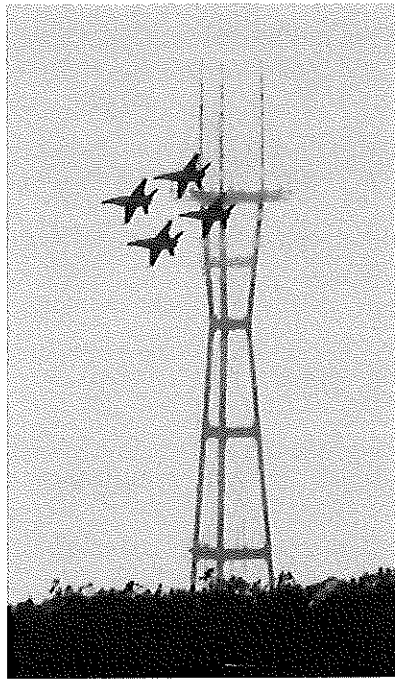




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SUTRO TOWER REPORT
ROUTINE INSPECTION OF LEG A AND NORTH FACE
SAN FRANCISCO, CA
FOR
SUTRO TOWER, INC



By: **CEL CONSULTING**

K. C. Dewell
Civil Engineer No. 29110
November, 2009



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A DIVISION OF CONSOLIDATED ENGINEERING

January 18, 2010

Project No. D50541

Mr. Gene Zastrow
Sutro Tower, Inc.
1 La Avanzada Street
San Francisco, CA 94131-1124

SUBJ: Sutro Tower – Routine Inspection of Leg A and North Face – November, 2009
San Francisco, CA

Dear Mr. Zastrow:

We have completed our inspection of Leg A, the North Trusses, the Strands and the Base of all legs. The inspection was performed on November 10 and 11, 2009.

Purpose

The purpose of the inspection was to check the structural portions of the tower proper (not the attached equipment, etc.) for distress due to corrosion, structural overload and/or other signs of structural distress or potential deterioration.

Scope and Procedures

The survey was performed in general accordance with the recommended approach for a Routine Inspection as described in the Inspection Procedures. A staff engineer (Richard Ng) and an inspector (Chad Hill) performed the inspection. Both had performed inspections on other legs and faces with the undersigned in prior years. They also inspected the strands by naked eye and binocular.

The inspection was limited to visual observations and recording by entry on the data sheets for each portion of the tower being inspected. A specific photograph was taken for the individual conditions. The data sheets and the photographs are coordinated.

Inspection Limitations

We inspected the tower from the interior of the leg and horizontal trusses. No attempt was made to inspect from the exterior of the trusses and legs other than what could be

seen by naked eye and binoculars (8x). These methods allow us to see most of each surface and connection, however there are still areas that are not visible.


Results

The individual results are shown on the data sheets, location sketches and photographs. The general results were as follows:

1. No structural members were noted with distorted or distressed conditions indicating structural overload.
2. Most of the distress noted was corroded fasteners. Either the nut (usually) or the head of the bolt, or both, were corroded. None of the fasteners were corroded to the point of producing flaking buildup. These fasteners should be cleaned and repainted. If however during the cleaning significant loss of metal is found, that is, if the flats of the nut or heads rounded at junction of the flats due to corrosion, the fastener should be replaced.
3. The skin showed no signs of structural distress.
4. The strands did not have any visible distress. They were checked and re-tensioned, if necessary, during upgrade work performed recently.
5. The bases of all three legs showed no significant observable distress. Leg B had some rust that should be cleaned off of it and then repainted. The base plate welds will be examined for cracks by the magnetic particle process in the near future.

This concludes our report of the routine inspection of Leg A and the North Face of Sutro Tower. If you have any questions please contact the undersigned.

Sincerely,
CEL Consulting


K. C. Dewell, Senior Engineer
Civil Engineer No. 29110

Cc: Ron Hamburger



CEL CONSULTING

Inspection Summary – Year 2009

Description of Inspection:

- Routine inspection of Leg A ✓
- Routine inspection of horizontal levels on North face ✓
- Routine inspection of strands on all faces ✓
- Routine inspection of strand anchors on all legs ✓
- Routine inspection of base – all legs ✓

Special or In-Depth Inspections:

- Load test of all diagonal strands
- Test welds at base of all legs

Diagonal strands retensioned during upgrade work on tower

Summary of Results:

Summary of Recommendations:

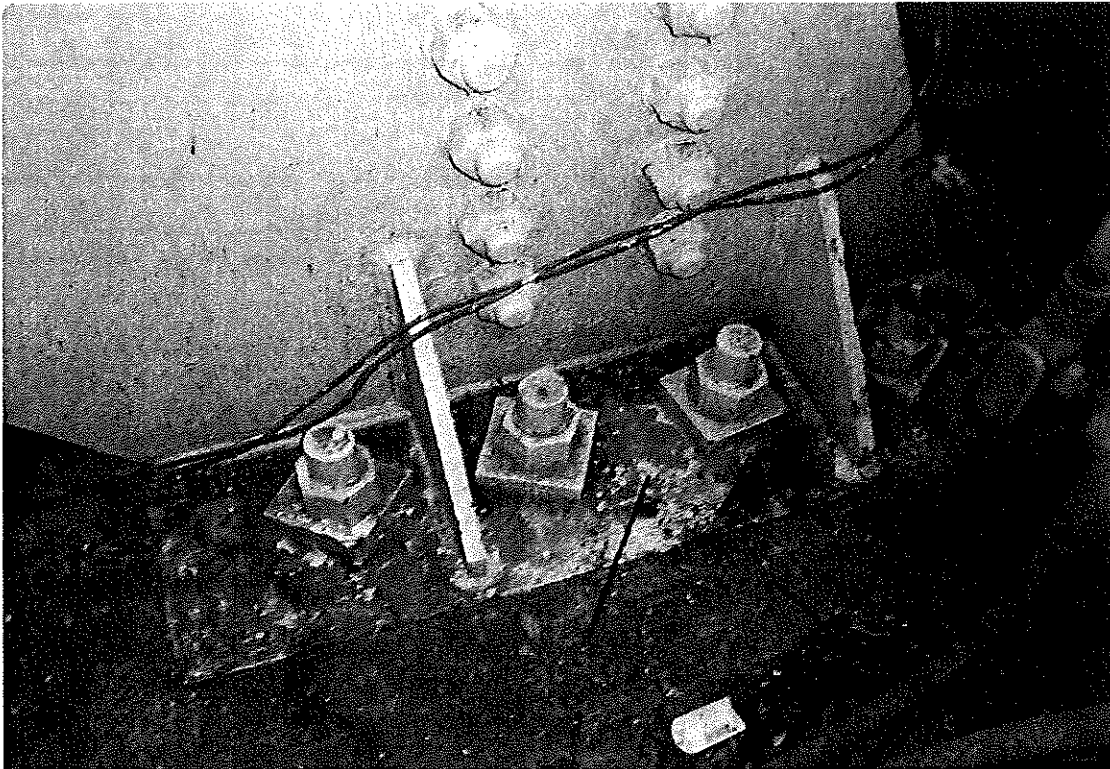
Clean and Paint

Checklist:

