

**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-004552**Date Inspected:** 29-Oct-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** HoChang, Korea**Location:** UnYang, Korea

<b>CWI Name:</b>	N/A		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	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. 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 Ulsan, Korea. And trip to DooSan Heavy Industry. The Purpose of this trip was observed Quality control during fabrication and process of the following items.

**Forgings**

1. Bearing Bottom Housing (F07302-010): Completed normalizing and heat treating
2. Bearing Bottom Housing (F07302-020): Completed normalizing and heat treating
3. Bearing Bottom Housing (F07302-030): Completed normalizing and heat treating
4. Bearing Bottom Housing (F07302-040): Completed normalizing and heat treating
5. Spherical Ring (F07302-050): Completed normalizing and heat treating
6. Spherical Ring (F07302-060): Completed normalizing and heat treating

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# WELDING INSPECTION REPORT

( Continued Page 2 of 3 )

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7. Spherical Ring (F07302-070): Completed normalizing and heat treating
8. Spherical Ring (F07302-080): Completed normalizing and heat treating
9. Solid Shaft (F07302-090): Completed normalizing and heat treating
10. Solid Shaft (F07302-100): Completed normalizing and heat treating
11. Solid Shaft (F07302-110): Completed normalizing and heat treating
12. Solid Shaft (F07302-120): Completed normalizing and heat treating

Note: The F number is the DooSan Production Number.

The QA reviewed the chemical test reports, normalizing, and heat treating charts and records.

All test results were found to meet ASTM A788 and project specification requirements.

## Castings

1. Bearing Top Housing
  - Unit # 1: Pattern making
  - Unit # 2: Not started
  - Unit # 3: Not started
  - Unit # 4: Not started
2. Bearing Hold Down Assembly
  - Unit # 1: Pattern making
  - Unit # 2: Pattern making
  - Unit # 3: Not started
  - Unit # 4: Not started
3. Shear key Housing
  - Unit # 1: Pattern making
  - Unit # 2: Pattern making
  - Unit # 3: Not started
  - Unit # 4: Not started
4. Shear Key Stub
  - Unit # 1: Pattern making
  - Unit # 2: Not started
  - Unit # 3: Not started
  - Unit # 4: Not started

## Summary of Conversations:

Discussed with DooSan and HoChang personnel at the DooSan Heavy Industry Facility:

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# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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1. Need submit NDT Procedures
2. Current status of casting
3. Current status of forging
4. Lack of communication with HoChang
5. Schedule for forging
6. Reviewed fabrication and forging procedures (The forging sequence does not match each other)

### 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 Jinesh K, Mehta 951-840-0541, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Shin,DJ	Quality Assurance Inspector
<b>Reviewed By:</b>	Lanz,Joe	QA Reviewer

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