

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009965**Date Inspected:** 31-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 645**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1845**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang**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 Trail Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath. Math. was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Assembly Area

Segment 1AW to 1AAW

This QA Inspector observed ZPMC welding personnel performing repair work for the Ultrasonic Test rejected areas for the Deck Panel of Segment 1AW to 1AAW Weld No. is identified as OBW1 -001. Noted down the "Y" Datum Line locations from the reference line and monitored and recorded strictly the Preheat Temperatures and approximately Length and Depth of excavations and all the following below information.

Weld No Identified as: OBW1-001

ZPMC QC Identified as: Mr. Song Hui

ZPMC CWI Identified as: Mr. Li Yang.

Critical Weld Report No.: B CWR – 876.

---

---

# WELDING INSPECTION REPORT

( Continued Page 2 of 6 )

---

---

WPS Used: WPS-345-SMAW-1G (1F)-FCM-Repair-1

Position of Weld: 1G (Flat Position)

Welding Process: Shielded Metal Arc Welding (SMAW)

Electrode Brand: TL 508 H4.

Electrode Specification: E 7018-1 H4.

Preheat Required: 160 Degree Centigrade.

Preheating Method used: Electric Resistance Heating Pad.

Groove Configuration: Single U or V.

Noticed Welder No. 054467 welding for the following Y Datum

1. Location Start= 8100mm and Y Location Stops=8220 Length of excavation is 120mm.

Preheat Observed: 182 Degree Centigrade.

Welding Start Time: 0814 Hrs.

Welding Stop Time: 0858 Hrs.

Groove Depth: 26mm

2. Location Start= 7210mm and Y Location Stops=7220 Length of excavation is 110mm.

Preheat Observed: 192 Degree Centigrade.

Welding Start Time: 0905 Hrs.

Welding Stop Time: 0943 Hrs.

Groove Depth: 20mm

3. Location Start= 6600mm and Y Location Stops=6820 Length of excavation is 220mm.

Preheat Observed: 180 Degree Centigrade.

Welding Start Time: 1005 Hrs.

Welding Stop Time: 1039 Hrs.

Groove Depth: 20mm

4. Location Start= 6070mm and Y Location Stops=6230 Length of excavation is 160mm.

Preheat Observed: 160 Degree Centigrade.

Welding Start Time: 1310 Hrs.

Welding Stop Time: 1338 Hrs.

Groove Depth: 24mm

5. Location Start= 2540mm and Y Location Stops=2705 Length of excavation is 201mm.

---

## WELDING INSPECTION REPORT

( Continued Page 3 of 6 )

---

Preheat Observed: 160 Degree Centigrade.

Welding Start Time: 1438 Hrs.

Welding Stop Time: 1521 Hrs.

Groove Depth: 24mm

Noticed Welder No. 048659 welding for the following Y Datum

1. Location Start= 13700mm and Y Location Stops=13880 Length of excavation is 180mm.

Preheat Observed: 176 Degree Centigrade.

Welding Start Time: 0818 Hrs.

Welding Stop Time: 0859 Hrs.

Groove Depth: 22mm

2. Location Start= 13320mm and Y Location Stops=13610 Length of excavation is 290mm.

Preheat Observed: 160 Degree Centigrade.

Welding Start Time: 0937 Hrs.

Welding Stop Time: 1048 Hrs.

Groove Depth: 25mm

3. Location Start= 600mm and Y Location Stops=740 Length of excavation is 140mm.

Preheat Observed: 160 Degree Centigrade.

Welding Start Time: 1327 Hrs.

Welding Stop Time: 1540 Hrs.

Groove Depth: 26mm

Noticed Welder No. 049769 welding for the following Y Datum

1. Location Start= 17770mm and Y Location Stops=17930 Length of excavation is 160mm.

Preheat Observed: 168 Degree Centigrade.

Welding Start Time: 0812 Hrs.

Welding Stop Time: 0913 Hrs.