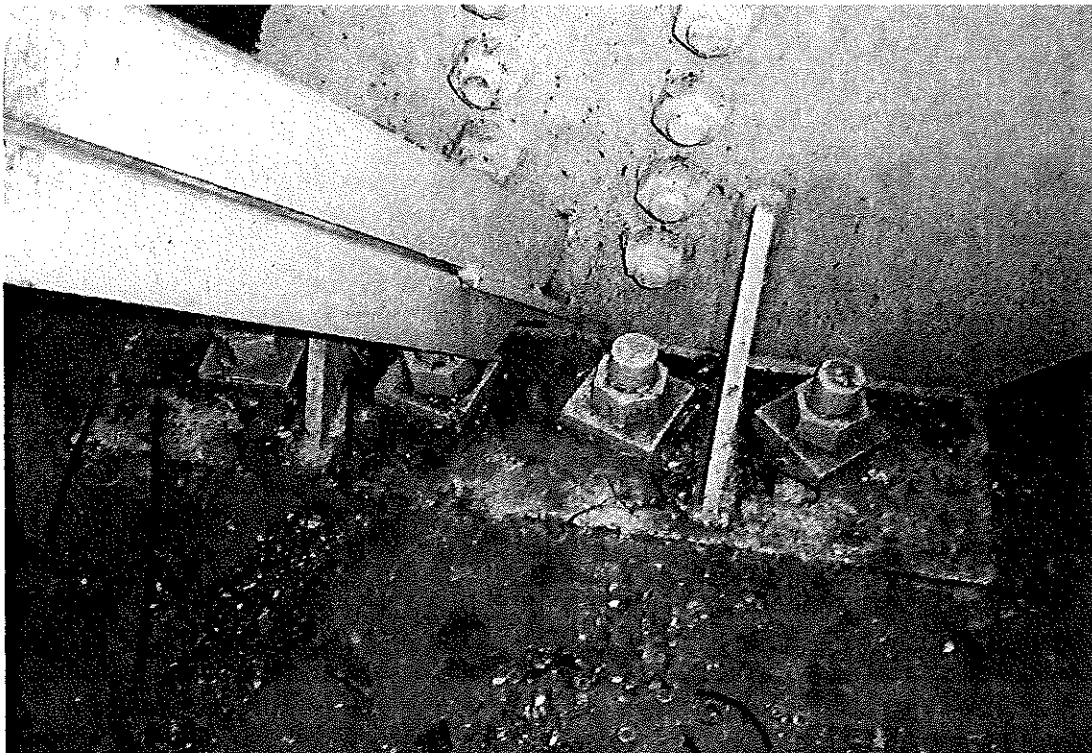
- Has a severe event occurred since the previous inspection? Yes **No**
- Have action items and recommendations from previous inspections been addressed in the scope of work? **Yes** No
- Has the inspection log for future years been revised to account for scope of work and findings of this inspection? Yes **No**

Signature: _____

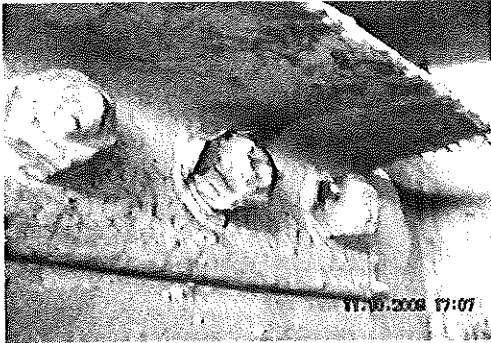
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PB101369
11/10/09



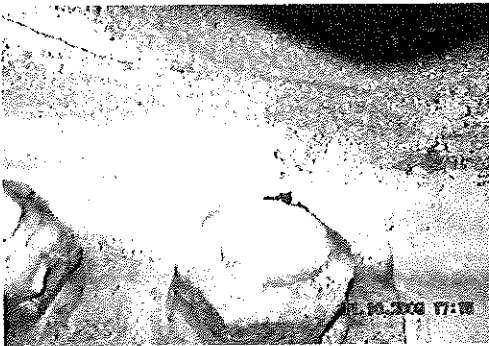
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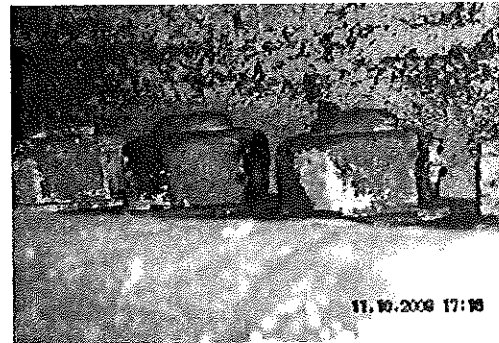
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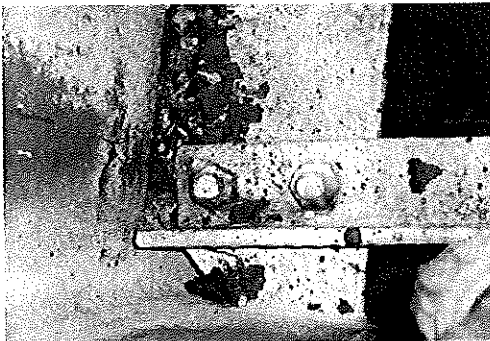
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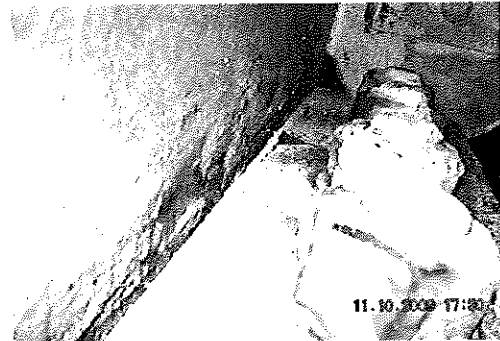
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DSCN3520
11/10/2009



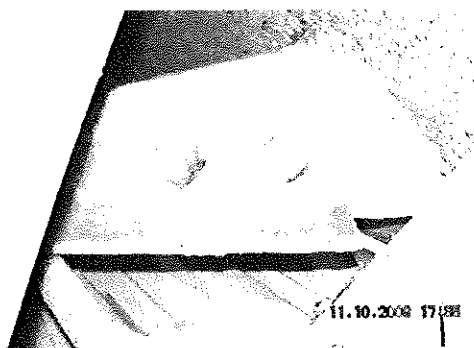
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11/10/2009



