

1/7/2009

David Klein  
Metal & Cable Corp  
PO Box 117  
Twinsburg, OH 44087-0117

Date Received: 10/14/2008

Test Report No.: MET025-08-10-69255-1

Material Testing and Non-Destructive  
Testing

---

5405 E. Schaaf Road  
Cleveland, OH 44131  
USA

Telephone : (216) 524-1450  
Fax : (216) 524-1459  
Website : www.storkherron.com

**TEST REPORT**

---

P.O. No.: 4943

Revised: 12/13/2008

**Stork Herron Testing Laboratories  
Report No. MET025-08-10-69255-1**

**Mechanical Testing of**

**Magnemount**

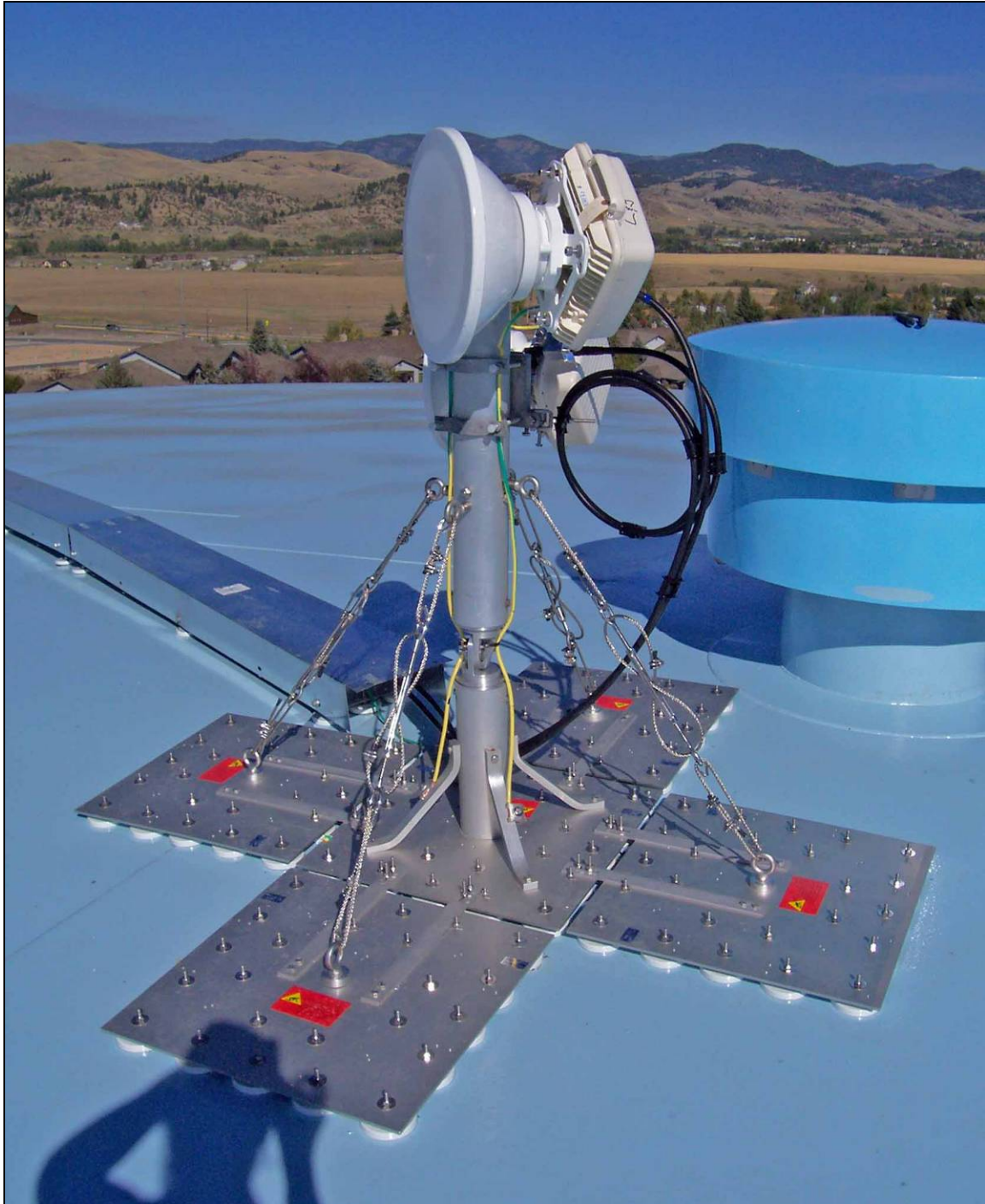
The above services were performed in accordance with Herron Testing Laboratories' Quality Assurance Program Edition 1, Revision 2 dated 1/30/07. Information and statements in this report are derived from material, information and/or specifications furnished by the client and exclude any expressed or implied warranties as to the fitness of the material tested or analyzed for any particular purpose or use. This report is the confidential property of our client and may not be used for advertising purposes. This report shall not be reproduced except in full, without written approval of this laboratory. The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under Federal Statutes.

