

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010935**Date Inspected:** 09-Dec-2009**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>	Du Zhi Qun, Liu Zhong An	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b> <b>No</b>	<b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b> <b>No</b>	<b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b> <b>No</b>	<b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b> <b>No</b>	<b>N/A</b>
<b>Bridge No:</b>	34-0006	<b>Delayed / Cancelled:</b>	<b>Yes</b> <b>No</b>	<b>N/A</b>
		<b>Component:</b>	Tower	

**Summary of Items Observed:**

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

**BAY 10 TOWER SKIRT PLATE A713**

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT reports for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

ND1-A713C/E-86, 21, 22, 20, 15, 17, 13, 14, 9, 8, 5, 25, 26, 28, 29, 30, 31, 32

ND1-A713C/E-75, 76 (QA REJECT, MT LINEAR INDICATION OBSERVED)

**BAY 10 TOWER SKIRT PLATE A803**

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT reports for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

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# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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NSD1-A803B/B-6-28, 6, 20, 7, 21  
NSD1-A803B/B-5-6, 20, 7, 21, 5  
NSD1-A803B/B-2-20, 21, 3, 2, 4, 28, 29  
NSD1-A803A/B-9, 10, 11, 12, 13, 14

This Quality Assurance (QA) Inspector observed the following work in progress:

Bay 10

## SPARE STRUT

SMAW welding of weld joint 3B located on ED1-STSA3-2-89M-1.  
Welder is identified as 040582. ZPMC QC is identified as Mr. Yu Zhi Lai.  
The welding variables recorded by QC appeared to comply with WPS-B-T-2212-Tc-U5b.

SMAW welding of weld joint 55 located on ED1-STSA3-2-99M-2.  
Welder is identified as 040268. ZPMC CWI is identified as Mr. Du Zhi Qun.  
The welding variables recorded by QC appeared to comply with WPS-B-T-2113.

SMAW welding of weld joint 40 located on ND1-A6002-18.  
Welder is identified as 052493. ZPMC QC is identified as Mr. Yu Zhi Lai.  
The welding variables recorded by QC appeared to comply with WPS-B-T-4113-1.

## INTERIOR SPLICE PLATE

FCAW welding of weld joint 1B located on NSD1-SPSA4-18.  
Welder is identified as 053870. ZPMC QC is identified as Mr. Sun Tian Liang.  
The welding variables recorded by QC appeared to comply with WPS-B-T-2231-Tc-U5-F.

## NORTH TOWER LIFT 4 C/D CORNER TRIANGULAR PLATE

FCAW welding of weld joint 22 located on NSTL4-3B/L.  
Welder is identified as 040338. ZPMC QC is identified as Mr. Deng Zhi Bing.  
The welding variables recorded by QC appeared to comply with WPS-B-T-2132.

## REPAIR OF CORNER SPLICE PLATE OF LIFT 3-LIFT 4

FCAW welding of weld joint 1A/B(Repair) located on NSD1-SPSA4-15.  
Welder is identified as 040367. ZPMC QC is identified as Mr. Sun Tian Liang.  
The welding variables recorded by QC appeared to comply with WPS-345-FCAW-1G(1F)-REPAIR.

During random verification Magnetic Particle Testing (MT) of SKIRT PALTE A713, weld ND1-A713C/E-75, 76 located in the Tower Bay No. 10, Caltrans Quality Assurance (QA) Inspector discovered a linear indication of approximately 12mm in length. This area was not previously tested and accepted by ZPMC NDT personnel. (NDT Inspection Notification sheet # 004821). This issue has an incident report.

The attached photographs provide additional detail.

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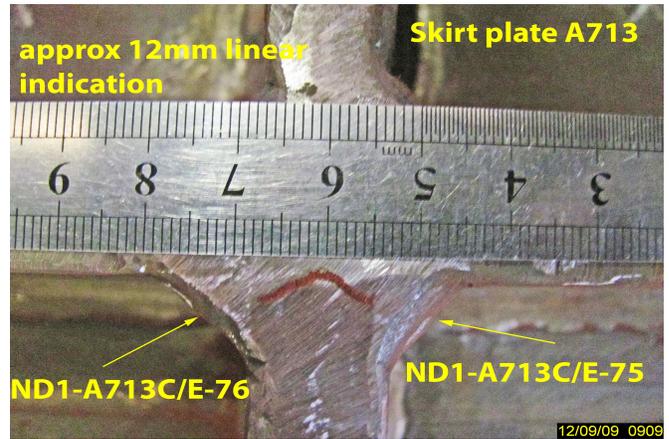
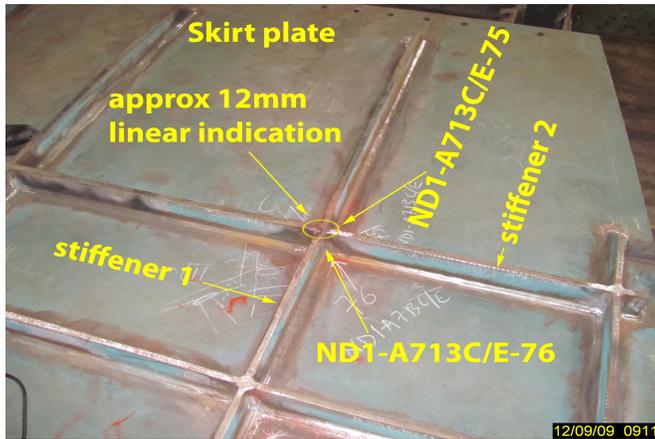
# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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



## Summary of Conversations:

Only general conversation was held between QA and 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 Serge Sinevod 134-8257-0045, who represents the Office of Structural Materials for your project.

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**Inspected By:** Gaikwad, Umesh

Quality Assurance Inspector

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**Reviewed By:** Clifford, William

QA Reviewer