

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-009456**Date Inspected:** 21-Sep-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 and Onsan Korea and Korea Precision Co., located at Dooseo 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): Completed blasting and painting.
2. Bearing Bottom Housing (B2-07/F07302-020): Completed blasting and painting.
3. Bearing Bottom Housing (B3-07/F07302-030): Completed blasting and painting.
4. Bearing Bottom Housing (B4-07/F07302-040): Completed blasting and painting.
5. Spherical Ring (S1-07/F07302-050): Start final machining.
6. Spherical Ring (S2-07/F07302-060): Start final machining.
7. Spherical Ring (S3-07/F07302-070): Start final machining.
8. Spherical Ring (S4-07/F07302-080): Start final machining.
9. Solid Shaft (B1-02/F07302-090): Start final machining.
10. Solid Shaft (B2-02/F07302-100): Start final machining.
11. Solid Shaft (B3-02/F07302-110): Start final machining.
12. Solid Shaft (B4-02/F07302-120): Start final machining.

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

Casting

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.

HMIC NDT technician Mr. DY, Whang and Mr. GT, Kim has performed final MT on Shear key Housing (S3-03 and S1-03). QA inspector checked the following items prior to testing: Calibration Date, AC lifting power, and Pie gauge sensitivity.

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

* S and B number is drawing number.

* C number is DSHI ID number.

Steel Structure

On this date HMIC continued structural welding on retainer brackets and nut retainer brackets. QA inspector and HMIC QC inspector checked welding parameters prior to start welding. Welding process utilized Flux Core Arc Welding (FCAW) with E71T-1C, 1.4mm diameter wire manufactured by Hyundai Steel, brand name Supercored 71H with Co2 gas. QA inspector verified welding parameters range of 23-27 volts, 250-290 amps, travel speed

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320-390mm/min, gas flow of 25l/min., preheat temperature over 20°C and interpass temperature of less than 250°

C. All welding parameters comply to approve welding procedure specifications No FC-061-F.



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