Sample remnants are held for a minimum of 30 days following issuance of test results, at which point they will be discarded unless notified in writing by the client. This material was not contaminated by mercury or chlorinated solvents during the handling and processing at Stork-Herron Testing Laboratories facilities.



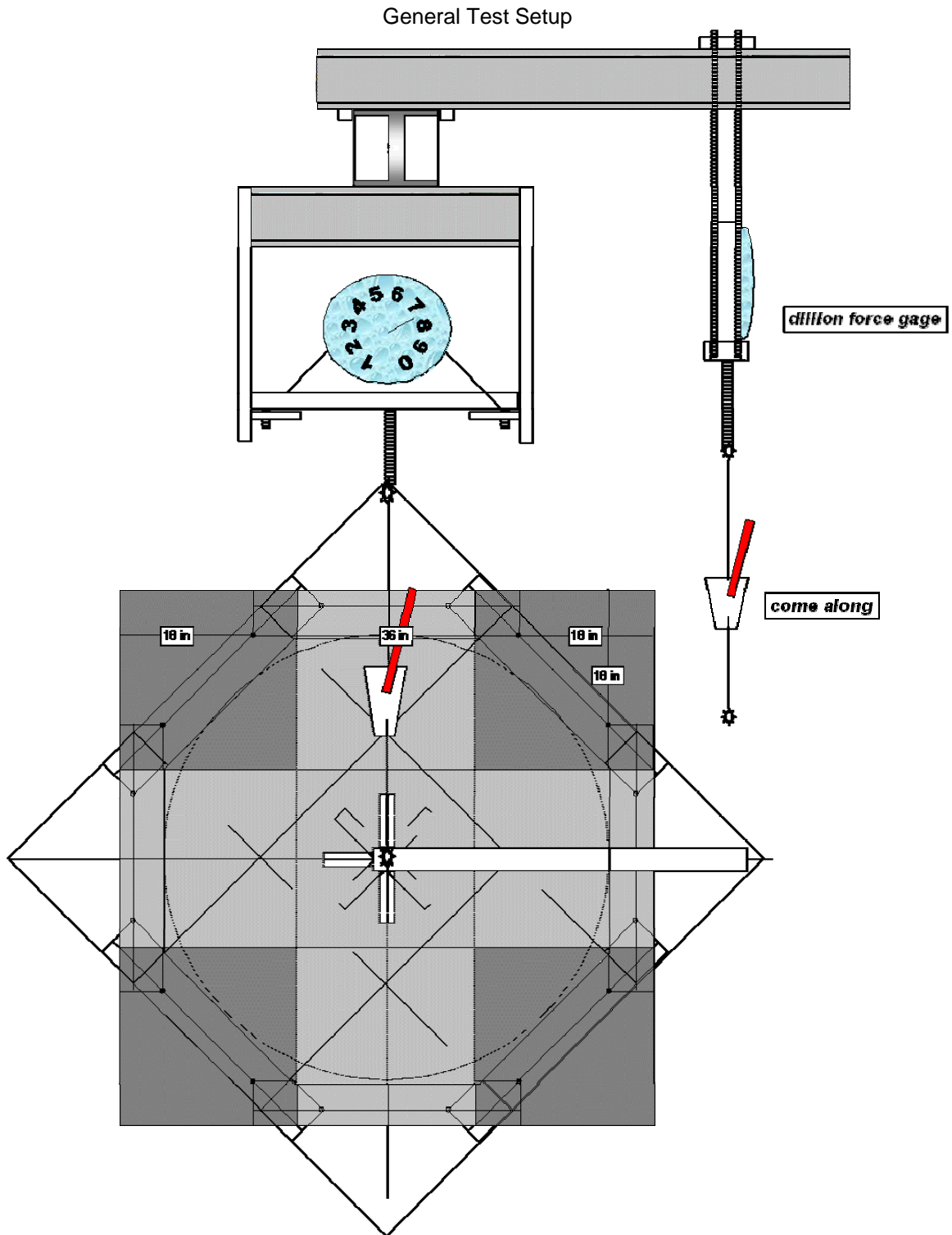
Michael R. Gaydos  
General Manager, COO

