

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-009454**Date Inspected:** 17-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): Completed PWHT after SS overlay welding.
6. Spherical Ring (S2-07/F07302-060): Completed PWHT after SS overlay welding.
7. Spherical Ring (S3-07/F07302-070): Completed PWHT after SS overlay welding.
8. Spherical Ring (S4-07/F07302-080): Completed PWHT after SS overlay welding.
9. Solid Shaft (B1-02/F07302-090): Completed SS overlay welding.
10. Solid Shaft (B2-02/F07302-100): Completed SS overlay welding.
11. Solid Shaft (B3-02/F07302-110): Completed SS overlay welding.
12. Solid Shaft (B4-02/F07302-120): Completed SS overlay welding.

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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.

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 of retainer bracket and nut retainer brackets. QA inspector and HMIC QC inspector checked welding parameters prior to start welding. Welding process utilized was Flux Core Arc Welding (FCAW) with E71T-1C with 1.4mm diameter wire manufactured by Hyundai Steel, brand name Supercored 71H(HYUNDAI) with Co2 gas. QA inspector checked welding parameter ranges of 23-27 volts, 250-290 amps, travel speed 320-390mm/min, Gas flow 25little/min, preheat temperature over 20°C and interpass temperature of less than 250° C.

All of welding parameters comply with approved welding procedure specification No FC-061-F.

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PAINTING

On this date HMIC started painting of 4 (Four) Bottom Bearing Housings. QA inspector checked surface profile and environmental conditions and general workmanship. Surface profile was taken at 3 points on each piece and reading were 75-85 microns. Environmental conditions were dry temperature of 26°C, Wet Temperature 20°C, Dew point 19°C, Relative humidity 59%, and steel temperature was 30°C. HMIC painting personnel sprayed inorganic zinc primer 22, 2 coatings with air spray method.



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