	BY: Rolando Ionta	DATE: 29-Mar-00
	CHK'D:	DATE:
	Project No. YY-XXX	
	Description: Client Name Here	
	Crane Drive Inspection & Repair Recommendations	
Report e-mailed to "Mr. XXXX" on mm/dd/yr.		
Tape No. 2 3/01/00; 10:06 AM		
<u>Purpose of Inspection:</u>		
<p>"Mr. XXXX" of "Client Name" requested that CMM inspect the South Bridge Drive of the No. "XXX" Teeming Crane. "Mr. XXXX" advised that the south drive was observed by staff to have excessive movement when the crane was accelerated and especially during deceleration by plugging the crane. The purpose of the project was to visually observe the crane during typical acceleration and deceleration followed by a detailed visual inspection of the south drive. Repair recommendations were to be provided for any deficiencies found.</p>		
<u>Data Provided by Client:</u>		
<p>The following data/information was provided by "Mr. XXXX" during the field inspection of March 1, 2000.</p> <ol style="list-style-type: none"> 1- 8 1/2 X 11 size copies of drawings XXXX-1, XXXX-2 and XXXX-3. 2- Opportunity to ride the crane and visually observe both the north and south bridge drives during accelerating and decelerating in a NO LOAD condition. 3- A man-lift was provided by Client for CMM's use during the visual inspection of the south drive support structure. 		
<u>Field Inspection Procedure:</u>		
<p>The field inspection was performed by Rolando Ionta and Bogdan Mazurczyk on Wednesday, March 1, 2000 and consisted of the following procedure:</p> <ol style="list-style-type: none"> 1- Riding the crane and visually observing the north and south drive during NON LOADED operation. 2- Detailed visual inspection of the south drive assembly and support frame accessible from the top of the walkway. 3- Detailed visual inspection of the south drive support and walkway supports accessible from under the walkway utilizing a man-lift. 		
<u>Field Inspection Observations and Findings:</u>		
<p>The following video capture photographs and comments clearly depict the findings of the inspection. The entire field video is available for review if required/preferred.</p> <p style="text-align: right;">Tape No. 2 3/01/00; 10:06 AM</p>		



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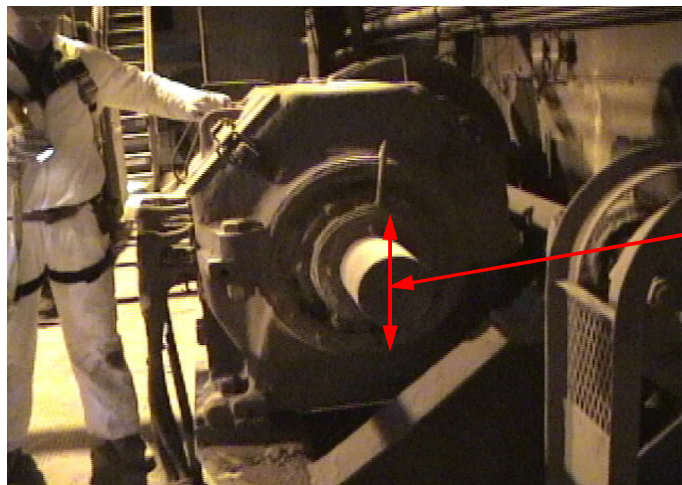


PHOTO No. 1

General Photo looking west at the south bridge drive during NO LOAD test operation.

The whole drive assembly was observed to have significant vertical movement during acceleration and deceleration.



PHOTO No. 2

This is a photo looking up at the south bridge drive support beams from under the walkway. Walkway Truss, on south end of crane.
 East drive support beam.
 West drive support beam.
 South Bridge Girder.

Ref. Drawings; XXXX-1, XXXX-2, XXXX-3 and XXXX-4.