TEST ITEM

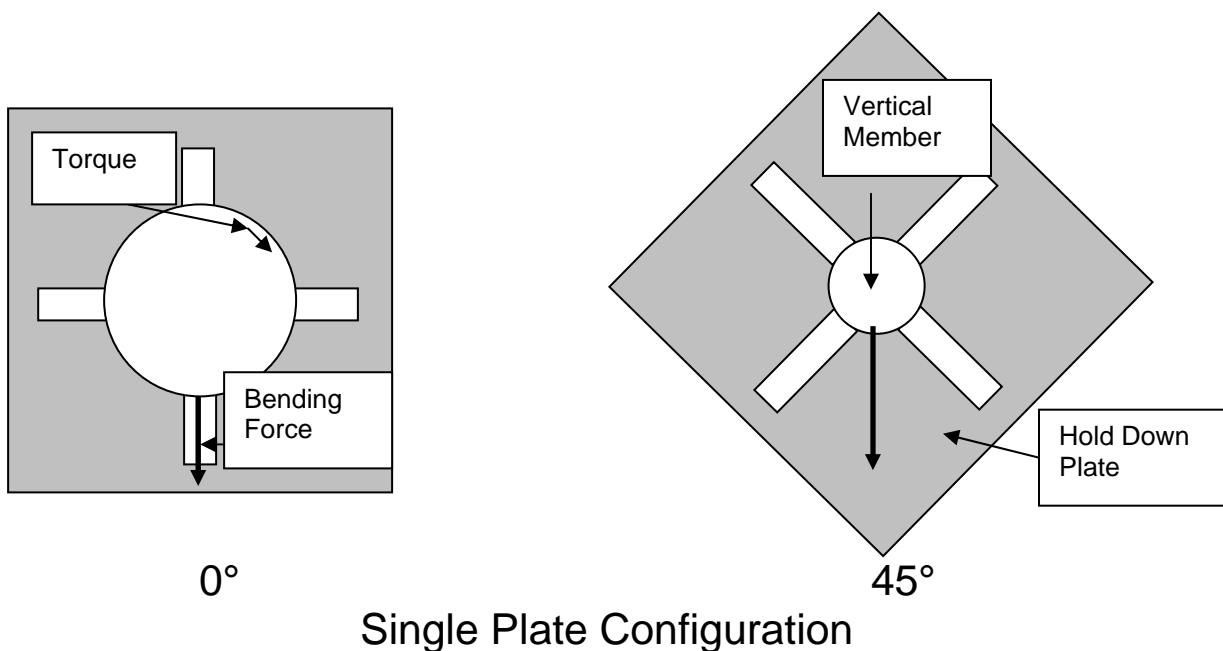


Magnetic Mount with Guide Wires

**SETUP**



### Single Hold Down Plate Configuration

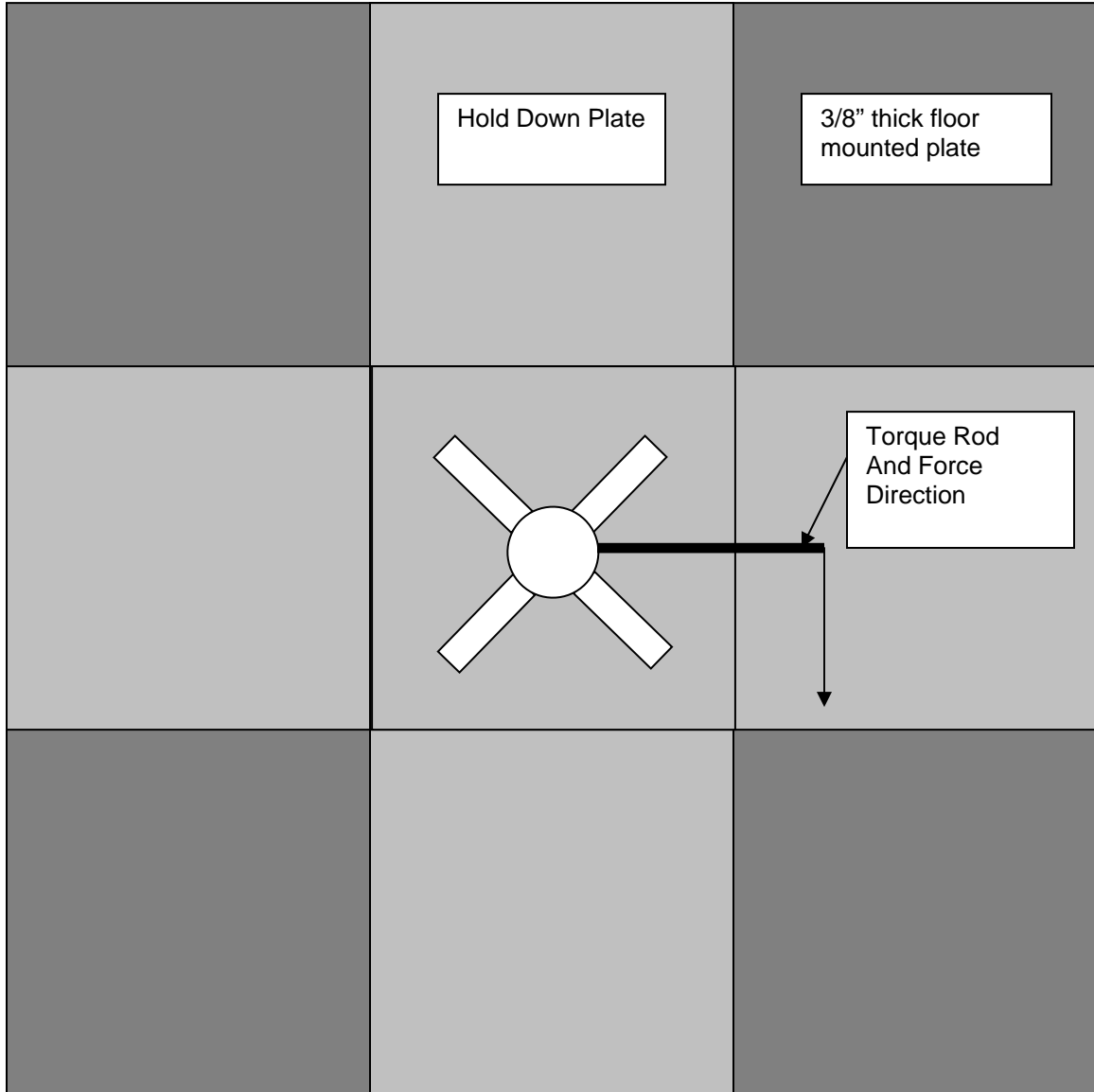


Test samples were magnetically held to a 3/8" thick steel plate anchored to a cement floor. Cables were attached as illustrated in the photograph found on the first page. Bending offsets were determined by attaching a cable to the vertical member at a defined height above the steel plate. Loads were applied along the cable by use of a mechanical hand operated wench and measured by use of a calibrated force indicator. Bending offsets were measured by use of a calibrated dial indicator set at a defined height above the steel plate. All testing was performed with a 0.015" thick paper between the steel plate and the magnetic mounts to simulate a painted steel surface.

Torque was measured by an application of a load on a horizontal rod attached at a defined height above the steel plate to the vertical member of the assembly. Loads were applied to the rod end and recorded along with rotation angle.

