

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 #: 73.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007440**Date Inspected:** 23-Jun-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1800**Contractor:** HoChang, Korea**Location:** Unyang/Changwon, Korea

CWI Name:	Sang Ho Kwak		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No	
Rod Oven in Use:	Yes	No	N/A
Weld Procedures Followed:	Yes	No	N/A
Verified Joint Fit-up:	Yes	No	N/A
Approved WPS:	Yes	No	N/A
Delayed / Cancelled:	Yes	No	N/A

Bridge No: 34-0006**Component:** Pier E2 bearing and Shear key**Summary of Items Observed:**

The following report is based on METS observations at HoChang Machinery Industries (HCMI). Current work: Casting, forging and machining.

On this date the Caltrans Quality Assurance (QA) inspector, Dong J. Shin arrived at HoChang Machinery Industries (HCMI) located at Unyang, Korea and DooSan Heavy Industries (DHIC) located at Changwon, Korea. The Purpose of this trip was to observe Quality Control (QC) functions during fabrication and processing of the following items.

Forging

1. Bearing Bottom Housing (B1-07/F07302-010): Completed final UT
2. Bearing Bottom Housing (B2-07/F07302-020): Completed final UT
3. Bearing Bottom Housing (B3-07/F07302-030): Completed final UT
4. Bearing Bottom Housing (B4-07/F07302-040): Completed MT
5. Spherical Ring (S1-07/F07302-050): Completed final UT
6. Spherical Ring (S2-07/F07302-060): Completed final UT
7. Spherical Ring (S3-07/F07302-070): Completed final UT
8. Spherical Ring (S4-07/F07302-080): Completed final UT
9. Solid Shaft (B1-02/F07302-090): Completed final UT
10. Solid Shaft (B2-02/F07302-100): Completed final UT
11. Solid Shaft (B3-02/F07302-110): Completed MT

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12. Solid Shaft (B4-02/F07302-120): Completed MT

- F number is DooSan Production Number.
- B number is drawing Number .

Casting

On this date the QA inspector observed DHIC performing repair welding on the castings listed below. The QA inspector observed HMIC QC inspector and DHIC QC inspector verify the welding parameters of the welding personnel listed below prior to repair welding. The QA inspector observed the Flux Core Arc Welding (FCAW) process was used with filler metal E81T1-K2, manufactured by SEAH-ESAB with brand name Dual shield 1181-K2. The QA inspector observed the following welding parameters; 23-26 volts, 210-250 amps and travel speed 13-16 cm/min. The shielding gas flow was 10-25 l/min with a preheat temperature of over 100°C. The welding parameters observed appeared to comply with approved welding procedure specification; A-F-Z1Z1-219.

Welder: Mr. DJ, Kang welding on S4-03.

Mr. HS, Lee minor repair welding on S2-01 after PWHT (GTAW)

This QA inspector observed DHIC NDT technician Mr. KS Lee and Mr. SD Lee performing the final MT and UT on the following items; S3-01(Stub), B3-06(Bearing top housing) and B2-01-2(Bearing Hold Down).

1. Bearing Top Housing(B1-06, C07039-010): Continue to repair welding.
2. Bearing Top Housing(B2-06, C07039-020): Continue to repair welding.
3. Bearing Top Housing(B3-06, C07039-030): Continue to final UT
4. Bearing Top Housing(B4-06, C07039-040): Completed PWHT
5. Bearing Hold Down Assembly (B1-01-1, C07039-050): Completed Final UT
6. Bearing Hold Down Assembly (B1-01-2, C07039-060): Completed Final UT
7. Bearing Hold Down Assembly (B2-01-1, C07039-070): Completed Final UT
8. Bearing Hold Down Assembly (B2-01-2, C07039-080): Completed final UT
9. Bearing Hold Down Assembly (B3-01-1, C07039-170): Completed Final UT
10. Bearing Hold Down Assembly (B3-01-2, C07039-180): Completed Final UT
11. Bearing Hold Down Assembly (B4-01-1, C07039-190): Completed Final UT
12. Bearing Hold Down Assembly (B4-01-2, C07039-200): Completed final UT
13. Shear Key Stub(S1-01, C07039-090) : Completed PWHT
14. Shear Key Stub(S2-01, C07039-100) : Completed PWHT
15. Shear Key Stub(S3-01, C07039-110) : Completed final UT
16. Shear Key Stub(S4-01, C07039-120) : Continue to repair welding.
17. Shear key Housing(S1-03, C07039-130): Completed repair welding.
18. Shear key Housing(S2-03, C07039-140): Completed PWHT
19. Shear key Housing(S3-03, C07039-150): Continue to repair welding.
20. Shear key Housing(S4-03, C07039-160): Continue to repair welding.

* S and B number is drawing number.

* C number is DSHI ID number

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Summary of Conversations:

*Discuss with Mr. S. H. Kwak regarding general project schedule.

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 Nina Choy, (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Shin,DJ	Quality Assurance Inspector
Reviewed By:	Hager,Craig	QA Reviewer
