

CLIENT: **Bautex Systems, INC.**
101 Thermon Drive, Suite 10
San Marcos, TX 78666
Attn: David Sterne

Test Report No: RJ2381-1	Date: April 09, 2013
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SAMPLE ID: **Bautex ICF System**

SAMPLING DETAIL: Test samples were submitted to the laboratory directly by the client. No special sampling conditions were observed by QAI.

DATE OF RECEIPT: Samples were received at QAI laboratories on February 27, 2013.

TESTING PERIOD: March 13, 2013

AUTHORIZATION: Signed QAI Test Proposal # PA111212-2, dated January 31, 2013

TEST PROCEDURE: Testing was performed in accordance with *ASTM E2634-10, Standard Specifications for Flat Wall Insulated Concrete Form (ICF) Systems. ASTM D1761-06 Standard Test Method for Mechanical Fasteners in Wood.*

Detailed test procedures are presented on the subsequent pages of this report.

TEST RESULTS: Detailed test results are presented on the subsequent pages of this report.

Prepared By



Matt Antell
Physical Testing Technician

**Signed for and on behalf of
QAI Laboratories Inc.**



Chris Scoville, M. Sc.
Operations Manager



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FASTENER TESTING – LATERAL

Test Procedure: Testing was performed in accordance with ASTM D1761-06. 5 test specimens were prepared for the lateral tests. Each specimen was then placed on a universal testing machine and secured to the base of the testing machine. The testing machine was then set up to pull the fastener in an upward direction (lateral to the surface of the ICF block) until failure. Each fastener was individually tested using the following parameters:

Constant rate of crosshead motion: 0.1 inches / minute.
 Preload Value: 1 lbs.

FASTENER TESTING RESULTS – LATERAL

Test Results:

6 x 2” Coarse Thread Drywall Screws

Test No.	Ultimate Load (lbs.)	Proportional Limit Load (lbs.)
CT-1	344.3	268.2
CT-2	500.9	370.1
CT-3	448.3	360.4
CT-4	366.3	311.3
CT-5	400.1	311.9
MO-1	432.1	255.9
MO-2	429.4	344.3
MO-3	417.8	382.4
MO-4	428.7	330.9
MO-5	410.8	245.3
Average	417.9	318.1
St. Dev.	43.1	48.6
COV	10.3%	(Not required)
AVG / 3.2	130.6	n/a
AVG x .75	n/a	238.6

Allowable load = Lesser of:
 (Average ultimate load / 3.2), or (proportional limit load x 0.75)

Allowable load = **130.6 lbs.**



FASTENER TESTING – WITHDRAWAL

Test Procedure: Testing was performed in accordance with ASTM D1761-06. 5 test specimens were prepared for the Withdrawal tests. Each specimen was then placed on a universal testing machine and secured to the base of the testing machine. The testing machine was then set up to pull the fastener in an upward direction until failure. Each fastener was individually tested using the following parameters:

Constant rate of crosshead motion: 0.1 inches / minute.
Preload Value: 1 Lbs.

Test Results:

**# 6 x 2” Coarse Thread
Drywall Screws**

Test No.	Ultimate Load (lbs)
CT-1	263.4
CT-2	227.2
CT-3	311.9
CT-4	304.7
CT-5	280.5
MO-1	267.3
MO-2	282.1
MO-3	286.4
MO-4	296.0
MO-5	297.4
Average	281.7
St. Dev.	24.6
COV	9%
AVG / 5	56.3

Allowable load = **56.3 lbs.**



CONCLUSION

- 1.) The allowable lateral fastener load is calculated as the lower of the following two values:
(a) The average ultimate load divided by 3.2, as long as the COV is not greater than 15%.
(b) 75% of the average proportional limit load.