Bending tests were conducted at both the 0° and 45° configuration as illustrated above.

Tests were conducted using just a single magnetic hold down plate as illustrated above and multiple hold down plates (5 total) as illustrated below.



Five Plate Configuration, No Cables Attached

TEST DATA

MODEL M, Single Plate Configuration

0° Configuration Bending Offset Test

Horizontal Load was Applied at a Height of 42 ½" above Steel Plate

Bending Offset Measurements were Made at a Height of 49" above Steel Plate

Horizontal Load (lbs)	Sample		
	1 No Cables Attached (in)	2 No Cables Attached (in)	3 No Cables Attached (in)
10	0.020	0.033	0.048
20	0.093	0.122	0.128
30	0.150	0.170	0.200
40	0.210	0.230	0.245
50	0.255	0.280	0.295
60	0.302	0.330	0.345
70	0.345	0.385	0.400
80	0.402	0.445	0.452
90	0.450	0.495	0.498
100	0.505	0.550	0.550
110	0.555	0.620	0.605
120	0.610	0.680	0.648
130	0.660	0.770	0.705
140	0.720	0.895	0.770
150	0.765	-	0.825
160	0.850	-	0.880
170	0.950	-	0.950

MODEL M, Single Plate Configuration

0° Configuration Bending Offset Test

Horizontal Load was Applied to a Rod with a Length of 18"

