

**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-012692**Date Inspected:** 13-Mar-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**CWI Name:** Mr. Wuzhi Chang**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:** 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 TRIAL ASSEMBLY**

This QA Inspector Randomly observed the following work in progress:

**SEGMENT: 7AE**

Shielded Metal Arc Welding (SMAW) welding of Repair weld joint SEG034A-007 (Corner split weld). Welder is identified as 048659. ZPMC Quality Control (QC) is identified as Mr. Wang Zhu. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-345-SMAW-4G (4F) FCM-Repair-1. The repair welding was performed against the Caltrans Engineer Approved Critical Welding Repair Report (CWR) No: B-CWR 1211 and American Bridge/Fluor (AB/F) UT report # UT-7E-029 dated: 02/18/2010. The attached photographs provide additional detail.

**SEGMENT: 7BE-7CE**

Shielded Metal Arc Welding (SMAW) welding of weld joint OBE7C-009. Welder is identified as 220067. ZPMC

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Quality Control (QC) is identified as Mr.Wang Zhu. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-P-2214-B-U2-FCM-1.

Shielded Metal Arc Welding (SMAW) welding of weld joint OBE7C-007. Welder is identified as 067829. ZPMC Quality Control (QC) is identified as Mr.Wang Zhu. The welding variables recorded by QC appeared to comply with the Applicable WPS: WPS-B-P-2214-B-U2-FCM-1.

SEGMENT: 7AE-7BE

This QA Inspector observed ZPMC personnel's performing weld flush grinding for the splice joint welds at Segment 7AE-7BE Bottom panel and side panels.  
The attached photographs provide additional detail.

SEGMENT: 7AE

The following Non Destructive Testing (NDT) Inspection carried out on Segment 7AE-Panel Point (PP) #48.  
Visual Inspection (VT)

This QA Inspector performed random VT of Segment 7AE-Panel Point (PP) #48 (Bike Path side).  
During Quality Assurance VT review of welds located on Segment 7AE-Panel Point (PP) #48, this Quality Assurance Inspector (QA) discovered the following issue:

- One (1) Rounded indication (Single porosity) on weld measuring approximately 3.5 mm dia.
- The weld is identified as: LD012-001-004.
- The weld is a fillet weld joining Longitudinal Diaphragm to Longitudinal Diaphragm stiffener plate.
- SEGMENT: 7AE is located near the OBG TRIAL ASSEMBLY AREA.
- Y Location is approximately 2200 mm from the Panel Point #48.

This QA notified ZPMC QC identified as Mr.Wuzhi Chang and ABF inspector identified as Mr. Li Jing Bo of the above issue, and reported to the Team leader for further action.

The attached photographs provide additional detail.

Applicable reference:

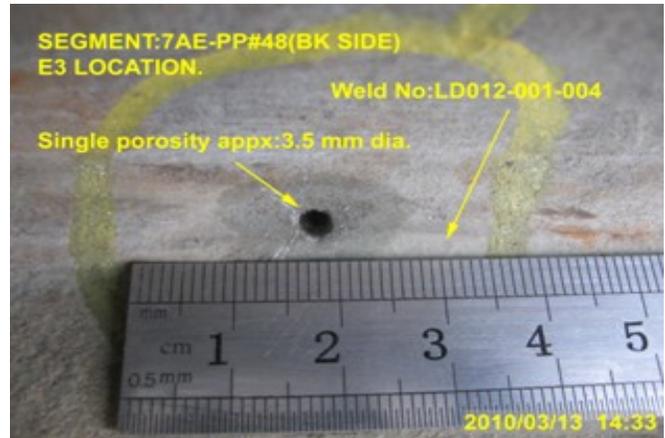
AWS D1.5 2002 figure 6.8 – specifies for fillet weld sizes between 6mm and 13mm the maximum discontinuity length is approximately 2mm to 4mm.

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

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.

**Inspected By:** Prabhu,Surendra

Quality Assurance Inspector

**Reviewed By:** Miller,Mark

QA Reviewer