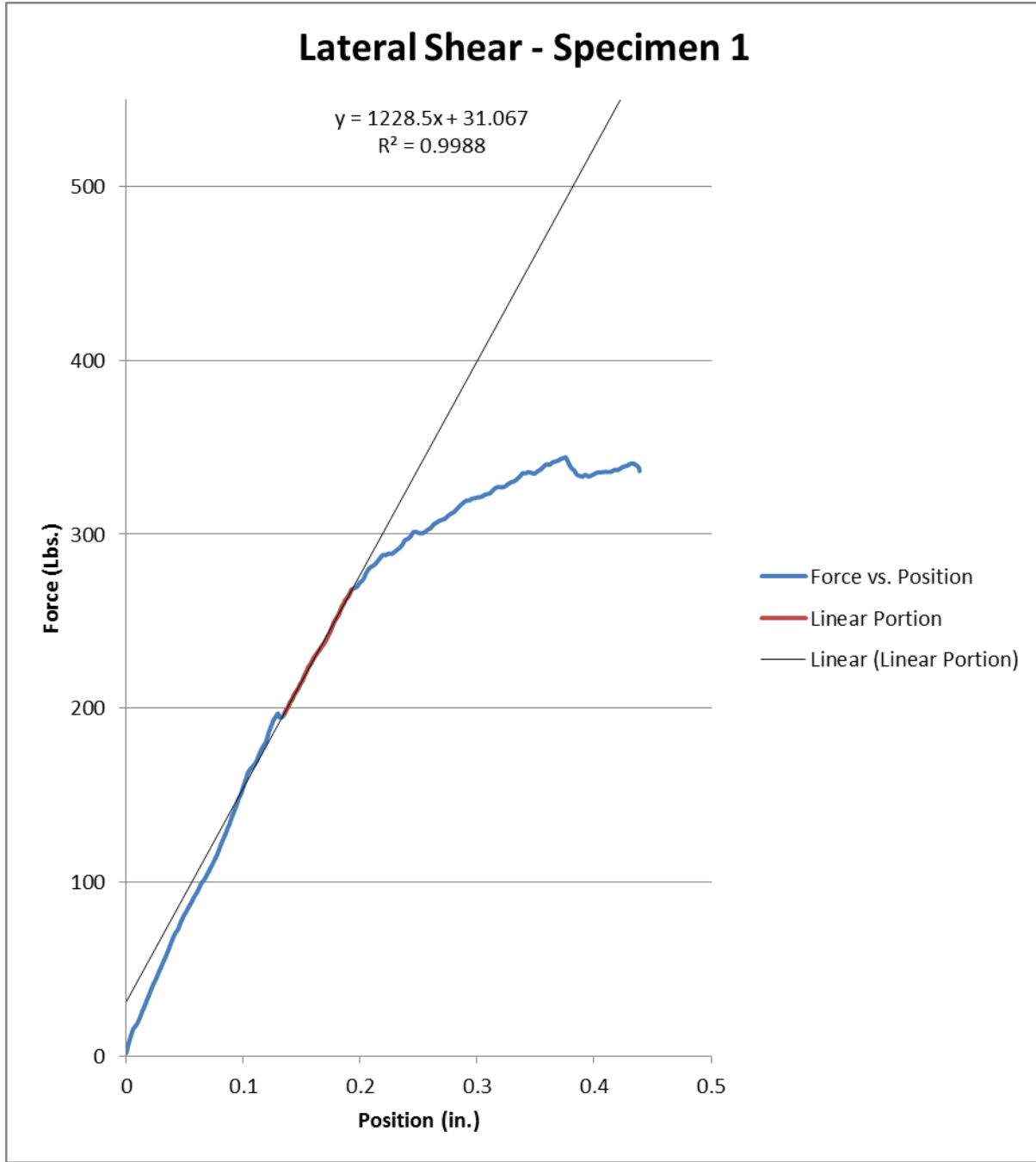
Type of fastener	Allowable lateral fastener load (lbs.)
# 6 x 2" coarse thread drywall screw	130.6

- 2.) The allowable withdrawal fastener load is calculated as the average ultimate load divided by 5.