Torque was Applied to the Top of the Vertical Member

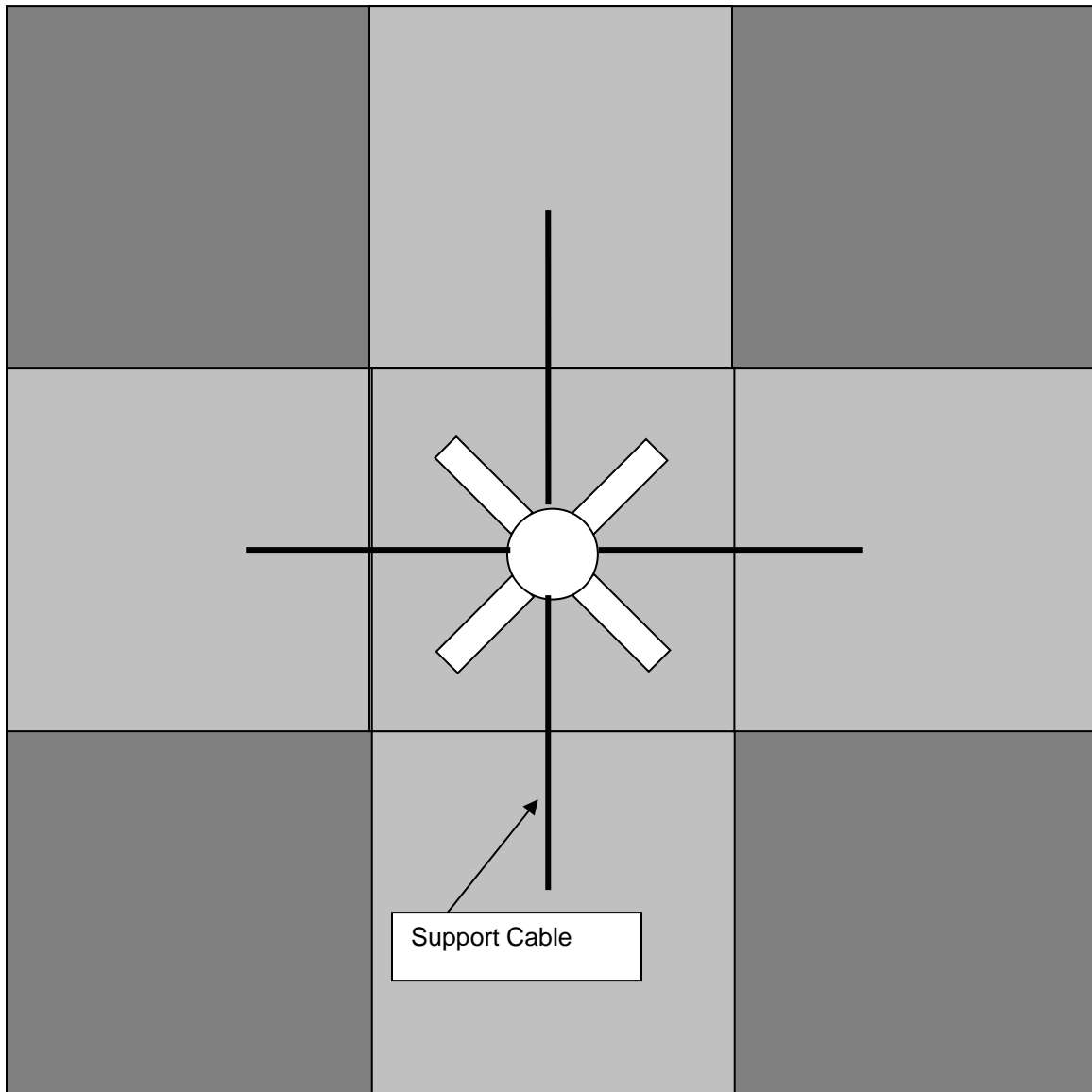
Horizontal Load (lbs)	Sample		
	1 (Rotation Angle) No Cables Attached	2 (Rotation Angle) No Cables Attached	3 (Rotation Angle) Support Cables Tight
20	1°	0°	1°
40	2°	1°	2°
60	3°	2°	3°
80	4°	3 ½°	4°
100	5°	5°	5°
120	6 ½°	6°	6°
140	Magnetic Base Dislodged	Magnetic Base Dislodged	Magnetic Base Dislodged

MODEL M, Single Plate Configuration

45° Configuration Bending Offset Test

Horizontal Load was Applied at a Height of 44 ½" above Steel Plate  
 Bending Offset Measurements were Made at a Height of 49" above Steel Plate

Horizontal Load (lbs)	Sample				
	1 No Cables Attached (in)	2 No Cables Attached (in)	3 No Cables Attached (in)	4 No Cables Attached (in)	5 No Cables Attached (in)
10	0.055	0.025	0.030	0.041	0.030
20	0.217	0.150	0.140	0.106	0.101
30	0.285	0.220	0.220	0.192	0.174
40	0.330	0.275	0.290	0.250	0.216
50	0.400	0.335	0.340	0.300	0.256
60	0.455	0.380	0.380	0.350	0.315
70	0.515	-	0.405	0.405	0.401
80	0.575	0.585	0.470	0.425	0.460
90	0.635	0.640	0.530	0.520	0.465
100	0.680	0.685	0.545	0.575	0.558
110	0.740	0.760	0.640	0.692	-
120	0.795	0.820	0.680	0.785	0.580
130	0.860	0.915	0.750	0.835	0.615
140	0.955	0.940	0.795	0.870	0.735
150	1.005	1.040	0.910	0.935	0.801
160	1.115	1.160	1.005	1.055	0.888
170	-	-	-	-	1.010



