

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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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-021700**Date Inspected:** 12-Mar-2011**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. An Qing xiang / Mr. Sha zhi	<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:

OBG Assembly bay- 14.

This QA Inspector randomly observed the following work in progress:

Shielded Metal Arc Welding (SMAW) welding of weld joint identified as SEG3013F-111. Welder is identified as 066459. ZPMC Quality Control (QC) is identified as Mr. Shen jian bo. The welding variables recorded by QC personnel observed appeared to comply with Welding Procedure Specification (WPS): WPS-B-P-2213-TC-U4b-FCM-1.

SMAW welding of weld joint identified as SEG3013K-167. Welder is identified as 066443. ZPMC Quality Control (QC) is identified as Mr. Shen jian bo. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-P-2213-TC-U4b-FCM-1.

SMAW welding of weld joint identified as SEG3013AA-118. Welder is identified as 037996. ZPMC Quality Control (QC) is identified as Mr. Shen jian bo. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-P-2212-TC-U4b-FCM-1.

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SMAW welding of weld joint identified as SEG3013AA-116. Welder is identified as 067764. ZPMC Quality Control (QC) is identified as Mr. Shen jian bo. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-P-2212-TC-U4b-FCM-1.

Flux Cored Arc Welding (FCAW) welding of weld joint identified as SEG3020AY-268,269. Welder is identified as 204730. ZPMC Quality Control (QC) is identified as Mr. An qing xiang. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-T-2233-ESAB.

FCAW welding of weld joint identified as SEG3020L-119,125. Welder is identified as 066239. ZPMC Quality Control (QC) is identified as Mr. An qing xiang. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-T-2233-ESAB.

FCAW welding of weld joint identified as SA3231C-086,136. Welder is identified as 048433. ZPMC Quality Control (QC) is identified as Mr. Li ping. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-B-T-2232-ESAB.

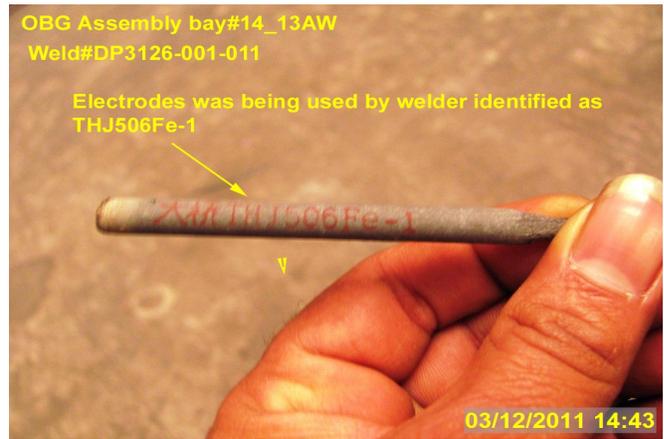
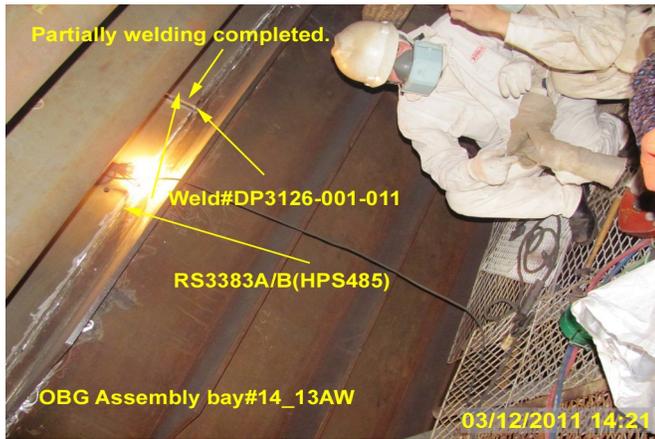
During a random in process visual inspection of OBG Deck Panel (DP)DP3126A, this Caltrans QA Inspector observed ZPMC welding personnel performing the Shielded Metal Arc Welding (SMAW) process using an unapproved electrode for the joint being welded. The welding was being performed to WPS-B-T-3213-B-U3b which specifies using electrode classification E9018M-H4R (Brand Excalibur 9018M/MR). The welder was using SMAW electrode Brand THJ506Fe-1 and classification E7018-1 for the joint being welded. The material being welded was A709M-HPS485-WT2 to A709M-HPS485-WT2. The weld is a Complete joint penetration(CJP)groove weld joining Rib stiffener(RS3383A) to Rib stiffener(RS3383B). The weld joint is identified as DP3126-001-011. The segment and Panel Point is 13AW at PP117.5. The thickness of the material is 35 mm. This QA Inspector informed to ZPMC Certified Welding Inspector (CWI) identified as Mr. An qing xiang and AB/F Lead QA Inspector identified as Mr. Peter Shaw and also informed Caltrans (CT) Lead QA Inspector regarding the above issue. ZPMC CWI and AB/F Lead QA informed CT Lead QA that the previous deposited weld metal will be removed by gouging and the joint would be re-beveled and Magnetic Particle Testing (MT) would be performed on the new bevel area prior to the start of welding. This QA observed that the ZPMC welder was removing the weld by gouging. see attached photos for further details.

This QA Inspector did not generate an Incident Report for the above issue as per the CT Lead QA Inspector's instructions.

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

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## Summary of Conversations:

No significant conversations were reported on this date.

## 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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<b>Inspected By:</b>	Prabhu,Surendra	Quality Assurance Inspector
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<b>Reviewed By:</b>	Peterson,Art	QA Reviewer
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