

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



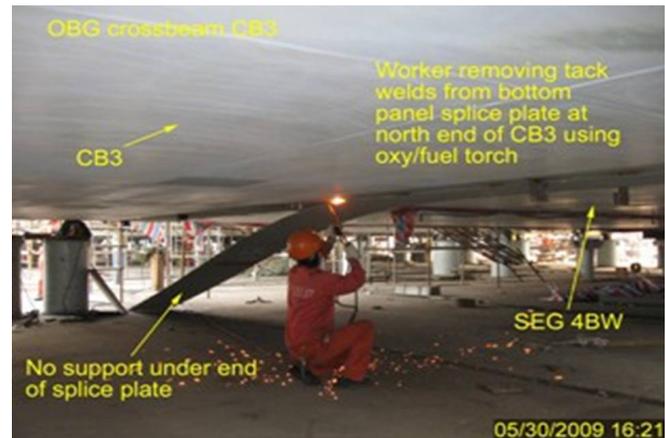
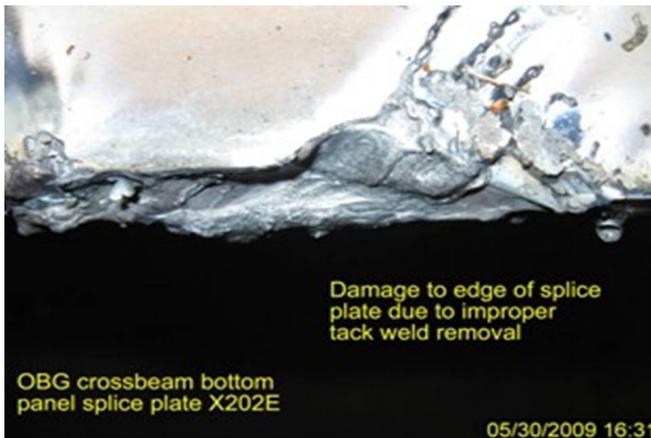
Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

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-000290**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 30-May-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0264**Type of problem:**

Welding	Concrete	Other
Welding	Curing	Procedural
Joint fit-up	Coating	Other
Procedural	Procedural	Description:

Bridge No: 34-0006**Component:** Splice Plate X202E, Crossbeam CB3/Segment 4BW**Reference Description:** Base Metal Damage During Tack Weld Removal, Crossbeam CB3/Segment 4BW**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel removing temporary tack welds from SPCM Splice Plate X202E. This splice plate was temporarily tack welded to the outside of the bottom panel on the north end of Crossbeam CB3 and OBG Segment 4BW. The worker was using an oxy/fuel torch to remove the tack welds. The edge of the splice plate was damaged at 16 areas where the tack welds were removed.

**Applicable reference:**

AWS D1.5 2002 section 3.3.7.3 "Tack welds not incorporated into the final weld shall be removed in such a manner that the base metal is not nicked or undercut. Repair of base metal accidentally removed shall be approved by the Engineer prior to making the repair."

Who discovered the problem: Steve Hall**Name of individual from Contractor notified:** Ping Xing Chi**Time and method of notification:** 17:00, 05-30-09, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of Caltrans Engineer notified: Stanley Ku

Time and method of notification: 16:00, 06-01-09, Verbal

QC Inspector's Name: Wang Lu

Was QC Inspector aware of the problem: Yes No

Contractor's proposal to correct the problem:

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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
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Reviewed By:	Wahbeh, Mazen	SMR
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DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

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

Date: 05-Jun-2009

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

Dear: Mr. Charles Kanapicki

Job Name: SAS Superstructure

Attention: Mr. Thomas Nilsson Project/Fabrication Manager

Document No: 05.03.06-000254

Subject: NCR No. ZPMC-0264

Reference Description: Base Metal Damage During Tack Weld Removal, Crossbeam CB3/Segment 4BW

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:**

Remarks:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel removing temporary tack welds from SPCM Splice Plate X202E. This splice plate was temporarily tack welded to the outside of the bottom panel on the north end of Crossbeam CB3 and OBG Segment 4BW. The worker was using an oxy/fuel torch to remove the tack welds. The edge of the splice plate was damaged at 16 areas where the tack welds were removed.

