

**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 #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCR-000611**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 07-Jan-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0584**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Traveler Rails for Crossbeam
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b> No QC coverage more than 30 minutes	

**Reference Description:** No QC coverage more than 30 minutes at welding stations to ensure continuous inspection during the welding process

**Description of Non-Conformance:**

During random in process observations this Caltrans Quality Assurance Inspector (QA) observed the following:

- Production welding being performed without a ZPMC Quality Control (QC) Inspector present for a period exceeding 30 minutes.
- This QA was present from 15:50 to 16:40 hours. This time frame exceeds the allowable maximum time for QC Inspection coverage as required by Caltrans Special Provision Section 8-3.01.
- The welding being performed on the following members:
  - 20TR1-005-003
  - 20TR1-006-001, 003, 005
  - 20TR1-007-001, 003, 007
  - 20TR1-008-001
- These members are all located in Bay 2.

**Applicable reference:**

Applicable reference: Caltrans Special Provision Section 8-3.01: QC inspections shall be provided to ensure continuous inspection when any welding is being performed. Continuous inspection, as a minimum, shall include (1) having QC Inspectors continually present on the shop floor or project site when any welding operation is being performed, and (2) having a QC Inspector within such close proximity of all welders or operators so that inspections by the QC Inspector of each operation, at each welding location, shall not lapse for a period exceeding 30 minutes

**Who discovered the problem:** Stefan Holmes**Name of individual from Contractor notified:** Luo Quai Lin**Time and method of notification:** 1600 hours, 01-07-10, Verbal**Name of Caltrans Engineer notified:** Bill Howe

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Time and method of notification:** 1900 hours, 01-07-10, Email

**QC Inspector's Name:** Yang Qing Feng

**Was QC Inspector aware of the problem:** Yes No

**Contractor's proposal to correct the problem:**

N/A

**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 Mazen Wahbeh, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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**Inspected By:** Carreon,Albert

Lead Reviewer/Task Leader

**Reviewed By:** Wahbeh,Mazen

SMR



**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge**

333 Burma Road  
Oakland CA 94607  
Tel: Fax:

**NON-CONFORMANCE REPORT TRANSMITTAL**

**To:** AMERICAN BRIDGE/FLUOR, A JV  
375 BURMA ROAD  
OAKLAND CA 95607

**Date:** 07-Jan-2010  
**Contract No:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Dear:** Mr. Charles Kanapicki  
**Attention:** Mr. Thomas Nilsson Project/Fabrication Manager  
**Subject:** NCR No. ZPMC-0584

**Job Name:** SAS Superstructure  
**Document No:** 05.03.06-000574

**Reference Description:** No QC coverage more than 30 minutes at welding stations to ensure continuous inspection during the welding process

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

**Material Location:** OBG **Lift:** N/A

**Remarks:**

- During random in process observations this Caltrans Quality Assurance Inspector (QA) observed the following:
- Production welding being performed without a ZPMC Quality Control (QC) Inspector present for a period exceeding 30 minutes.
  - This QA was present from 15:50 to 16:40 hours. This time frame exceeds the allowable maximum time for QC Inspection coverage as required by Caltrans Special Provision Section 8-3.01.
  - The welding being performed on the following members:
    - 20TR1-005-003
    - 20TR1-006-001, 003, 005
    - 20TR1-007-001, 003, 007
    - 20TR1-008-001
  - These members are all located in Bay 2.

**Action Required and/or Action Taken:**

Submit passing NDT documentation to the engineer showing the welds mentioned in this NCR. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Bill Howe Sr. Transportation Engineer  
**Attachments:** ZPMC-0584

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao  
**File:** 05.03.06

## NCR PROPOSED RESOLUTION

**To:** CALTRANS - SAS Superstructure  
333 Burma Road  
Oakland CA 94607

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000574

**Subject:** NCR No. ZPMC-0584

**Dated:** 25-Feb-2010

**Contract No.:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000601 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC acknowledges that this lapse in coverage occurred and conducted training after this non conformance to reinforce this requirement. Attached is the agenda and sign in sheet from the meeting.

