld designations are review as follows:

### 1. CB3002H-018-001,002

This QA Inspector Randomly observed the following work in progress:

Submerged Arc Welding (SAW) of weld joint CB3002C-018-001. Welder is identified as 215960. ZPMC Quality Control (QC) is identified as Mr. Zhang zhi wei. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2221-B-L2c-S-2.

Flux Cored Arc Welding (FCAW) of weld joint FB3169-004-013. Welder is identified as 053609. ZPMC Quality Control (QC) is identified as Mr. Li Jia. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2233-TC-U4b-F.

During the Caltrans QA in-process observations of the fabrication of Crossbeam CB18 Side plates, this QA observed ZPMC personnel have performed heat straightening excessive distortion on one of the side panels for CB18 without Engineers approval. Distortion measured 12mm per 1000mm. The weld is identified as CB3002D-018-002. The weld is CJP butt joint, joining Side plate (SP3087A) to Side plate (SP3088A). The Material thickness is 20 mm.

This QA Inspector generated an incident report on this date for the above issue, for further information see the incident report and the attached photos.

## BAY- 7

FCAW of weld joint DP3181-001-009,010. Welder is identified as 205386. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

FCAW of weld joint DP3181-001-003,004. Welder is identified as 217185. ZPMC Quality Control (QC) is identified as Mr. Guopan. The welding variables appeared to comply with the Applicable WPS: WPS-B- T-2132-3.

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

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## Summary of Conversations:

Only general conversation was held between QA and Quality Control (QC) concerning this project.

## 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 15000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Prabhu,Surendra

Quality Assurance Inspector

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**Reviewed By:** Hall,Steven

QA Reviewer