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0264

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, 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: 05.03.06-000254

Subject: NCR No. ZPMC-0264

Dated: 21-Jul-2009

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

Job Name: SAS Superstructure

Document No.: ABF-NPR-000263 **Rev:** 00

Contractor's Proposed Resolution:

Reference Resolution: ZPMC has responded to the NCR and has attached the necessary documents for closure. ZPMC requests closure of this NCR.

ZPMC has responded to the NCR and has attached the necessary documents for closure. ZPMC requests closure of this NCR.

Submitted by:

Attachment(s): ABF-NPR-000263R00;

Caltrans' comments:

Status: CLO

Date: 10-Aug-2009

The proposed resolution is acceptable. The approved critical weld repair report is included, and the areas of the plates in question have been accepted by VT, MT, and UT as shown in the attached documents. The Department concurs that Non-Conformance ZPMC-0264 is closed.

Submitted by: Wright, Doug

Date: 10-Aug-2009

Attachment(s):



No. B-402

LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2009-7-16

REGARDING: NCR-000290 (ZPMC-0264)

With this letter of response, ZPMC requests closure for caltrans **NCR-000290 (ZPMC-0264)**. According to the technology procedure we have to fix the segment deck plate with the splice plate by tack weld, but during the cause of the removing by flame, the base metal were damage with the workers' irresponsibility. Therefore we agree what describe in the non-conformance report.

We have submitted the CWR for the engineer approval, and repair the damage area or notch after received the response, right now provide the corresponding documentation to support the weld repair already done and the NDT inspection all accepted by three parties.

So base on the above explanation and attached documentations, ZPMC applies to close the caltrans's report **NCR-000290 (ZPMC-0264)**.

Please reference attached documentation for acceptance and closure the **NCR-000290 (ZPMC-0264)**.

ATTACHMENT:

NCR-000290 (ZPMC-0264)

ZPMC internal NCR

The approval and closed CWR

The final VT/MT/UT inspection report

Chao Shuangbao

2009.7.16



Nonconformance Report

不符合项报告

Project Name: S.F.O.B.B
 项目名称: 美国加州海湾大桥
 NCR Number: NCR-B-184
 NCR 编号: (NCR-000290)

Item: Base Metal Damage Tack Weld Removal, CB3/4BW
 名称描述:
 Item Number: N/A
 件号:
 Drawing: CB3/4BW
 图号:

Location: Trial assembly
 位置: 外场
 Date: 2009-06-11
 日期:

Description of Nonconformance:
 不符合项状态描述:

Caltrans Quality Assurance inspector observed ZPMC personnel removing temporary tack welds from SPCM Splice plate X202E. This splice plate was temporarily tack welded to the outside of the bottom panel on the north end of Crossbeam CB3 and OBG Segment 4BW. The worker was using on oxy/fuel torch to remove the tack welds, The edge of the splice plate was damaged at 16 areas where the tack welds were removed.

加州检验员发现 ZPMC 私自对 CB3 与 4BW 连接的连接板 SPCM X202E 去除。这块板是北侧 CB3 与 4BW 的连接板。工人用氧切割去除点焊，且对连接母材伤害多达 16 处位置。

Work By: 09.6.12 Prepared by: naqin Reviewed by QCE: Zhao Shuangbao
 施工方: Xiaobo Lin 准备: 09.6.11 质量工程师批准:
 Drawing Error Material Defect Fabrication Error Other 6-11
 图纸错误 材料缺陷 制作错误 其他原因

Disposition: Use as is Repair Reject
 处理措施: 回用 返修 拒收

Recommendation:
 建议: ① 去除点焊之前必须通知工程师见证。② 对母材损伤处进行返修。
 禁止再用氧切割。① Note engineer before removing tack welds ② repair gouged area and forbid cut by use of oxygen.
 Prepared by: Du Weidong Approved by QCA: _____
 准备 质量经理批准