ZPMC acknowledges that this lapse in coverage occurred and conducted training after this non conformance to reinforce this requirement. Attached is the agenda and sign in sheet from the meeting. Based on this ZPMC requests closure of this NCR.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000601R00;

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**Caltrans' comments:**

**Status:** CLO

**Date:** 25-Feb-2010

The information received is sufficient to close this NCR.

**Submitted by:** Howe, Bill

**Date:** 25-Feb-2010

**Attachment(s):**

# 会议签到单

会议时间： 2010-1-28 12: 40

会议地点： OBG 拼装会议室

会议主题： 关于返修过程中无报告及人员问题

与会人员（签到）：

CWI:

朱忠海 耿伟 李勤华 李强

施工队 电焊带班:

刘立军  
樊汉强  
冯石强  
李强

# 会议签到单

会议时间：2010.01.28.

会议地点：OBG 会议室

会议主题：关于OBG拼装返修和修补过程中无报告及人员问题.

与会人员（签到）：

武高 王河新 王科、钟国祥  
李伟 郭伟 张强 袁伟 徐玲  
陈军 王明 周亦 陈平 李平  
莫春辉 李杰

# 会议记录

会议时间：2010.01.28 12: 40

会议地点：OBG 拼装会议室

会议主题：关于 OBG 拼装返修和修补过程中无报告及人员问题

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会议内容纲要：

问题：

1. 返修过程中没有返修报告
2. 施工队焊接过程中没有 CWI 现场确认
3. 施工队焊接过程中没有 QC 人员在现场监控
4. 返修没有按照 WPS 上面要求预热和焊接
5. 焊工焊接位置不正确

对于上述问题我们的解决方案：

- 1、 返修过程中没有返修报告：如返修要进行焊接的都要开具返修报告，分一般返修和关键返修报告。一般返修报告先由探伤或 CWI 开具手写版，上面要写清楚是缺陷名称，缺陷的长度和大小，图号及焊缝编号都要写清楚，并签字。再由 CWI 人员签写所选用的 WPS，并签字。施工队工人拿到手写版的一般返修报告才能进行返修，在返修时必须有 CWI 或 QC 人员在现场才能进行工作，返修过程中所使用的 WPS 必须在现场，并且按照 WPS 上面所要求的预热及其他参数进行，现场 CWI 人员要对返修过程中预热、所选取的电流电压进行测量并记录数据，完全按照 WPS 上面的要求执行。同时按照手写的一般返修报告由文档人员开具正式的返修报告，生产工艺确认后由质检经理签字后下方施工队和质检。发现缺陷超出一般返修成为关键返修时，施工人员应停止次项工作，由探伤或 CWI 人员记录好缺陷位置、长度、大小、焊缝和钢板编号，开具关键返修报告提交文档室。文档人员拿到报

告后由生产部门写明缺陷产生的原因及以后的预防措施，再由工艺人员写清楚返修程序注意事项及所选用的 WPS，在由文档人员提交监理进行审批，审批结束后由文档人员下发到车间和现场质检。拿到关键返修报告后施工人员要在 CWI 和监控下进行返修，返修要严格按照返修报告上面及 WPS 上面的要求执行。施工队和质检要严格按照返修程序进行返修，禁止没有报告进行返修，对于没有报告返修者我们要对施工队及个人进行经济处罚。

2、 施工队焊接过程中没有 CWI 人员在现场：WQCP 上面要求 CWI 人员每半个小时在现场监控一次，以免在施工过程中能及时发现问题，并解决问题。但是我们近期出现长时间没有 CWI 人员在现场进行检查，这是我们 CWI 人员的失职。现在我们的 CWI 人员必须严格要求自己，按照质量控制计划上面的要求，至少每半个小时到一个焊接工位一次，并检查施工过程中是否存在违反要求的问题。施工队人员在施工之前必须通知质检人员，不允许存在没有 CWI 进行施工的存在，CWI 必须和施工人员协调和工作计划。施工人员在在通知 CWI 施工前必须做好准备工作，CWI 必须对施工前准备工作进行检查，施工过程中要进行检查，检查施工人员是否按照 WPS 上面及 WQCP 上面的要求执行，施工人员必须正确的接受 CWI 人员的检查，焊接结束后要对焊缝程序进行检查。要做到焊前、焊中及焊后 3 方面检查。

