

Reports

Axial Compression of Steel Columns

Applied Testing & Geosciences, LLC

SQUAREcolumnsTM

A perfect match for truSPAN™ and throughSPAN Beams, but the fact is they'll support just about anything. Square Columns have several advantages over round columns or jack posts and at comparable prices they feature strength and flexibility not found in most column products on the market. Metwood Square Structural Columns together with truSPAN™ Beams will give you a whole new set of possibilities.

 "Tabbed" Top Plate for flexibility at the job site. This allows for immediate use of the column and no need for

- "temporaries".
- Fasten with screws, and trim easily with a reciprocating saw, hacksaw, or saw with abrasive blade.
- Easier to plumb and attach treatments such as wood, masonry, vinyl, dryvit, and more.
- 3" Square Columns fit inside 2 x
 4 framed walls, and are perfect as supports or wall stiffeners.
- Lighter gauge than round columns but featuring higher load capacities.
- Galvanized with an in-line Flo-Coat for a triple layer of corrosion protection.
 An excellent choice for exterior applications.

 Available lengths are 9', 10' and 12' along with custom lengths and end plates.



Available Loads (lbs.)

3" - 13 Ga. 9' - 18,637 lbs. 10' - 16,162 lbs.

4" - 13 Ga. 10' - 29,776 lbs. 12' - 25,280 lbs.

4" - 11 Ga. 10' - 37,204 lbs. 12' - 31,503 lbs.



SQUAREcolumns

by Metwood





Report No.

P207009-070626

Test Date

6/26/2007

Report of Axial Compression of Steel Columns

Name of Project

Metwood - Column Testing

Client

Metwood, Inc., Boones Mill, VA

Description of Work Axial Compression of Steel Columns

Location of Work

Applied Testing & Geosciences, LLC, Bridgeport, PA

Material Supplier

Allied Tubing

Test Pump/Gauge

Enerpac RCH-606, P-80 Jack, Serial No. 257 - Calibration Services, Inc. 4/10/2007

Test Cylinder

TFL42-200K, Serial No. 200016

Load Calibration

Morehouse Instrument Company, Inc. / Certificate # 20016F2507

Indicator

Load Cell Central AHM Readout, Serial No. 1000341745

Test Procedure

ASTM E72 Modified

Test Engineer

Joss / Ianuli / Rivera

Section Properties

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
1	13	3"x3"x10'	0.101	0.100	0.093	0.106	0.100
4	13	3"x3"x10'	0.096	0.096	0.097	0.092	0.095
7	13	3"x3"x10'	0.107	0.094	0.095	0.092	0.097

Results

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
1	13	20	24,400	15,884	1.5
4	13	80	25,120	15,884	1.6
7	13	480	25,960	15,884	1.6
		Average:	25,160		1.6

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Reported to: Report Date

Al Smith 6/26/2007 Respectfully Submitted

Applied Testing & Geosciences, LLC

Craig J. Joss, Ph.D., P.E. Technical Manager









Report No.

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Test Procedure

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Test Engineer

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Section Properties

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
10	-	3"x3"x10'	0.113	0.116	0.119	0.112	0.115
5	-	3"x3"x10'	0.114	0.116	0.114	0.114	0.115
3	-	3"x3"x10'	0.114	0.117	0.112	0.112	0.114

Results

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
10	-	400	31,090	-	-
5	-	330	41,230	-	-
3	, -	100	41,270	-	-
		Average:	37,863	, n,	

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Reported to: Al Smith Report Date

6/27/2007

Respectfully Submitted,

Applied Testing & Geosciences, LLC

Craig J. Joss, Ph D., P.E. Technical Manage



401 E. Fourth Street, Bldg 12-B, Bridgeport, PA 19405 Phone: 610-313-3227 Fax: 610-313-9667 Email: info@appliedtesting.com Web: www.appliedtesting.com



Report No. P207009-070628 **Test Date** 6/28/2007

Report of Axial Compression of Steel Columns

Name of Project

Metwood - Column Testing

Client

Metwood, Inc., Boones Mill, VA

Description of Work

Axial Compression of Steel Columns

Location of Work

Applied Testing & Geosciences, LLC, Bridgeport, PA

Material Supplier

Allied Tubing

Test Pump/Gauge

Enerpac RCH-606, P-80 Jack, Serial No. 257 - Calibration Services, Inc. 4/10/2007

Test Cylinder

TFL42-200K, Serial No. 200016

Load Calibration

Morehouse Instrument Company, Inc. / Certificate # 20016F2507

Indicator

Load Cell Central AHM Readout, Serial No. 1000341745

Test Procedure

ASTM E72 Modified

Test Engineer

Joss / lanuli / Rivera

Section Properties

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
9	11	4"x4"x10'	0.121	0.135	0.135	0.120	0.128
12	11	4"x4"x10'	. 0.118	0.121	0.135	0.133	0.127
11	11	4"x4"x10'	0.136	0.134	0.119	0.121	0.128

Results

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
9	11	60	61,840	38,072	1.6
12	11	1570	66,170	38,072	1.7
11	11	-30	67,930	38,072	1.8
		Average:	65,313		1.7

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Reported to: Report Date

Al Smith 6/28/2007 Respectfully Submitted,

Applied Testing & Geosciences, LLC

Craig J Joss, Ph.D., P.E.

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Report No. P207009-070629

Test Date 6/29/2007

Report of Axial Compression of Steel Columns

Name of Project

Metwood - Column Testing

Client

Metwood, Inc., Boones Mill, VA

Description of Work

Axial Compression of Steel Columns

Location of Work

Applied Testing & Geosciences, LLC, Bridgeport, PA

Material Supplier

Allied Tubing

Test Pump/Gauge

Enerpac RCH-606, P-80 Jack, Serial No. 257 - Calibration Services, Inc. 4/10/2007

Test Cylinder

TFL42-200K, Serial No. 200016

Load Calibration

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Indicator

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Test Procedure

ASTM E72 Modified

Test Engineer

Joss / Ianuli / Rivera

Section Properties

Column Label	Gauge #	Column Size	Side A thk (inches)	Side B thk (inches)	Side C thk (inches)	Side D thk (inches)	Average thk (inches)
2	13	4"x4"x10'	0.097	0.097	0.094	0.097	0.096
8	13	4"x4"x10'	.0.095	0.095	0.095	0.097	0.096
6	13	4"x4"x10'	0.096	0.097	0.095	0.097	0.096

Results

Column Label	Gauge #	Initial Load (lbf)	Ultimate Load (lbf)	Allowable Load (lbf)	Ultimate vs. Allowable
2	13	90	48,280	28,361	1.7
8	13	-100	50,030	28,361	1.8
6	13	-60	53,140	28,361	1.9
		Average:	50,483		1.8

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Reported to: Al Smith Report Date

6/29/2007

Respectfully Submitted,

Applied Testing & Geosciences, LLC

Craig J Joss, Ph.D., P.E. Technical Manager