Five Plate Configuration, Four Cables Attached



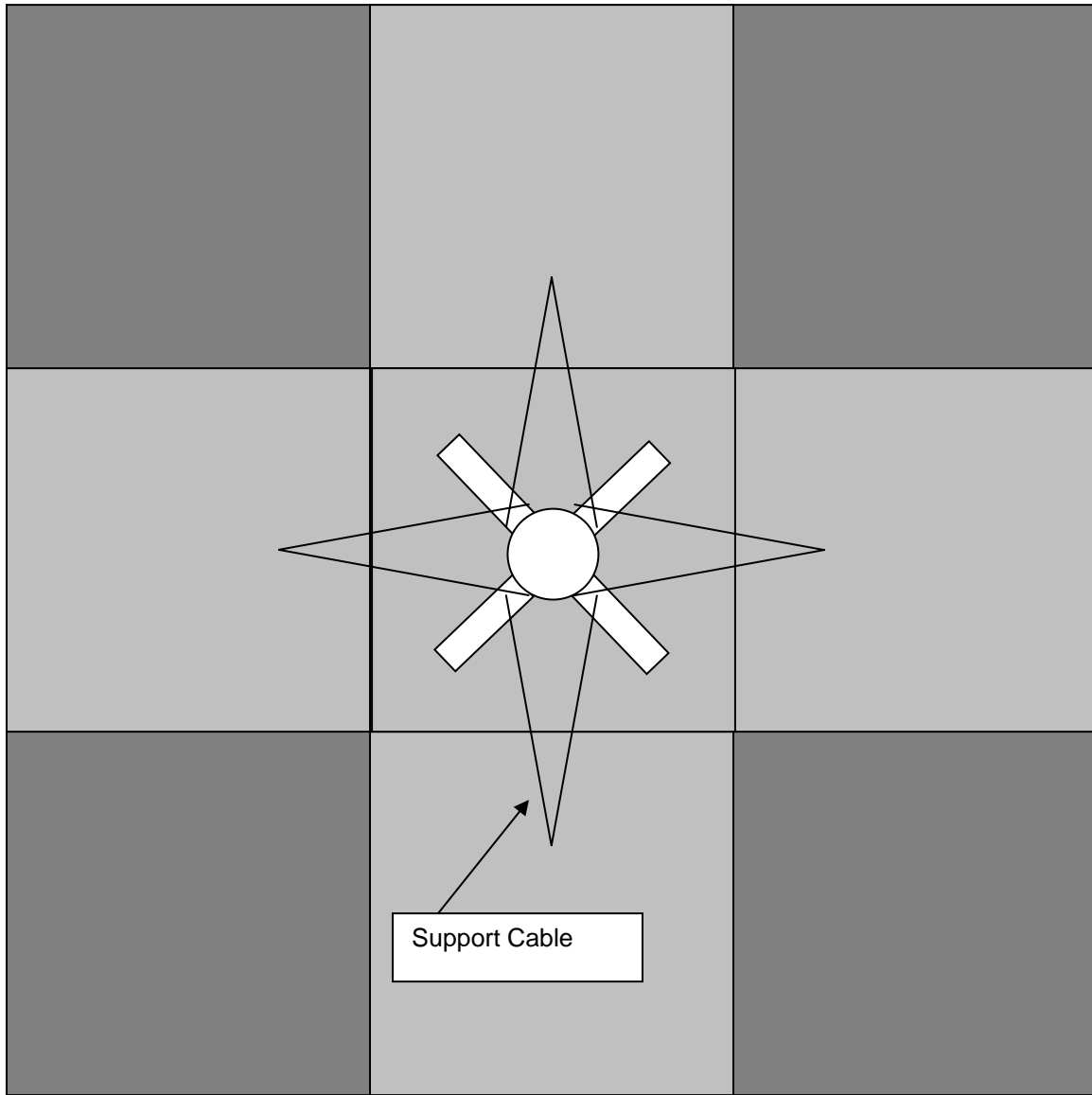
MODEL M, Five Plate Configuration, Four Support Cables

