

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 #: 73.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-007766**Date Inspected:** 10-Jul-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, 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 during fabrication and process of following items.

Forging

1. Bearing Bottom Housing (B1-07/F07302-010): Transfer to KPC for final machining.
2. Bearing Bottom Housing (B2-07/F07302-020): Transfer to KPC for final machining.
3. Bearing Bottom Housing (B3-07/F07302-030): Transfer to KPC for final machining.
4. Bearing Bottom Housing (B4-07/F07302-040): Transfer to KPC for final machining.
5. Spherical Ring (S1-07/F07302-050): Continue to pre machining for SS overlay welding.
6. Spherical Ring (S2-07/F07302-060): Continue to pre machining for SS overlay welding.
7. Spherical Ring (S3-07/F07302-070): Continue to pre machining for SS overlay welding.
8. Spherical Ring (S4-07/F07302-080): Continue to pre machining for SS overlay welding.
9. Solid Shaft (B1-02/F07302-090): Continue to pre machining for SS overlay welding.
10. Solid Shaft (B2-02/F07302-100): Continue to pre machining for SS overlay welding.
11. Solid Shaft (B3-02/F07302-110): Continue to pre machining for SS overlay welding.
12. Solid Shaft (B4-02/F07302-120): Continue to pre machining for SS overlay welding.

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

Casting

On this date DHIC continued repair welding on following castings, QA inspector, HMIC QC inspector and DHIC QC inspector checked welding parameters prior start repair welding. Welding process utilized Flux Core Arc Welding (FCAW) with E81T1-K2, 1.6mm diameter Flux Core wire Manufacture by SEAH-ESAB, Brand name Dual shield 1181-K2.

QA inspector checked welding parameters of 23-26 volts, 210-250 amps, travel speed 13-16 cm/min, Gas flow 10-25l/min, preheat temperature over 100°C and 24 hours maintaining preheat temperature. All of welding parameters comply with approved welding procedure specification A-F-Z1Z1-219.

QA Inspector observed HMIC QC Inspector Mr. Kwak and ABF welding engineer Mr. Craig, Knob has performed Welding procedures Qualification test for following draft WPS. Please see detail information in TL-6032 with following witness Lot numbers.

WPS No	Supporting PQR No	QA LOT number(6032)
FC-061 1F	QFC-061-1F	B258-36-09
FC-061 2F	QFC-061-2F	B258-37-09
FC-061 3F	QFC-061-3F	B258-38-09

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

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* S and B number is drawing number.

* C number is DSHI ID number.



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: Lanz,Joe

QA Reviewer