PB101433
11/10/2009

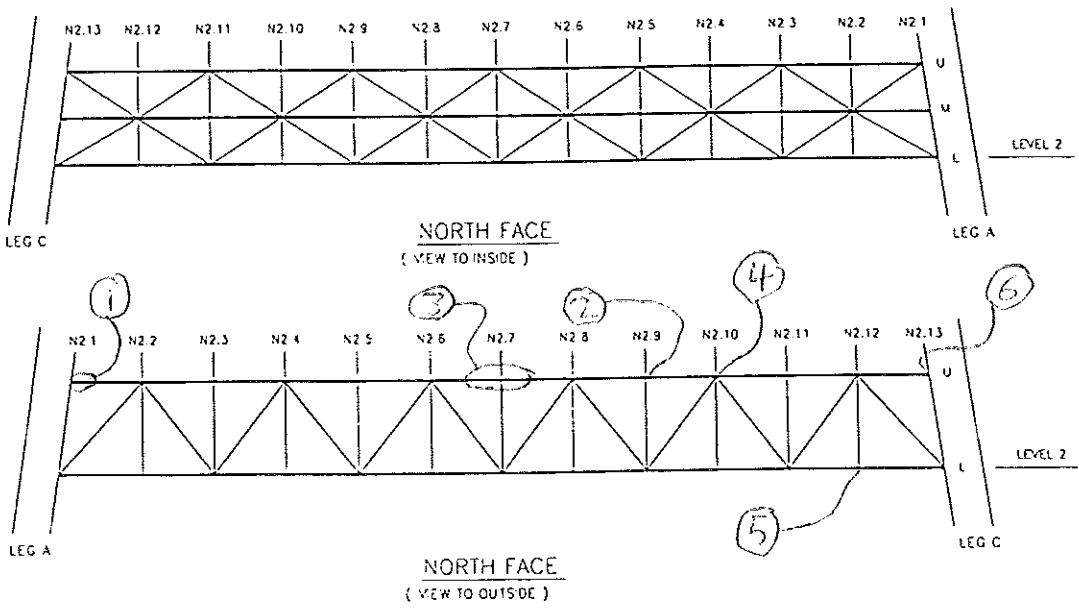


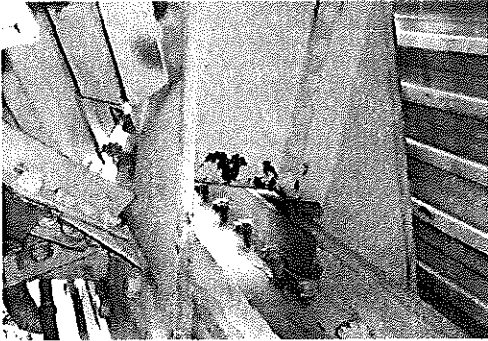
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Inspection Data Sheet: North Truss (Level 2)

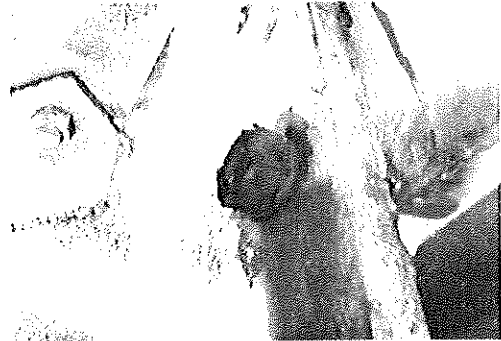
Observ. No.	Location / Identification			Photo No.	Inspection Comments
	Chord ¹	Horiz. Location	Item ²		
1	U	2.1	H	1	RF(3), Peeling Paint/Rust on Chord
2	U	2.9	C	2	RF
3	U	2.5-2.8	H	3	Rust on Beam Flange
4	U	2.10	C	4	RF(3)
5	L	2.12	C	5	RF(3)
6	U	2.13	C	6	RF
Sutro Tower				Signature: _____	Page: _____ of _____
San Francisco, CA				File: _____	Date: _____

¹ Chord member designation: U = upper, M = middle, and L = lower
² Item designation: H = horizontal, V = vertical, D = diagonal, C = connection, and O = others

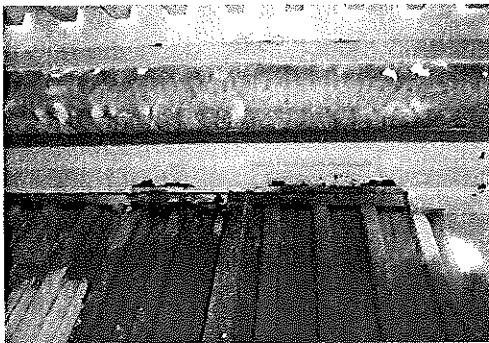




PB101404
11/10/2009



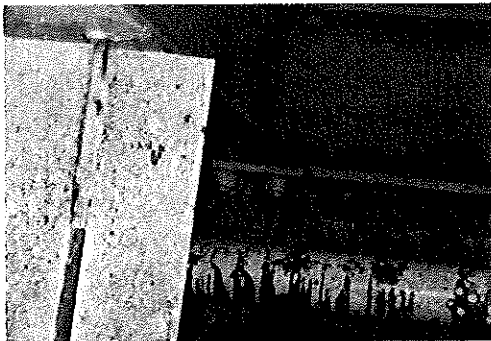
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PB101409
11/10/2009