Type of fastener	Allowable withdrawal fastener load (lbs.)
# 6 x 2" coarse thread drywall screw	56.3

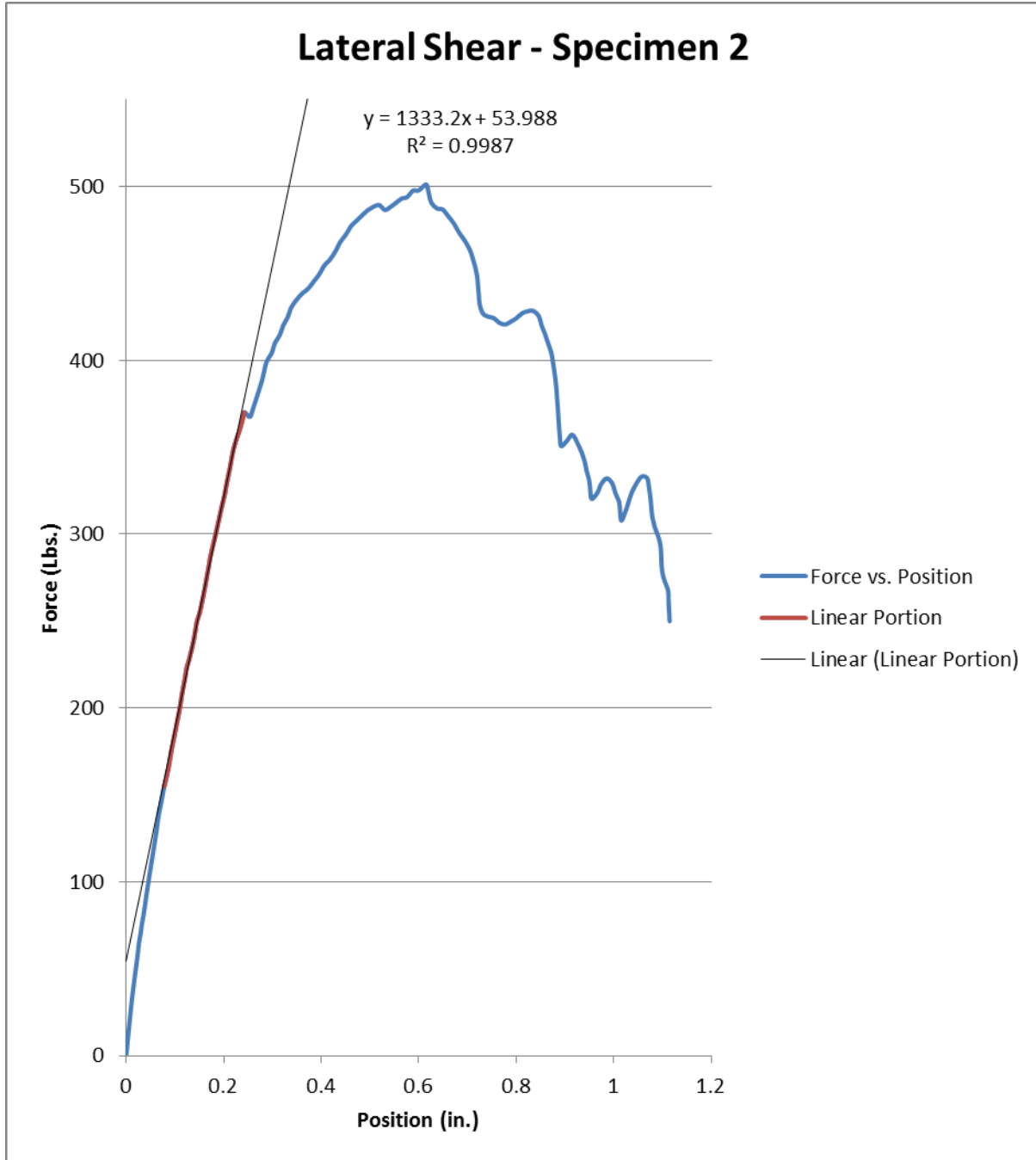
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Appendix A
Lateral curves