Reason for Nonconformance:
 不符合原因: 因 CB3 与 4BW 连接的连接板 SPCM X202E 私自去除, 且用氧切割去除点焊
 personnel removing tack weld at CB3 and 4BW connect plate X202E (SPCM)
 点, 导致母材损伤, which caused base metal aged.
 预防措施: Enhance supervision and inspection on-site, and educate worker.
 加强了现场监督, 检查, 对其工人教育。
 Approved by/批准: Guo Jun 09.06.12

Technical Justification for Use-As-Is/Repair: Attachment Non-attachment
 回用或返修的技术依据: 对母材进行返修, 以后不得用氧切割去除点焊,
 repair base metal, and forbid removing tack welds by use of oxygen cutting.
 附件 无附件

Reviewed /批准: Shaojun 09.6.11
 Verification: Acceptable Unacceptable
 确认: 可接受 不可接受
 Verified by QCI/质检确认: Wu zhi cheng 08021751 Reviewed by QCA/质检主任审核:

CB3
20

Caltrans

DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge
666 Feng Bin Road Room 708, Changxing Island
Shanghai 201913 PR China
Tel: 021-56856666 ext 207061 Fax:

NON-CONFORMANCE REPORT TRANSMITTAL

To:	AMERICAN BRIDGE/FLUOR, A JV 375 BURMA ROAD OAKLAND CA 95607	Date:	05-Jun-2009
		Contract No:	04-0120F4 04-SF-80-13.2 / 13.9
Dear:	Mr. Charles Kanapicki	Job Name:	SAS Superstructure
Attention:	Mr. Thomas Nilsson Project/Fabrication Manager	Document No:	05.03.06-000254
Subject:	NCR No. ZPMC-0264		

Reference Description: Base Metal Damage During Tack Weld Removal, Crossbeam CB3/Segment 4BW

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:

Remarks:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel removing temporary tack welds from SPCM Splice Plate X202E. This splice plate was temporarily tack welded to the outside of the bottom panel on the north end of Crossbeam CB3 and OBG Segment 4BW. The worker was using an oxy/fuel torch to remove the tack welds. The edge of the splice plate was damaged at 16 areas where the tack welds were removed.

Action Required and/or Action Taken:

Please propose a resolution for the identified non-conformance to prevent future occurrences.

Transmitted by: Stanley Ku Sr. Bridge Engineer

Attachments: ZPMC-0264

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Brian Boal, Doug Coe, Jason Tom, Ching Chao
File: 05.03.06

DEPARTMENT OF TRANSPORTATION
 DIVISION OF ENGINEERING SERVICES
 Office of Structural Materials
 Quality Assurance and Source Inspection

Bay Area Branch
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 (707) 649-5453
 (707) 649-5493

Contract #: 04-0120E4
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9
 File #: 69.25B

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, P.R. China

Report No: NCR-000290

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 30-May-2009

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0264

Type of problem:

- Welding Concrete Other
- Welding Curing Procedural
- Joint fit-up Coating Other
- Procedural Procedural Description:

Bridge No: 34-0006

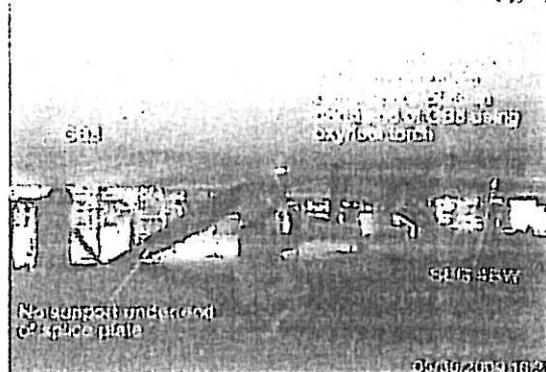
Component: Splice Plate X202E, Crossbeam CB3/Segment 4BW

Reference Description: Base Metal Damage During Tack Weld Removal, Crossbeam CB3/Segment 4BW

Description of Non-Conformance:

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel removing temporary tack welds from SPCM Splice Plate X202E. This splice plate was temporarily tack welded to the outside of the bottom panel on the north end of Crossbeam CB3 and OBG Segment 4BW. The worker was using an oxy/fuel torch to remove the tack welds. The edge of the splice plate was damaged at 16 areas where the tack welds were removed.