Groove Depth: 24mm

2. Location Start= 18100mm and Y Location Stops=18300 Length of excavation is 200mm.

Preheat Observed: 172 Degree Centigrade.

Welding Start Time: 0935 Hrs.

Welding Stop Time: 1042 Hrs.

Groove Depth: 25mm

3. Location Start= 180mm and Y Location Stops=320 Length of excavation is 140mm.

Preheat Observed: 160 Degree Centigrade.

Welding Start Time: 1401 Hrs.

Welding Stop Time: 1450 Hrs.

Groove Depth: 20mm

---

---

## WELDING INSPECTION REPORT

( Continued Page 4 of 6 )

---

---

Segment 1AW to 1AAW

This QA Inspector observed ZPMC welding personnel performing repair work for the Ultrasonic Test rejected areas for the Edge Panel Cross Beam side of Segment 1AW to 1AAW Weld No. is identified as OBW1 -003. Noted down the “Y” Datum Line locations from the reference line and monitored and recorded strictly the Preheat Temperatures and approximately Length and Depth of excavations and all the following below information.

Weld No Identified as: OBW1-003

ZPMC QC Identified as: Mr. Song Hui

ZPMC CWI Identified as: Mr. Li Yang.

Critical Weld Report No.: B CWR – 876.

WPS Used: WPS-345-SMAW-3G (3F)-FCM-Repair-1

Position of Weld: 3G (Vertical Position)

Welding Process: Shielded Metal Arc Welding (SMAW)

Electrode Brand: TL 508 H4.

Electrode Specification: E 7018-1 H4.

Preheat Required: 160 Degree Centigrade.

Preheating Method used: Electric Resistance Heating Pad.

Groove Configuration: Single U or V.

Noticed Welder No. 049769 welding for the following Y Datum

1. Location Start= 540mm and Y Location Stops=660 Length of excavation is 120mm.

Preheat Observed: 190 Degree Centigrade.

Welding Start Time: 1509 Hrs.

Welding Stop Time: 1542 Hrs.

Groove Depth: 24mm

Segment 1AW to 1AAW

This QA Inspector observed ZPMC welding personnel performing repair work for the Ultrasonic Test rejected areas for the Edge Panel Counter Weight side of Segment 1AW to 1AAW Weld No. is identified as OBW1 -002.

---

---

# WELDING INSPECTION REPORT

( Continued Page 5 of 6 )

---

---

Noted down the “Y” Datum Line locations from the reference line and monitored and recorded strictly the Preheat Temperatures and approximately Length and Depth of excavations and all the following below information.

Weld No Identified as: OBW1-002

ZPMC QC Identified as: Mr. Song Hui

ZPMC CWI Identified as: Mr. Li Yang.

Critical Weld Report No.: B CWR – 876.

WPS Used: WPS-345-SMAW-3G (3F)-FCM-Repair-1

Position of Weld: 3G (Vertical Position)

Welding Process: Shielded Metal Arc Welding (SMAW)

Electrode Brand: TL 508 H4.

Electrode Specification: E 7018-1 H4.

Preheat Required: 160 Degree Centigrade.

Preheating Method used: Electric Resistance Heating Pad.

Groove Configuration: Single U or V.

Noticed Welder No. 049769 welding for the following Y Datum

1. Location Start= 700mm and Y Location Stops=820 Length of excavation is 120mm.

Preheat Observed: 160 Degree Centigrade.

Welding Start Time: 1549 Hrs.

Welding Stop Time: 1628 Hrs.

Groove Depth: 24mm

Submitted the Repair Tracking Sheet to Caltrans Engineer and to the Team Leader.

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

## **Summary of Conversations:**

No relevant conversations.

## **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

---

---

## WELDING INSPECTION REPORT

*( Continued Page 6 of 6 )*

---

---

remedial efforts please contact , who represents the Office of Structural Materials for your project.

---

<b>Inspected By:</b>	Math,Manjunath	Quality Assurance Inspector
----------------------	----------------	-----------------------------

---

<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer
---------------------	----------------	-------------