3、 施工队焊接过程中没有 QC 人员在现场监控：施工过程中 QC 人员必须在现场进行监控，QC 人员必须要对自己所监控的范围负责，不允许出现任何违反质量控制计划的事情出现。对于现场 QC 来说，应当随时监控现场的施工动态，对焊接过程中所使用的焊接参数进行记录、焊工进行核实编号、是否使用正确的 WPS、所处的环境是否适合焊接、焊机是否是经过鉴定过的、焊材是否是处于保温状态等很多方面进行监控的，所以说 QC 这个位置是非常重要的。对于发现问题能及时按照要求进行解决的要及时解决，对于不能解决的可以及时反馈 CWI 人员进行解决，施工人员必须配合 QC 的工作。加入没有 QC 在现场监控，施工过程中的问题就不

能及时解决和及时反馈，施工人员就会视问题而不见。施工人员有责任通知 QC 人员发现问题，对于开始焊接之前必须通知 QC 进行监控，QC 也要主动配合施工，QC 要时刻在现场监控，对于如特殊原因要求离开的需让别人代替，坚决不允许出现没有 QC 人员在现场监控。

- 4、返修没有按照 WPS 上面要求预热和焊接：WPS 上面的参数都是经过试验得出来的结论，所以要严格按照 WPS 上面的要求执行。就如预热：预热可以使焊接位置周围的水分消失，减少了影响焊接过程中的氢，氢在焊缝中容易造成裂纹的出现，为什么我们在焊接重要位置的时候经常采用低氢焊条，就是减少焊缝中的氢含量，减少裂纹和的出现，所以说焊前预热是很重要的，WPS 里面的参数是能够焊出合格焊缝的依据，没有 WPS 或没有按照 WPS 焊接的焊缝就是不合格的焊缝。WPS 必须贴到施工现场，以便及时查阅，以后对于没有按照 WPS 焊接的焊缝我们要求刨除焊缝，并对焊工进行处罚，严重的取消在美国钢桥上面工作的资格，没收焊工证。
- 5、焊工焊接位置不正确：焊工证都是经过权威机构认可的证明。对于焊接位置不正确的问题也视为没有焊工证，在施工前现场检验员要检查焊工的焊工证，检查焊工的发证机构、焊接的位置及焊工的编号，焊工只能焊接焊工证上面要求的位置，没有要求的位置焊工不能焊接，检验员要严格控制。焊工必须主动配合质检的检查，不允许能虚作假，如发现焊接与焊工证位置不同的焊工要进行经济处罚，严重的取消焊接资格。

OBG 拼装质检室

2010-1-28

**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 #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000606**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 14-Apr-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0584**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Date the Non-Conformance Report was written:** 07-Jan-2010**Description of Non-Conformance:**

During random in process observations this Caltrans Quality Assurance Inspector (QA) observed the following:

-Production welding being performed without a ZPMC Quality Control (QC) Inspector present for a period exceeding 30 minutes.

-This QA was present from 15:50 to 16:40 hours. This time frame exceeds the allowable maximum time for QC Inspection coverage as required by Caltrans Special Provision Section 8-3.01.

-The welding being performed on the following members:

-20TR1-005-003

-20TR1-006-001, 003, 005

-20TR1-007-001, 003, 007

-20TR1-008-001

-These members are all located in Bay 2.

**Contractor's proposal to correct the problem:**

Provide supplemental training to QC to reinforce the importance of providing continuous inspection during welding.

**Corrective action taken:**

Contractor submitted a training outline along with a roster of attendees as evidence that a training session was held with QC in regards to this matter.

**Did corrective action require Engineer's approval?** Yes No**If so, name of Engineer providing approval:** **Date:****Is Engineer's approval attached?** Yes No**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 Jim Simonis 152.1675.3703, who represents the Office of

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# QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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Structural Materials for your project.

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**Inspected By:** Simonis,Jim

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer

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