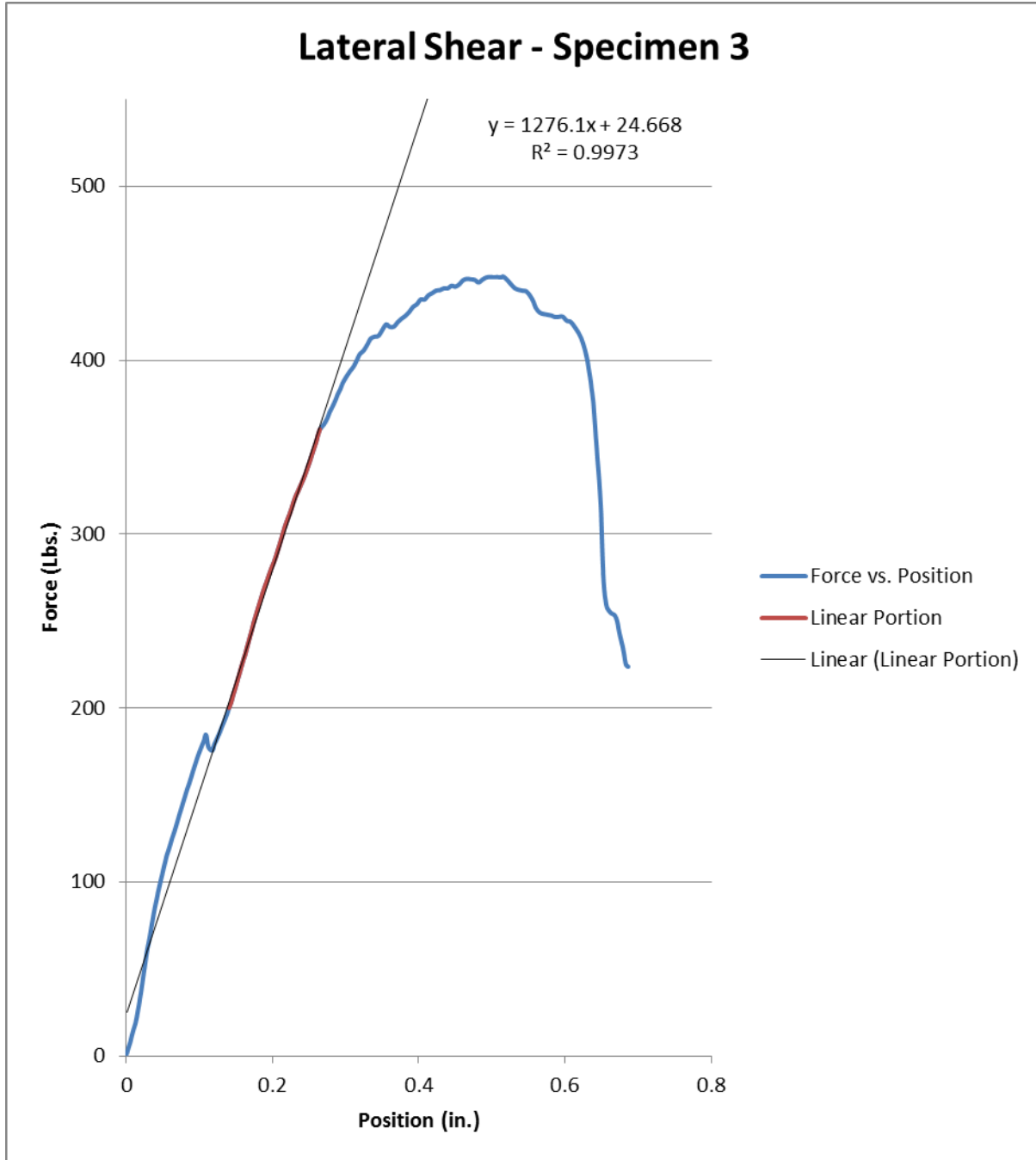
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Lateral curves