要求需做
 从乙提供报告



Applicable reference:

AWS D1.5 2002 section 3.3.7.3 "Tack welds not incorporated into the final weld shall be removed in such a manner that the base metal is not nicked or undercut. Repair of base metal accidentally removed shall be approved by the Engineer prior to making the repair."

Who discovered the problem: Steve Hall

Name of individual from Contractor notified: Ping Xing Chi

Time and method of notification: 17:00, 05-30-09, Verbal

QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

(Continued Page 2 of 2)

Name of Caltrans Engineer notified: Stanley Ku
Time and method of notification: 16:00, 06-01-09, Verbal
QC Inspector's Name: Wang Lu
Was QC Inspector aware of the problem: Yes No
Contractor's proposal to correct the problem:

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 Skyler Guest, (86) 1500.042.2360, who represents the Office of Structural Materials for your project.

Inspected By:	Guest, Skyler	SMR
Reviewed By:	Wahbeh, Mazen	SMR



关键焊缝返修报告
Critical Welding Repair Report (CWR)

版本
Rev. No.:

1

项目名称 Project Name:	英国海湾大桥 SFOBB	部件图号 Drawing No.:	CB3	报告编号 Report No.:	B-CWR562
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	X202D,X202E Top Flange and Bottom Flange	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

焊缝缺陷描述:

Description of Welding Discontinuity:

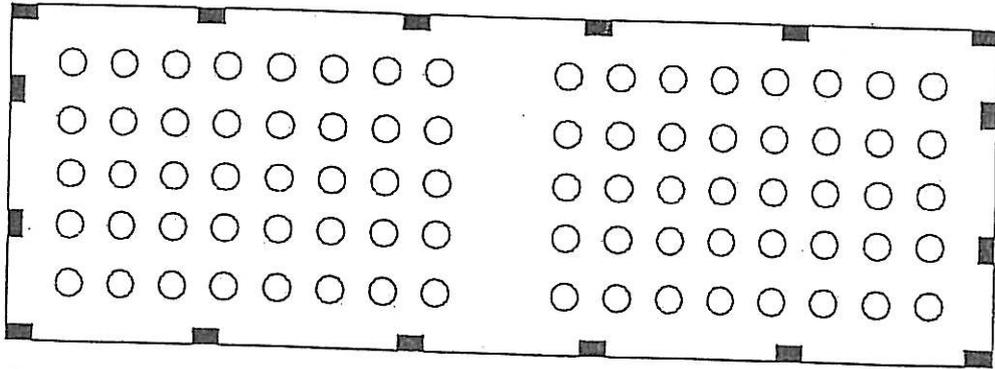
CB3连接板X202D,X202E在去除点焊时,有局部母材损伤,最大深度5MM. 见下图:
After inspection CB3 connect X202D and X202E, the base metal was gouged, maximum 5mm in depth, 500mm in length, total 4 parts, see the following draft.

检验员 (Inspector): Wang Jie

日期 (Date): 2009.06.13

焊缝返修位置示意图:

Draft of Welding Discontinuity:



X202D,X202E

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial WJ Date: 6/22/09

产生原因:

Cause:

碳刨工在去除点焊时, 错误操作, 导致母材损伤。

The gouger operated inappropriately during removing tack welds, which led to the base metal damaged.

车间负责人 (Foreman): Li Zhigang

日期 (Date): 07. 06. 18

处理意见

Disposition:

1. QA CWI 必须到现场。
2. 准备一个正确的接头型式, 具体参照相应的返修WPS;
3. 将返修区域打磨光滑, 开始和结束的接头交错布置;
4. 打磨后, 对修补区域进行VT与MT检测;
5. 对于SPCM构件, 根据批准的返修焊接工艺规程 (WPS) 进行预热及焊接;
6. 将修补区域打磨与母材或相邻焊缝平齐;
7. 按照AWS D1.5.3.2.2.3, 返修区域的表面和边缘, 承受拉伸和反向压力的构件, 返修后必须做UT和MT检测。

