

Infinity Testing Solutions

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Jack Post Compression Strnegth Test

Report Number: 14011437

Report for: Brooks Equipment Construction.
4101 Industrial , Laval
QC, H7L 6G9

Attention: Benoit Dufresne

Telephone: 1-800-332-4012 ext. 209

Report Date: November 14, 2014

1.0 INTRODUCTION

At request of Brooks Equipment Construction, Infinity Testing Solutions (ITS) conducted Jack Post Compression Strength tests as per CSA-269.2-M87

The types of samples that were received from customer and assigned with ITS sample numbers are represented in Table 1:

Table 1: Sample IDs

ITS Sample Number	Sample Description and Stock Numbers
14011437-1A, 1B, 1C, 1D	Jack Post 2012PS-0, Retracted, Test height 43.5"
14011437-2A, 2B, 2C, 2D	Jack Post 2014PS-1, Retracted, Test height 68"
14011437-3A, 3B, 3C, 3D	Jack Post 2012PS-2, Extended, Test height 132"
14011437-4A, 4B, 4C, 4D	Jack Post 2014PS-1, Extended, Test height 121"
14011437-5A, 5B, 5C, 5D	Jack Post 2014PS-0, Extended, Test height 72"
14011437-6A, 6B, 6C, 6D	Jack Post 2012PS-2, Retracted, Test height 80"
14011437-7A, 7B, 7C, 7D	Jack Post 2012PS-3, Retracted, Test height 105"
14011437-8A, 8B, 8C, 8D	Jack Post 2012PS-4, Retracted, Test height 128 "
14011437-9A, 9B, 9C, 9D	Jack Post 2012PS-4, Extended, Test height 195"
14011437-10A, 10B, 10C, 10D	Jack Post 2013PS-3, Extended, Test height 195"

2.0 TEST PROCEDURE

2.1 Compression Strength Test

The test was performed using a servo-hydraulic load test frame and a 100,000 lb load cell. The sample with top and bottom base plates was placed in vertical position between two flat steel surfaces. A retracted post installed in the frame is shown on Fig-1.

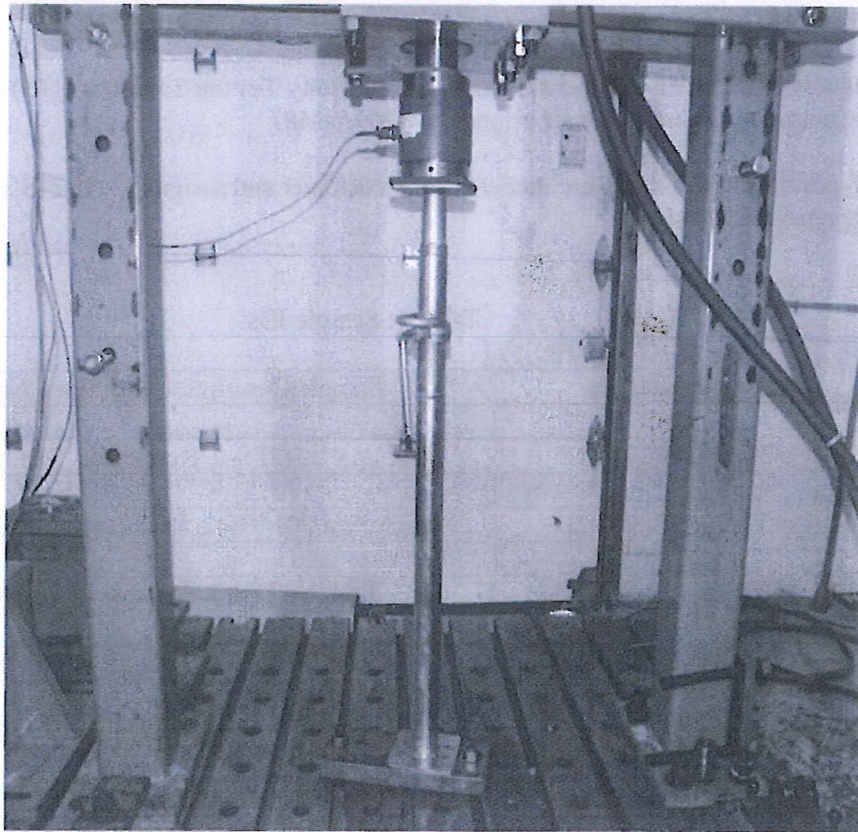


Figure 1

Extended posts were tested on the unique long frame which was specially designed for those tests. The extended sample on the frame is shown on Fig.-2.