PB101410
11/10/2009

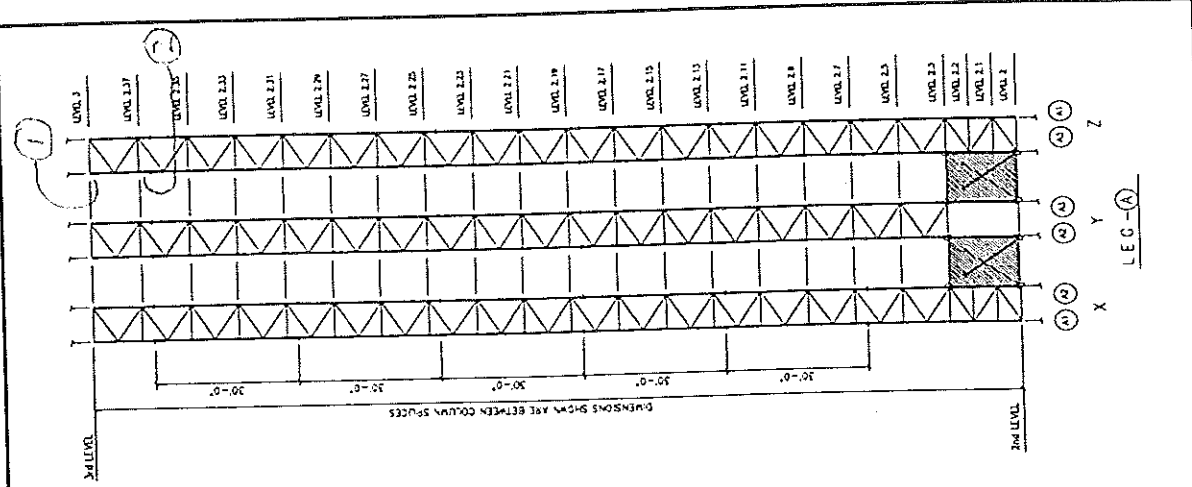


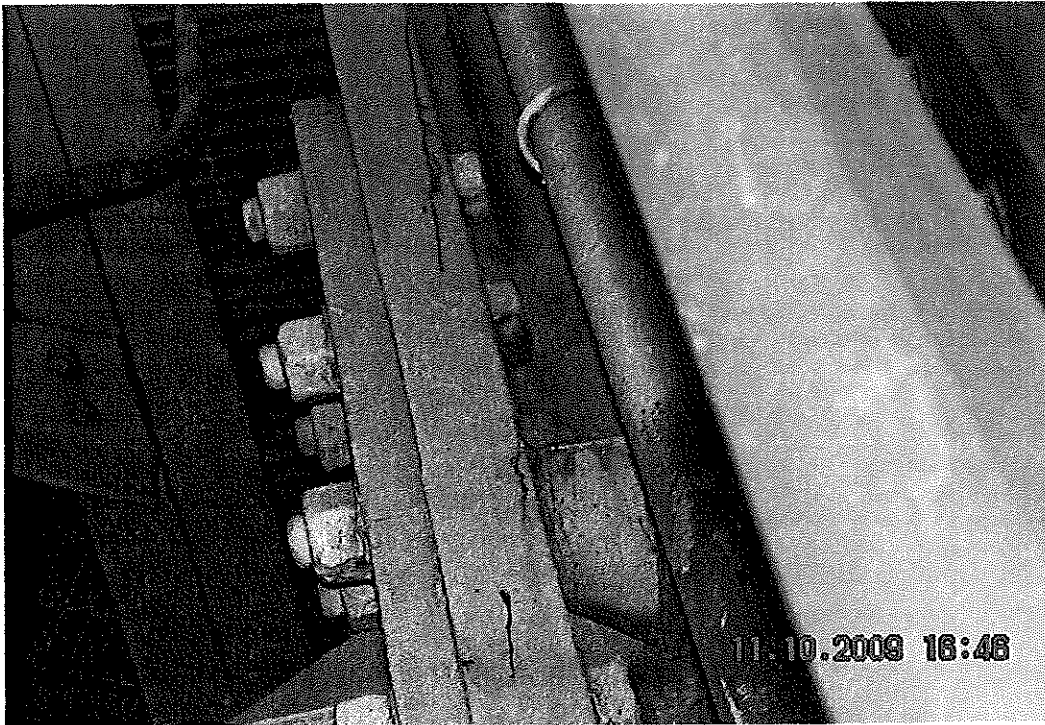
PB101411
11/10/2009

Inspection Data Sheet: Leg A (Level 2 to Level 3)

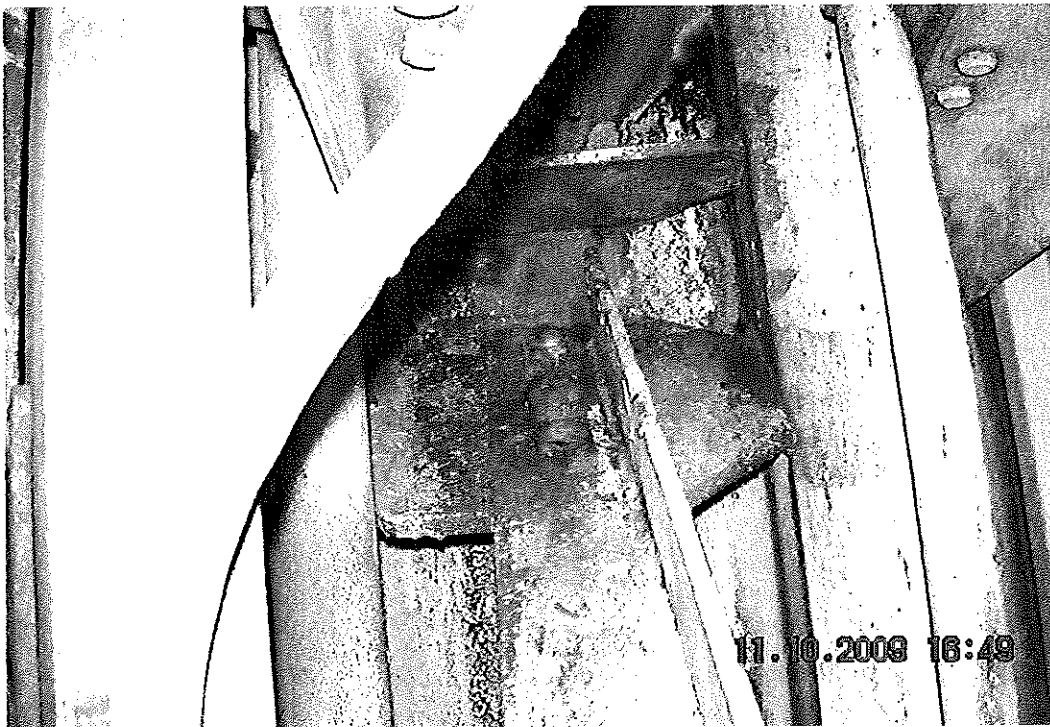
Observ. No.	Location / Identification		Photo No.	Observation Comments
	Column	Elevation		
1	A3	3	1	RF
2	A3	2.37		RF (no picture available)
3	A3	2.2	2	RF(3), Rust on Connection Plates
Signature: _____				Page: _____ of _____
File: _____				Date: _____
Sutro Tower				LECA
San Francisco, CA				2nd LEVEL

¹ Item designation: L=leg member, D=diagonal, H=horizontal, C=connection, O=others





DSCN3510
11/10/2009

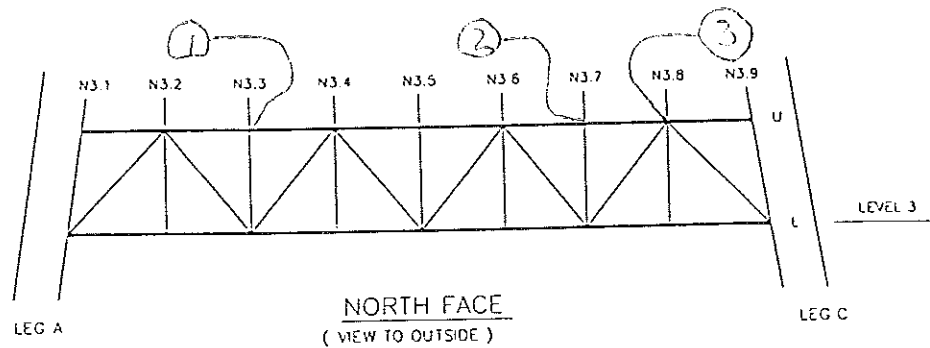
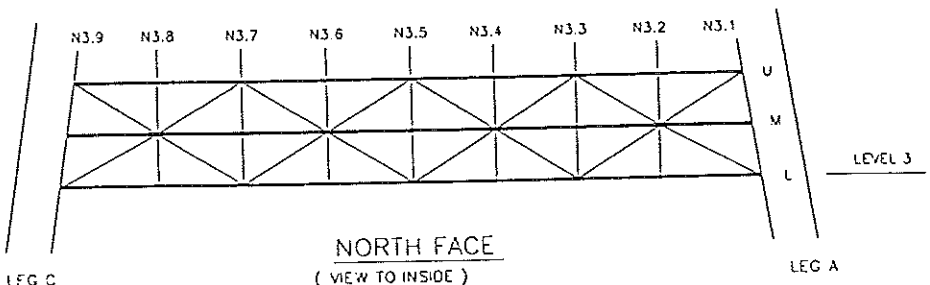


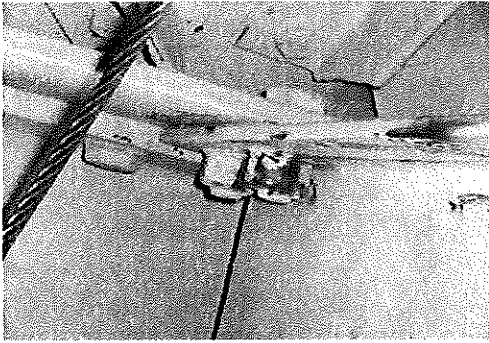
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Inspection Data Sheet: North Truss (Level 3)