1. QA CWI Presence.
2. Prepare excavation according to the approved repair WPS.
3. Grind the repair area to a smooth and shiny finish, with tapered ends, to ensure staggered starts and stops.
4. ~~VT and MT the repair area after grinding.~~
5. ~~Preheat and weld according to the relevant repair WPS for SPCM member.~~
6. Grind the repaired area flush with base metal or the adjacent weld.
7. Per AWS D1.5.3.2.2.3, welded repairs to the surfaces and edges of tension and reversal of stress Members shall be subject to ~~UT~~ and MT;

工艺:

Technical Engineer:

Nia Trefaj 审核: Approved By:

Lujiashua
for chenbin

日期:

Date: 07. 06. 19

This document is APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial *AT* Date: 6/22/19

#R787-QCP-900



关键焊缝返修报告

Critical Welding Repair Report (CWR)

版本
Rev. No.:

1

项目名称 Project Name:	美国海湾大桥 SFOBB	部件图号 Drawing No.:	CB3	报告编号 Report No.:	B-CWR562
合同号 Contract No.:	04-0120F4	部件名称 Item Name:	X202D, X202E Top Flange and Bottom Flange	NDT 报告编号 NDT Report No.:	NA
项目编号 Project No.:	ZP06-787				

纠正措施:

Corrective Action to Prevent Re-occurrence:

培训和教育碳刨工, 提高技术和水平, 加强构件制作过程中的监控, 减少误差。

Train and educate gouger to improve technology and skill and enhance supervision and controlling in process of fabrication to reduce error.

车间负责人 (Foreman):

Li Zhigang

日期 (Date):

07.06.18

参照的WPS编号 Repair WPS No.:	WPS-SMAW-345-1G(1F)-Repair WPS-FCAW-345-1G(1F)-Repair-1 WPS-SMAW-345-1G(1F)-SPCM-Repair WPS-FCAW-345-1G(1F)-SPCM-Repair-1	工艺员 Technologist:	Niu Tianfang 07.06.19
返修(碳刨)前预热温度 Preheat Temperature Before Gouging:	90°C	返修的缺陷 Description of Discontinuity:	Base metal is damaged 母材损伤.
焊前处理检查 Inspection Before Welding:	Acc	焊前预热温度 Preheat Temperature Before Welding:	110°C
最大碳刨深度 Max. Depth of Gouge:	8mm	碳刨总长 Total Length of Gouge:	900mm
焊工 Welder:	048659	焊接类型 Welding Type:	SMAW
焊接电流 Current:	165	焊接电压 Voltage:	24.5
		焊接位置 Position:	1G
		焊接速度 Speed:	132

返修后检查

Inspection After Repair:

外观检查 VT Result:	Acc	检验员 Inspector:	Wu Zhonggang 07120761	日期 Date:	09.06.23
NDT复检 NDT Result:	Pass	探伤员 NDT Person:	Wangfeng	日期 Date:	2017.7.7

见证:

Witness/Review:

备注:

Remark:

THIS DOCUMENT IS APPROVED
State of California
DEPARTMENT OF TRANSPORTATION
Pursuant to Section 5-1.02 of the
Standard Specifications
Initial: CH Date: 6/22/19

#R787-QCP-900

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-000267**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 25-Aug-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0264**Type of problem:**

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

Date the Non-Conformance Report was written: 30-May-2009**Description of Non-Conformance:**

Caltrans Quality Assurance (QA) Inspector observed ZPMC personnel removing temporary tack welds from SPCM Splice Plate X202E. This splice plate was temporarily tack welded to the outside of the bottom panel on the north end of Crossbeam CB3 and OBG Segment 4BW. The worker was using an oxy/fuel torch to remove the tack welds. The edge of the splice plate was damaged at 16 areas where the tack welds were removed.

Contractor's proposal to correct the problem:

Repair area in question and perform subsequent NDT.

Corrective action taken:

Contractor submitted CWR along with VT, MT, and UT reports verifying repair was performed in conformance with Contract requirements.

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, who represents the Office of Structural Materials for your project.

Inspected By: Simonis, Jim

Quality Assurance Inspector

Reviewed By: Wahbeh, Mazen

QA Reviewer