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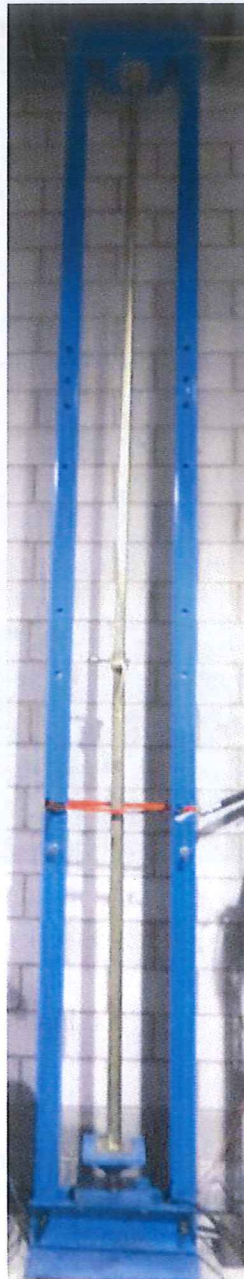


Figure 2

The compression force was applied with a rate not higher than 12,000 lbs/min until ultimate force was reached and load started goes down. The data “force – time” was recorded for each test. The maximum load at the failure for each test was selected and shown in the Table-2.



Figure 1

Extended posts were tested on the unique long frame which was specially designed for those tests. The extended sample on the frame is shown on Fig.-2.

3.0 RESULTS

The test results are listed in the Table-2:

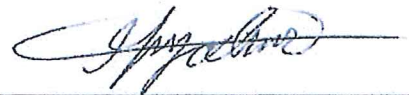
Table 2: Test results

Sample Description and Stock Numbers	Ultimate Load (lbf)				
	A	B	C	D	Average
Jack Post 2012PS-0, Retracted Test height 43.5"	26,012	26,038	26,876	26,242	26,929
Jack Post 2014PS-0, Extended Test height 72" - 6'	22,808	21,934	24,353	23,144	23,060
Jack Post 2014PS-1, Retracted Test height 68"	17,468	28,782	18,447	18,320	20,754
Jack Post 2014PS-1, Extended Test height 121"	10,810	12,909	13,190	13,647	12,639
Jack Post 2012PS-2, Retracted Test height 80" - 6'67"	29,054	25,536	26,851	28,338	27,445
Jack Post 2012PS-2, Extended Test height 132" - 11'	11,266	13,429	14,191	11,456	12,586
Jack Post 2012PS-3, Retracted Test height 105" - 8'	25,292	24,307	24,721	27,874	25,549
Jack Post 2013PS-3, Extended Test height 157" 13'	8,126	9,310	8,770	8,363	8,642
Jack Post 2012PS-4, Retracted Test height 128 "	20,014	21,926	17,352	19,125	19,604
Jack Post 2012PS-4, Extended Test height 195" 16'	6,412	7,208	7,050	6,570	6,810

The test was conducted in November, 2014.

Infinity Testing Solutions Inc.

Reported by:



Vladimir Yarusevych, PhD, P.Eng.
Senior Test Engineer

Reviewed by:



David Wang, P.Eng.

Infinity Testing Solutions

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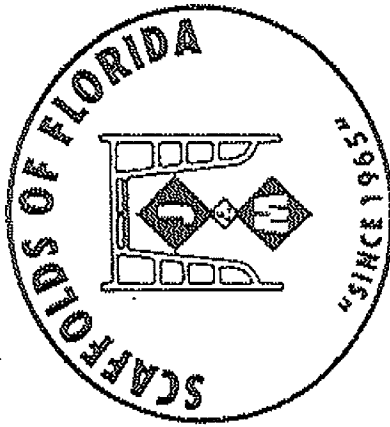
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ADE 305-953-6965 FAX 305-953-5497
11050 NW 36 AVE, MIAMI, FL 33167

ONROE 305-852-4962 FAX 305-852-0035
US # 1 MM 94.5, KEY LARGO, FL 33037

- 1.9 Inc diameter Inner Tube 0.126 (3.2 mm) Thickness, steel of Q235A
- 2.362 diameter Outer Tube, 0.137 Inch(3.5 mm) thickness, steel of Q235A

Safety Factor = 2:1
Allowable Loads in LBS.

Post Shore Code	Heavy Duty Post Shore Weight - in Pounds	Load Capacities - in Pounds											
		6'	7'	8'	9'	10'	10'-6"	11'	12'	13'	14'	15'	16'
6' to 11'	43.01	13,723	12,237	10,751	9,265	7,779		6,293					
8' to 13'	48.73			12,775	11,084	9,393		7,702	6,012	4,321			
10'-6" to 16'-3"	53.13						9,802	8,736	7,670	6,604	5,537	4,471	3,405