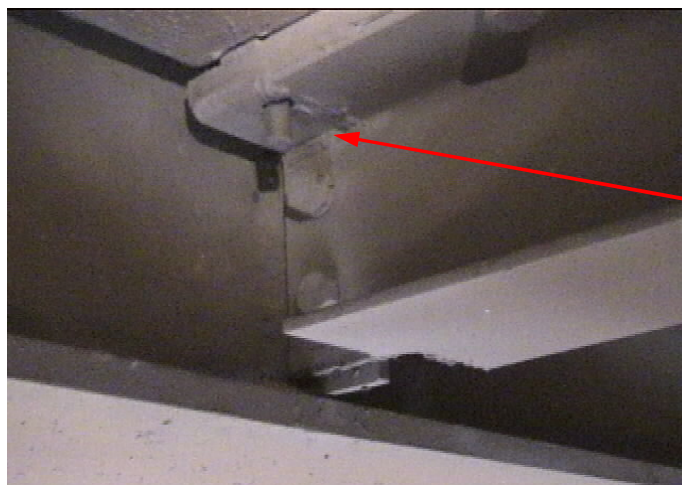


PHOTO No. 3

This is a view looking at the north end of the east beam. Notice the following.

- 1- Nut missing on bolt.
- 2- Previous repair weld has cracked.
- 3- Crack in weld has propagated into beam web base metal.

See close up view in photos 4 & 5 below.

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Close up view of photo 3 above depicting the crack in existing repair weld.

Repair: Gouge out and re-weld.

**PHOTO No. 5**

This is a continuation of the crack shown in photo 4 above.

The crack in the weld has propagated into the beam web base metal.

Repair:

**Drill 1/2" relief hole at end of crack.
Gouge out crack and re-weld.**


**PHOTO No. 6**

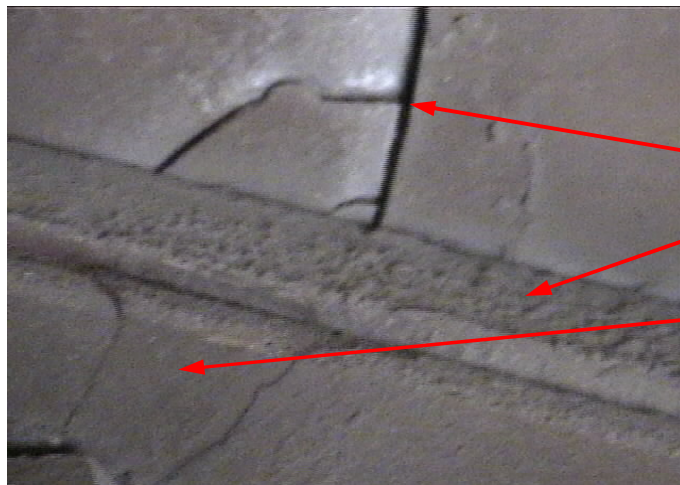
View looking at extreme south connection on the east drive support beam.

Motor mount base plate is severely cracked.

Portion of support beam flange is completely cracked through.

See close-up view in photo 7 below.

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**PHOTO No. 7**

Close-up view from photo 6.

Severe crack in motor mount base plate.

Spacer bar is not damaged.

Portion of support beam flange is completely cracked through.

Repair Recommendations:

Refer to the above photos and marked-up print XXXX-1 to incorporate the following repairs.

- 1- Repair the crack on the north end of the east beam as shown in photos 3, 4 and 5.
- 2- Repair the crack in the northwest corner of the motor mounting base plate as shown on the marked-up print and section X-X by adding:
 - a- Stiffener bar- ITEM NO. 1
 - b- Reinforcing angle- ITEM NO. 2
 - c- Beam Stiffener- ITEM NO. 4
- 3- Stiffen entire west side by adding stiffener bar- ITEM NO. 1
- 4- Repair crack in motor mounting plate shown in photos 6 and 7 in accordance with instructions on marked-up print.
- 5- Repair top flange of support beam shown in photos 6 and 7 by adding a reinforcing angle as shown on marked-up print section Y-Y; ITEM NO. 3.
- 6- Install 3 beam stiffeners on east beam- ITEM NO. 4
- 7- Replace all drive mount bolts with new grade 5 or A325 bolts.

Please contact Rolando Ionta at (216) 485-3704 if you have any questions concerning this report.

Thank You

Rolando Ionta, P.E.