0° Configuration Bending Offset Test

Horizontal Load was Applied at a Height of 43 ½" above Steel Plate

Bending Offset Measurements were Made at a Height of 53" above Steel Plate

Horizontal Load (lbs)	Sample			
	1 Support Cables Tight (in)	2 Support Cables Loose (in)	3 Support Cables Tight (in)	4 Support Cables Tight (in)
50	0.035	0.085	0.042	0.045
100	0.115	0.205	0.120	0.106
150	0.195	0.310	0.166	0.180
200	0.290	0.440	0.250	0.258
250	0.410	0.560	0.350	0.346
300	0.550	0.660	0.445	0.432
350	0.700	0.770	0.558	0.530
400	0.860	0.880	0.685	0.622
450	-	1.030	-	-



## Five Plate Configuration, Eight Cables Attached

The following test results were for five plate configuration but modified to have eight support cables as illustrated above.

MODEL M, Five Plate Configuration, Eight Support Wires

0° Configuration Bending Offset Test			
Horizontal Load was Applied at a Height of 42 ½" above Steel Plate			
Bending Offset Measurements were Made at a Height of 46 ½" above Steel Plate			
Horizontal Load (lbs)	Sample		
	1 Support Cables Tight (in)	2 Support Cables Tight (in)	3 Support Cables Tight (in)
50	0.040	0.025	0.030
100	0.100	0.064	0.073
150	0.160	0.114	0.193
200	0.245	0.170	0.278
250	0.350	0.254	0.367
300	0.480	0.330	0.462
350	-	0.435	-
400	-	0.508	-
450	-	-	-

MODEL M, Five Plate Configuration, Eight Support Wires

45° Configuration Bending Offset Test				
Horizontal Load was Applied at a Height of 42 ½" above Steel Plate				
Bending Offset Measurements were Made at a Height of 46 ½" above Steel Plate				
Horizontal Load (lbs)	Sample			
	1 Support Cables Tight (in)	2 Support Cables Tight (in)	3 Support Cables Tight (in)	4 Support Cables Tight (in)
50	0.030	0.028	0.033	0.025
100	0.070	0.063	0.058	0.055
150	0.110	0.095	0.093	0.085
200	0.155	0.135	0.131	0.130
250	0.205	0.192	0.170	0.175
300	0.260	0.230	0.213	0.225
350	0.350	0.271	0.263	0.280
400	0.430	0.428	0.360	0.370
450	0.510	0.490	0.440	0.510
500	0.680	-	0.632	0.640

MODEL M, Five Plate Configuration, Eight Support Wires

0° Configuration Bending Offset Test

Horizontal Load was Applied to a Rod with a Length of 18"

Torque was Applied to the Top of the Vertical Member

Sample			
Horizontal Load (lbs)	1 (Rotation Angle) Support Cables Tight	2 (Rotation Angle) Support Cables Tight	3 (Rotation Angle) Support Cables Tight
20	0°	0°	-
40	0°	0°	-
60	½°	1°	-
80	1 ½°	2°	-
100	2°	2 ½°	-
120	2 ½°	4°	-
140	3 ½°	5 ½°	-
160	5 ½°	6 ½°	-
180	7°	7 ½°	-
200	8°	8 ½°	-
220	9 ½°	9 ½°	-
240	11°	10°	-