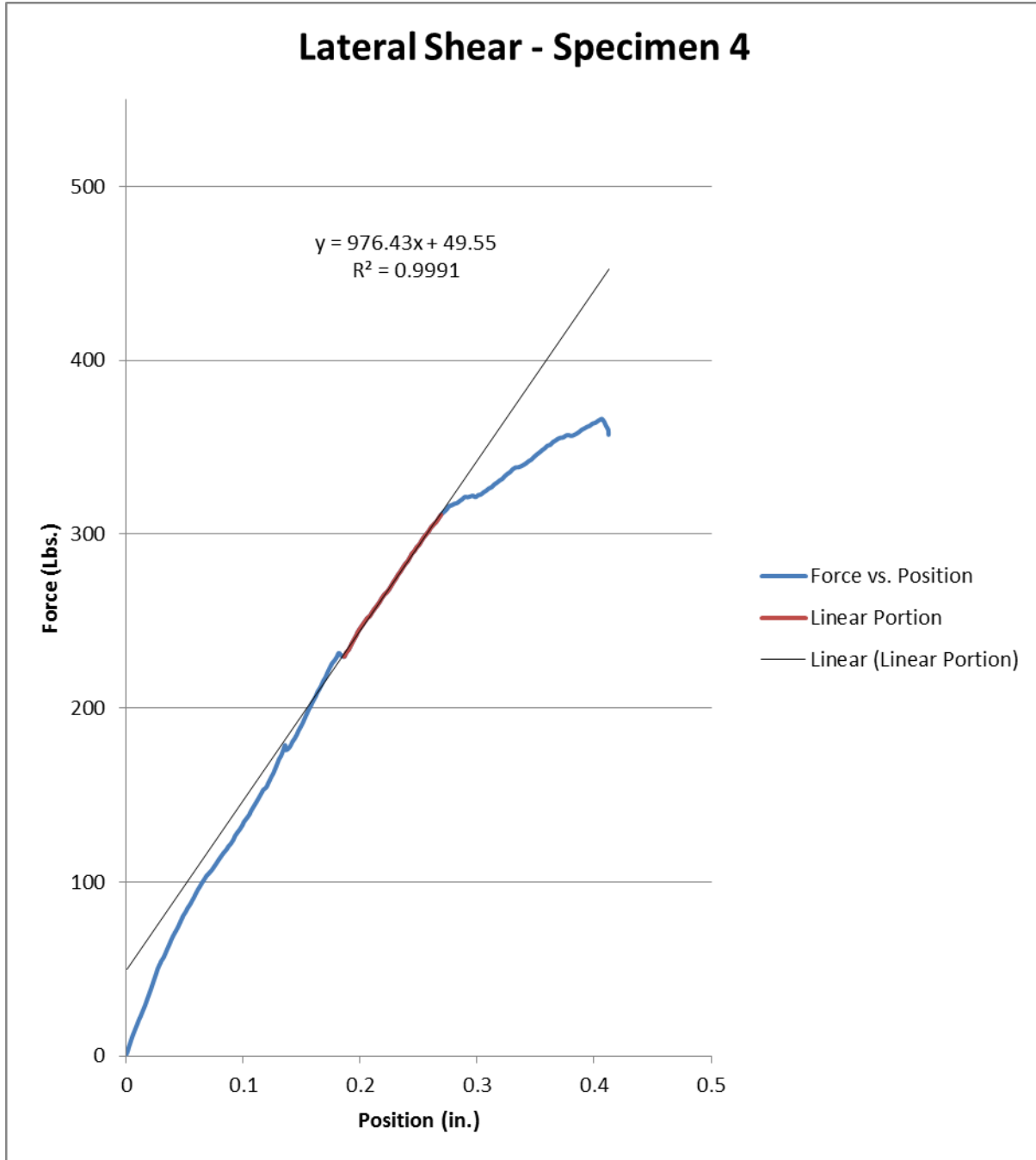
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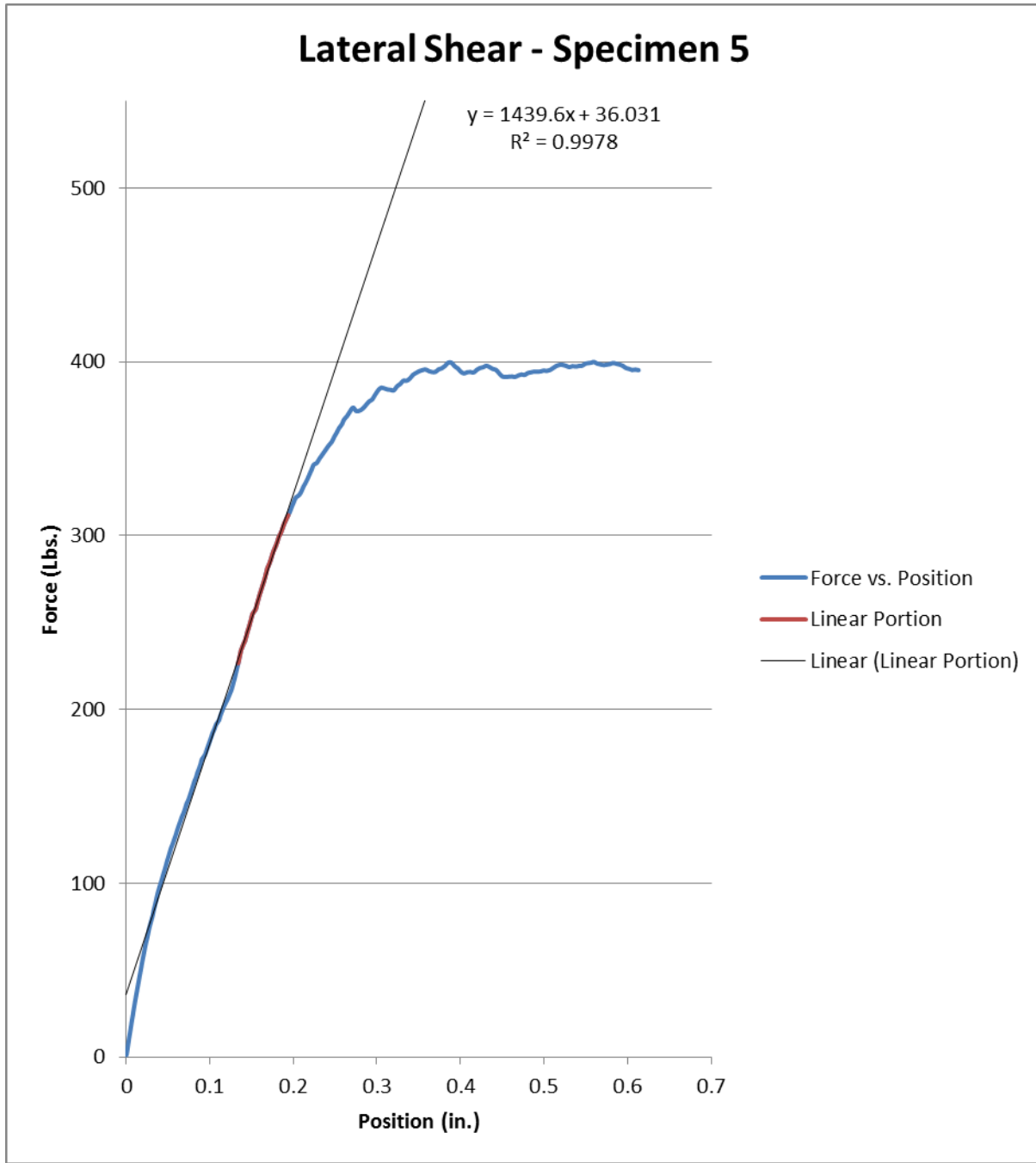