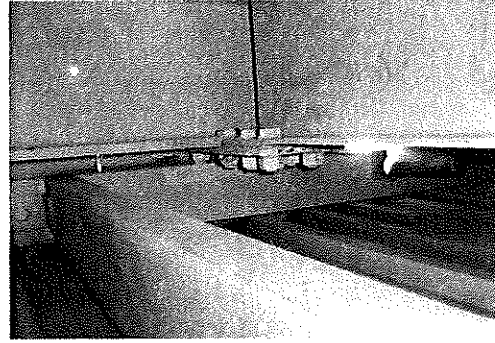
Observ. No.	Location / Identification			Photo No.	Inspection Comments
	Chord ¹	Horiz. Location	Item ²		
1	U	3.3	C	1	RF(2)
2	U	3.7	C	2,3	RF(2)
3	U	3.8	C	4	RF
Sutro Tower				Signature: _____	Page: _____ of _____
San Francisco, CA				File: _____	Date: _____

¹ Chord member designation: U = upper, M = middle, and L = lower
² Item designation: H = horizontal, V = vertical, D = diagonal, C = connection, and O = others

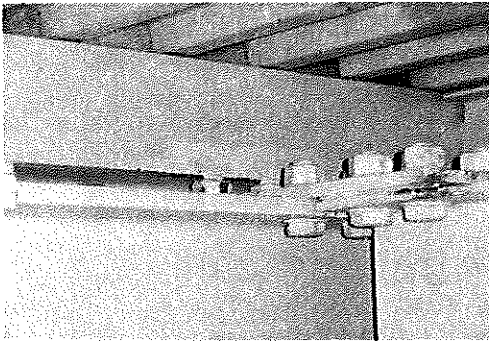




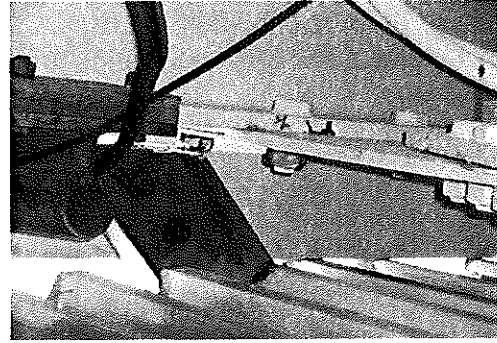
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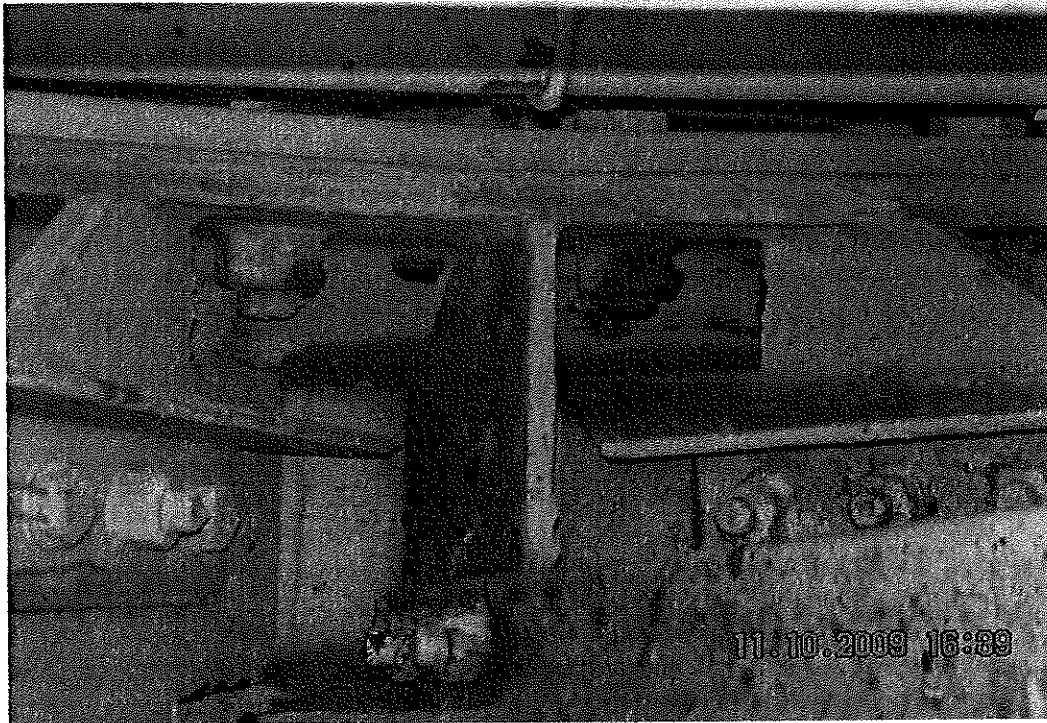
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PB101413
11/10/2009



PB101415
11/10/2009

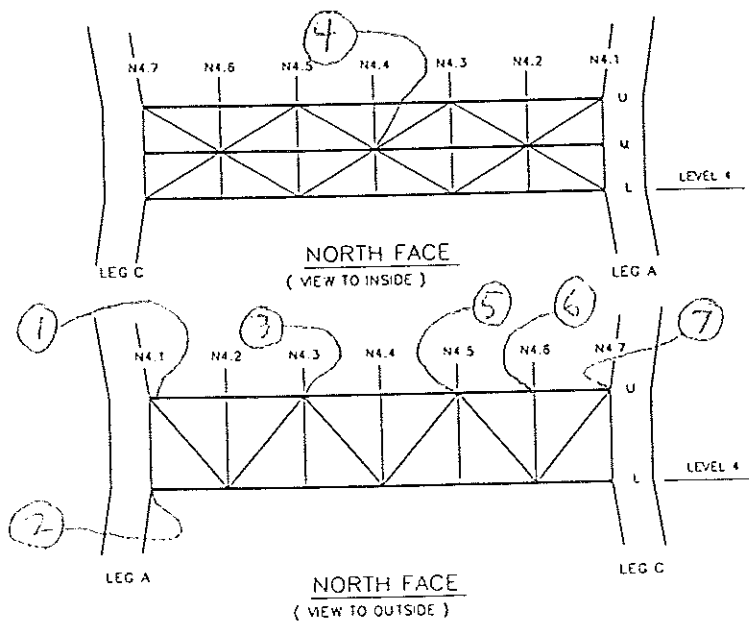


DSCN3506
11/10/2009

Inspection Data Sheet: North Truss (Level 4)