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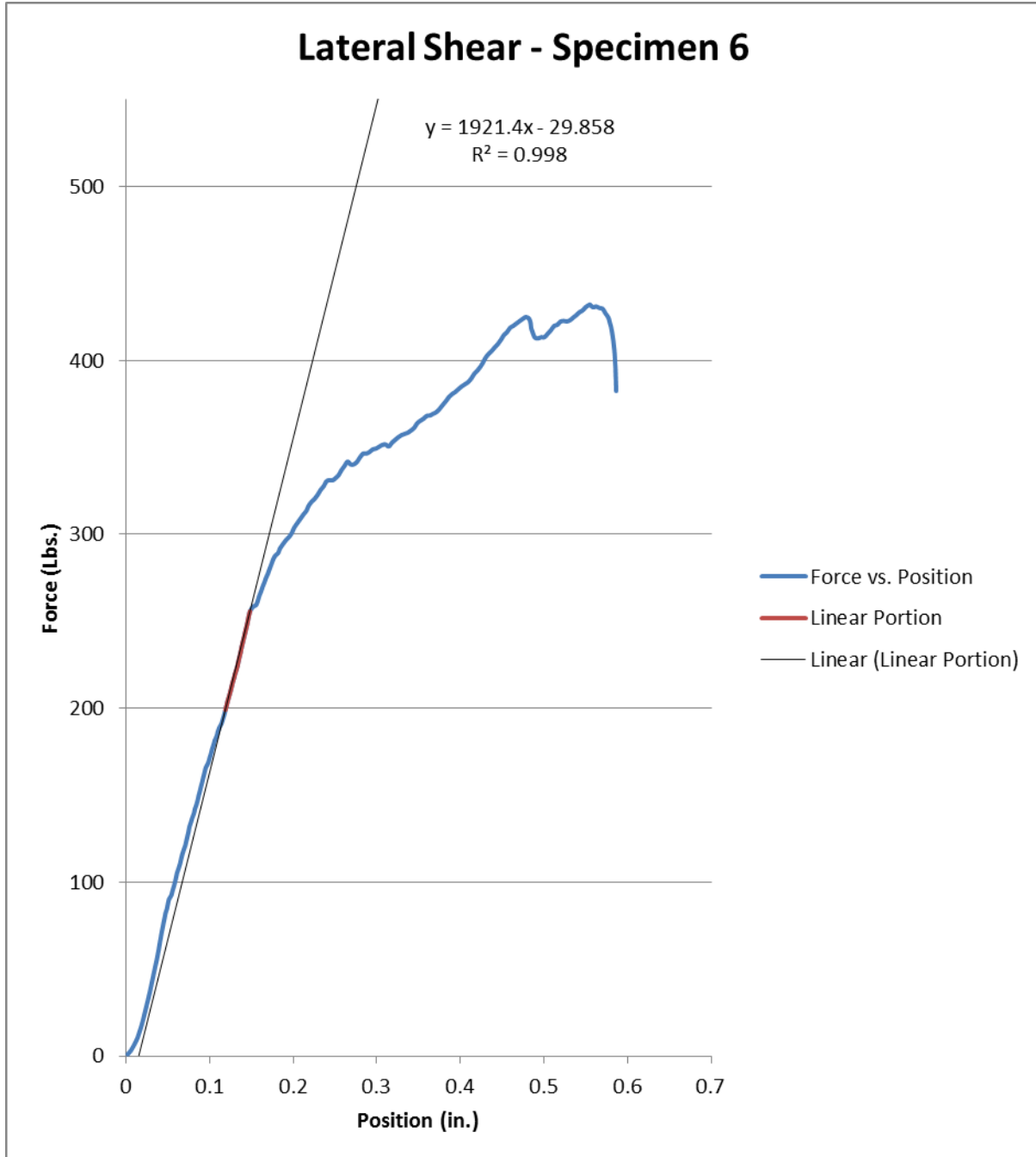


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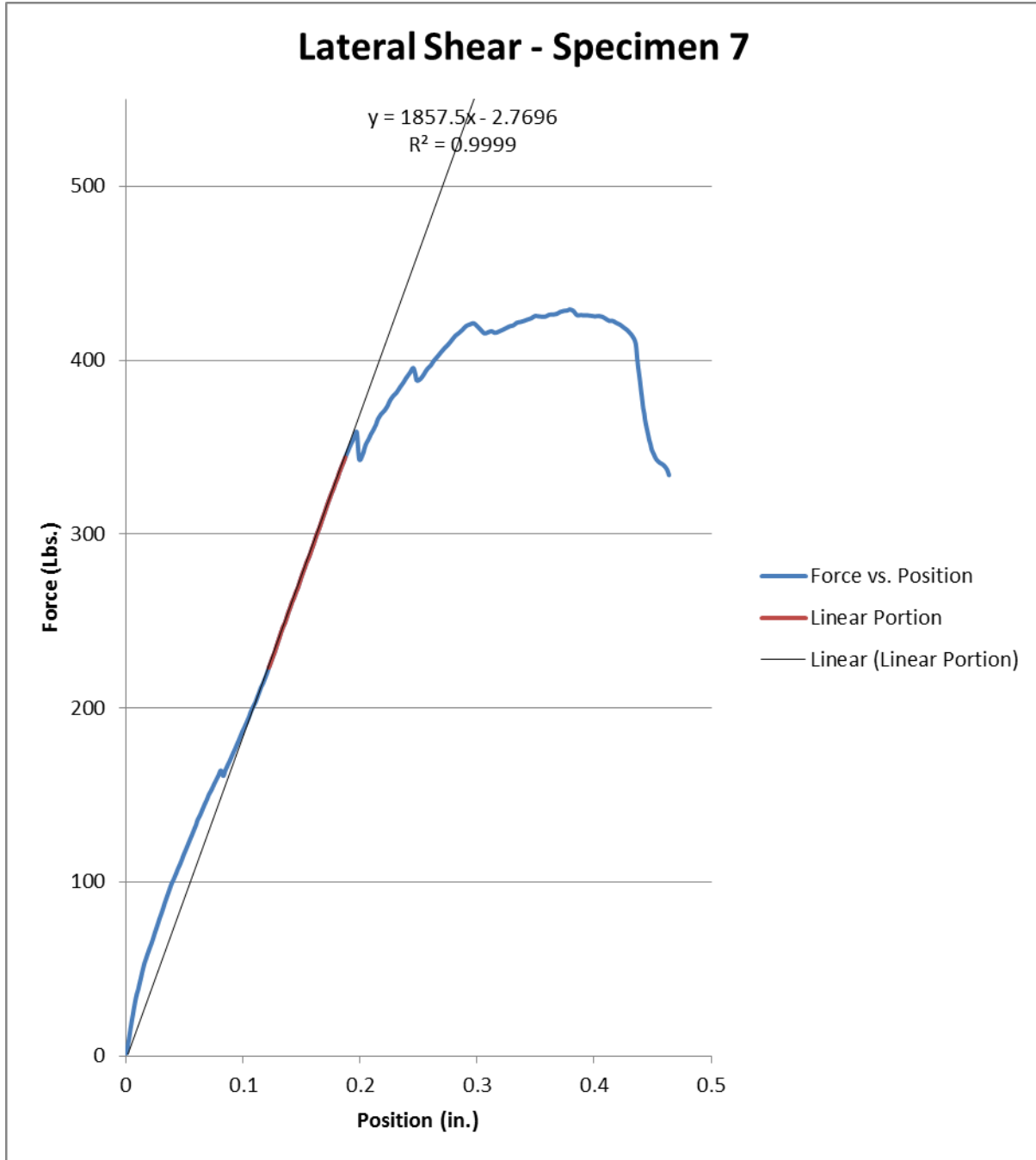
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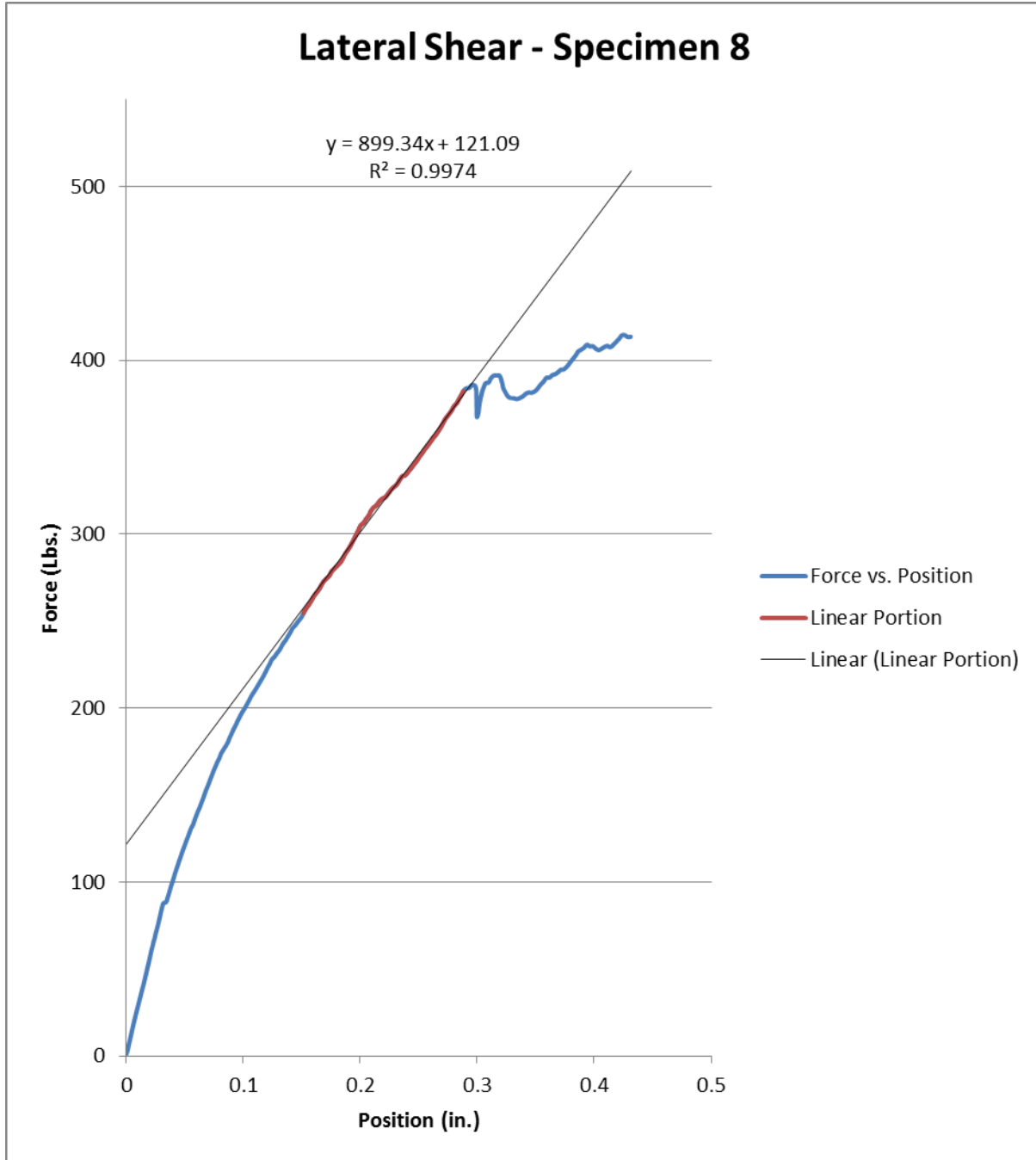