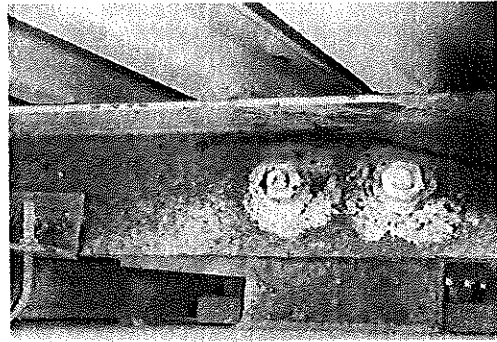
Observ. No.	Location / Identification			Photo No.	Inspection Comments
	Chord ¹	Horiz. Location	Item ²		
1	U	4.1	C	1	RF(2)
2	L	4.1	C	2	RF
3	U	4.3	C	3	RF(3)
4	M	4.4	C	4	Rust on Gussset Plates / Weld
5	U	4.5	C	5	RF
6	U	4.6	C	6	RF
7	U	4.7	C	7,8	RF(6)
Sutro Tower				Signature: _____	Page: _____ of _____
San Francisco, CA				File: _____	Date: _____

¹ Chord member designation: U = upper, M = middle, and L = lower
² Item designation: H = horizontal, V = vertical, D = diagonal, C = connection, and O = others





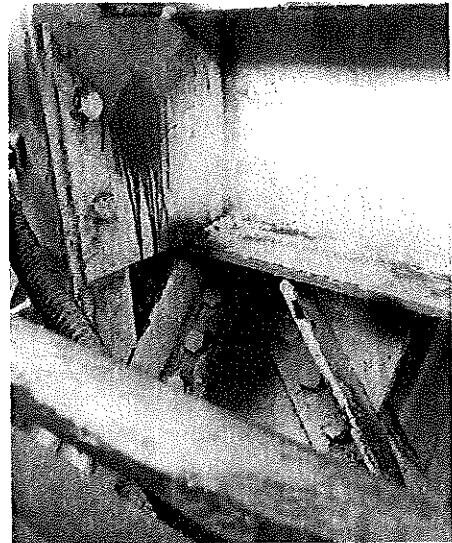
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PB101396
11/10/2009



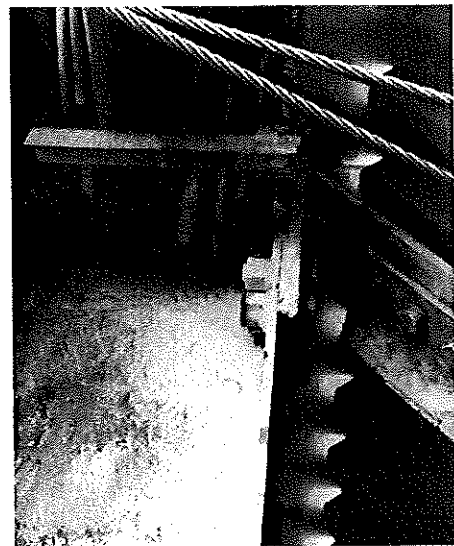
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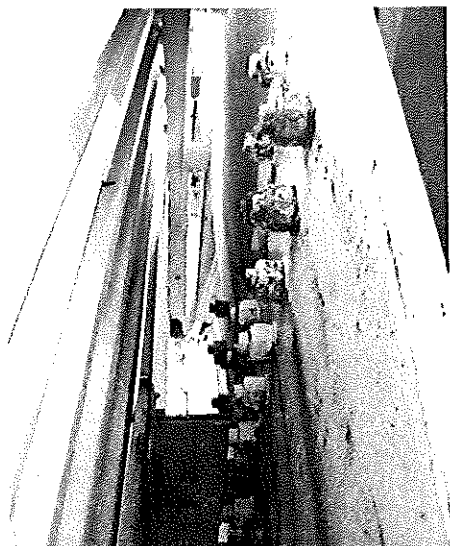
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PB101400
11/10/2009



PB101401
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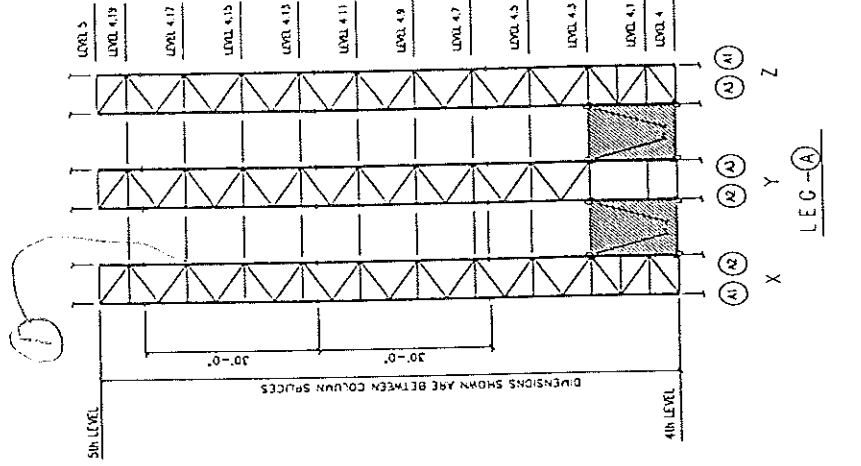
PB101402
11/10/2009

Inspection Data Sheet: Leg A (Level 4 to Level 5)

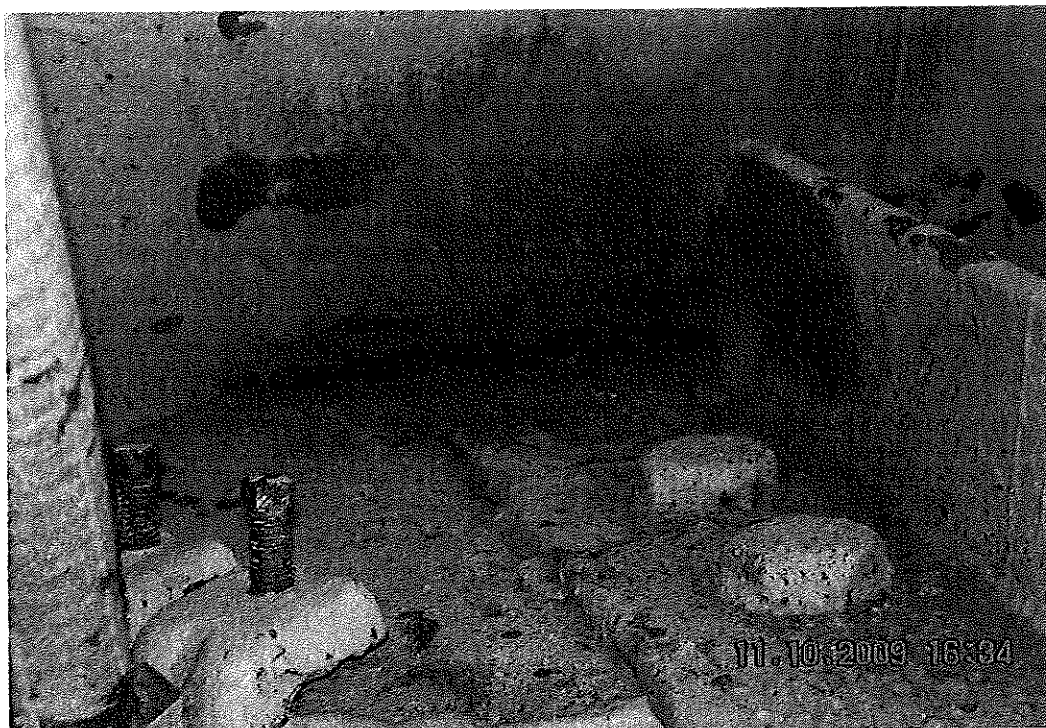
Observ. No.	Location / Identification		Photo No.	Observation Comments
	Column	Elevation		
1	A2	4.17	1	Rusty Weld