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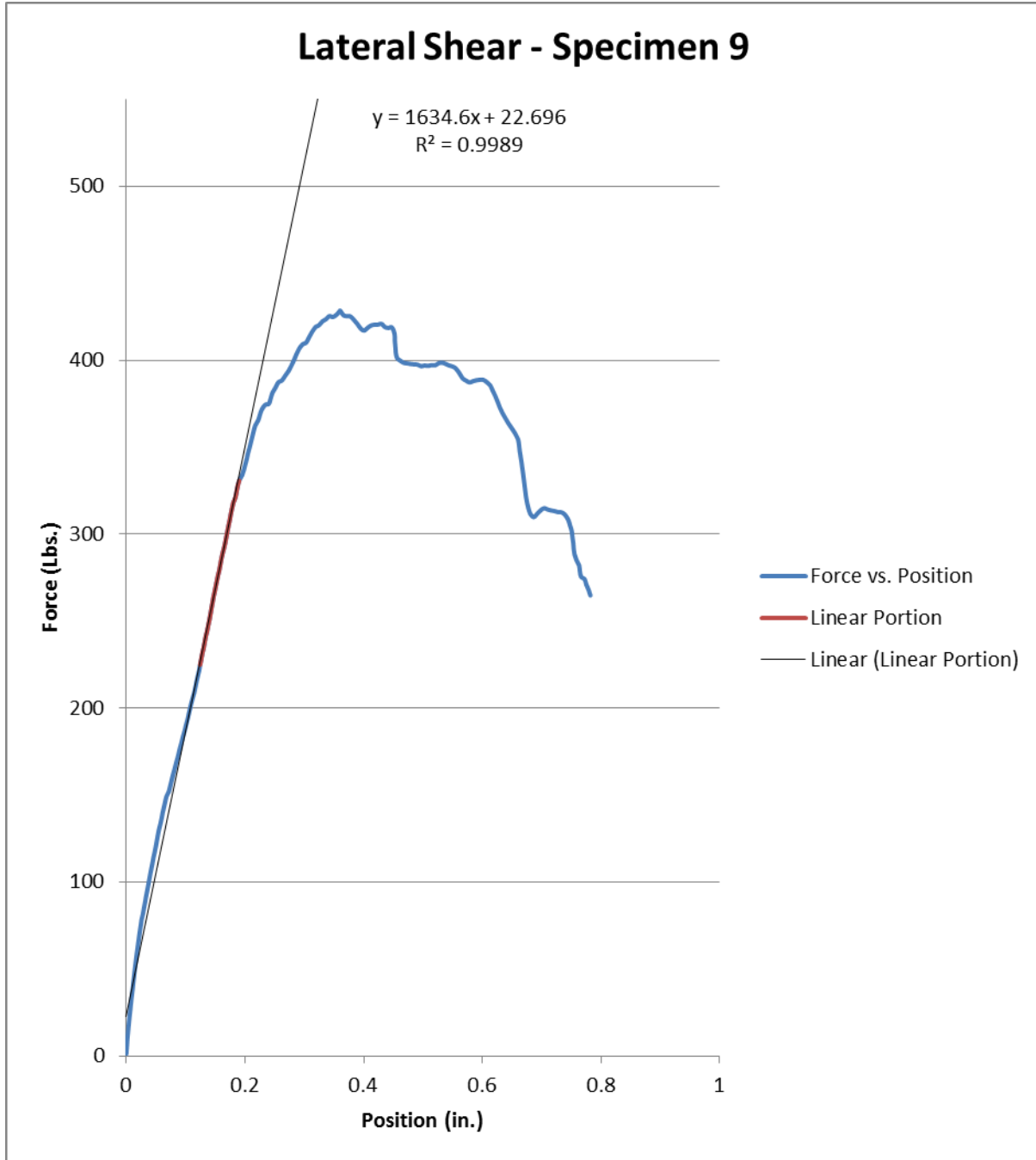
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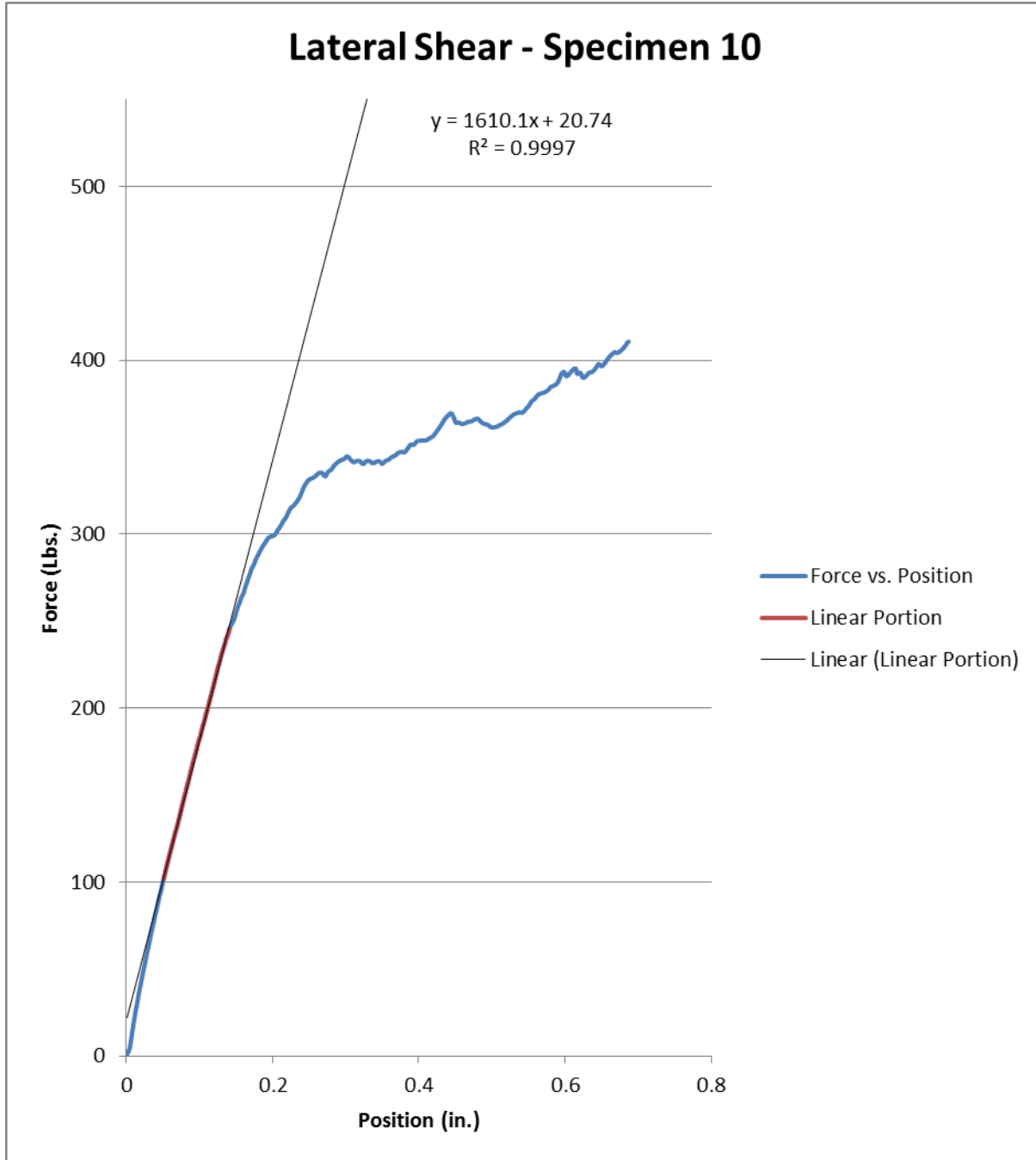
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