Signature: _____ Page: _____ of _____
Date: _____

Sutro Tower
San Francisco, CA



¹ Item designation: L=leg member, D=diagonal, H=horizontal, C=connection, O=others

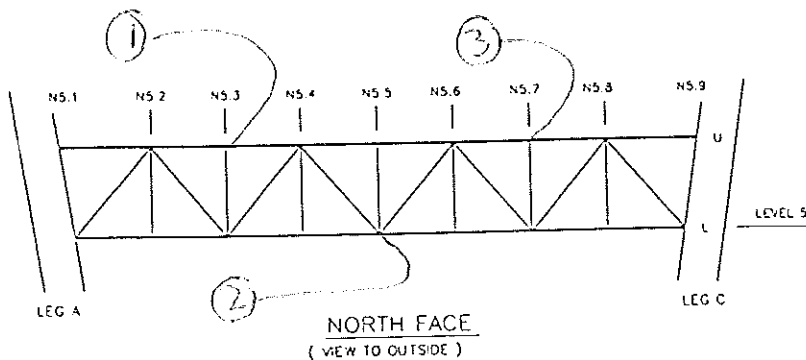
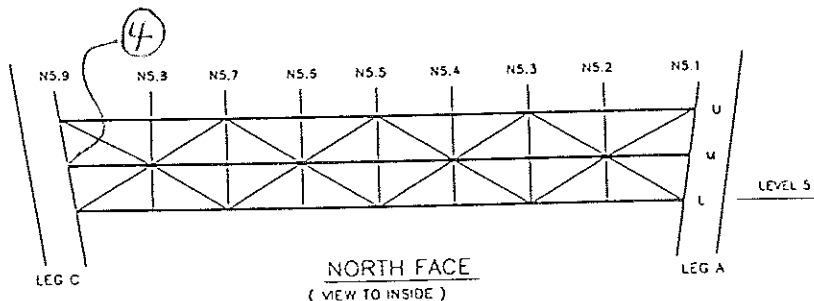


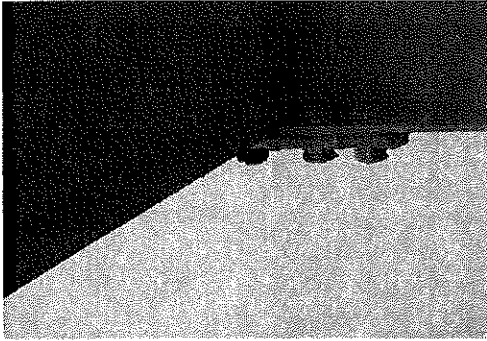
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Inspection Data Sheet: North Truss (Level 5)

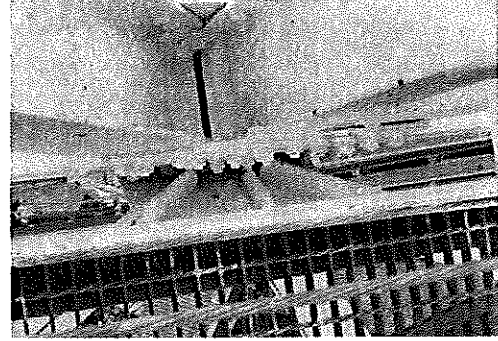
Observ. No.	Location / Identification			Photo No.	Inspection Comments
	Chord ¹	Horiz. Location	Item ²		
1	U	S.3	C	1	RF
2	L	S.5	C	2,3	RF
3	U	S.7	C	4	RF(2)
4	M	S.9	C	5	RF(2)
Sutro Tower				Signature: _____	Page: ____ of ____
San Francisco, CA				File: _____	Date: _____

¹ Chord member designation: U = upper, M = middle, and L = lower
² Item designation: H = horizontal, V = vertical, D = diagonal, C = connection, and O = others

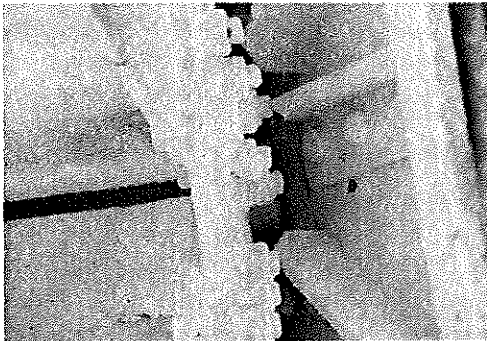




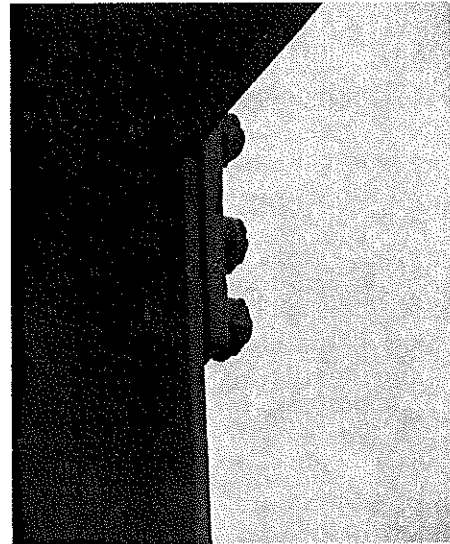
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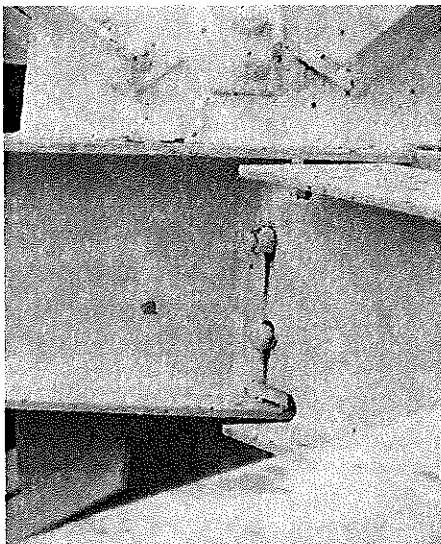
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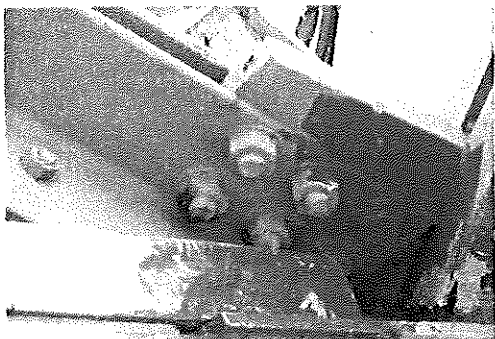
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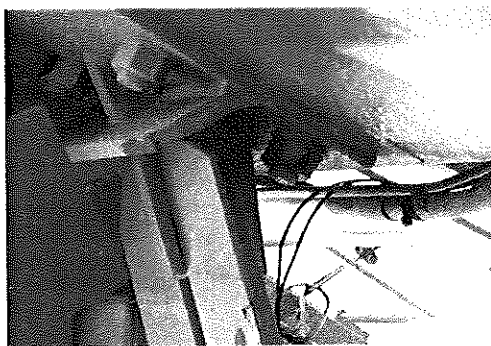
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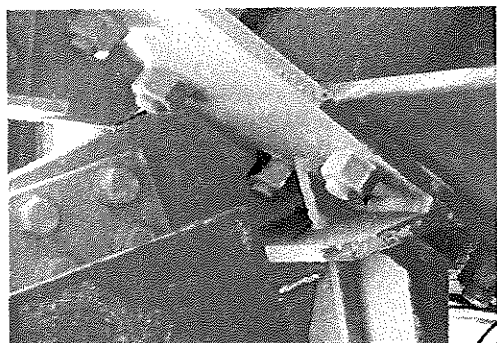
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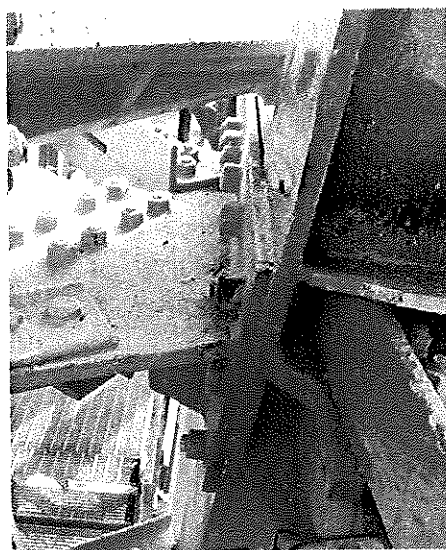
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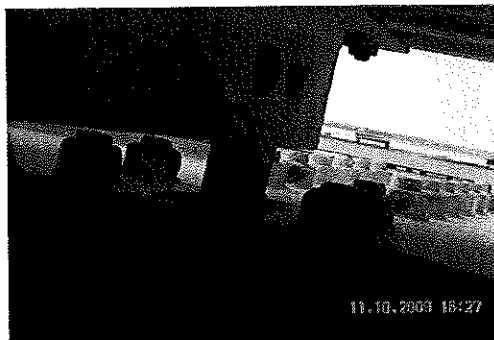
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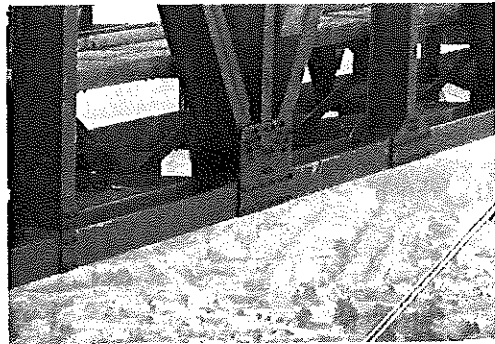
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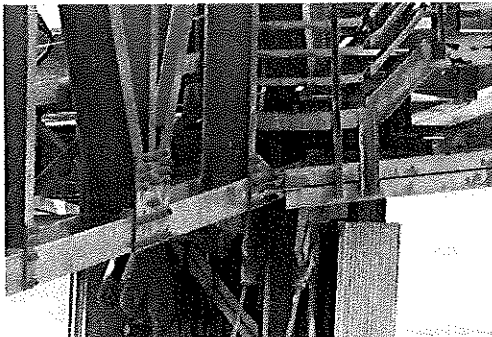
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11/10/2009



PB101385
11/10/2009



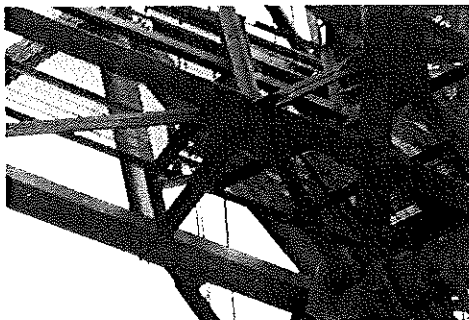
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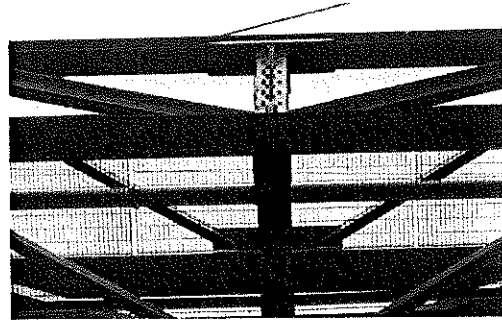
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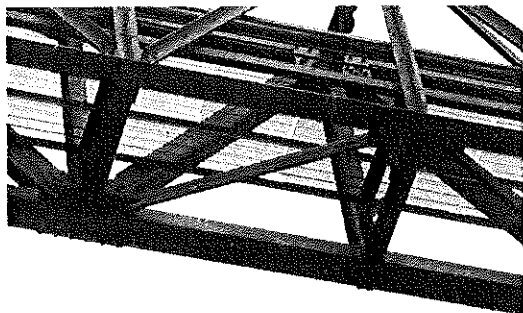
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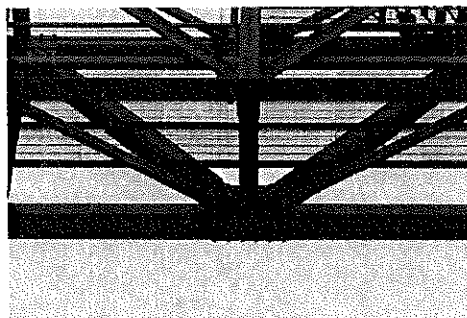
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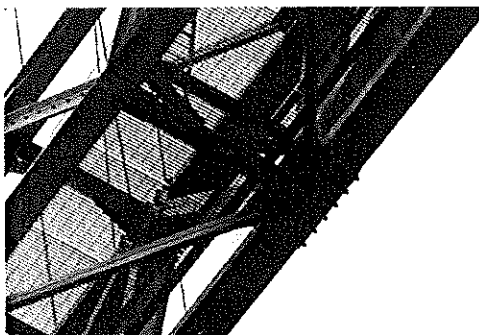
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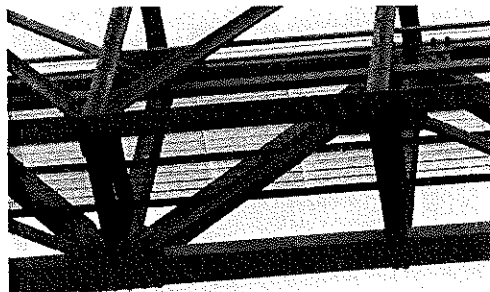
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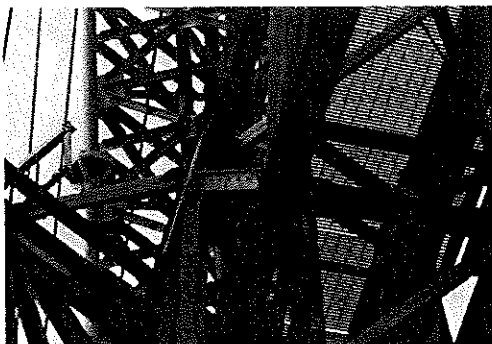
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PB101437
11/11/2009



PB101442
11/11/2009