



Test Results | THERMORY® White Ash Decking Load Testing

TESTED

- ▶ Uniform Load testing for 16" O.C. 3/4" and 1" Thick THERMORY® White Ash decking.
- ▶ Point Load for 1" decking used for stairs.

RESULTS

- ▶ Both 3/4" and 1" THERMORY® White Ash decking withstood an average of over 500 psf before meeting the maximum deflection limit for a 16" O.C. span
- ▶ The 1" Ash withstood a 1500 pound point load, well over the code requirement for use as stairs.



THERMORY®
LEAVE A LASTING IMPACT

▶ DECKING ▶ CLADDING ▶ PORCH FLOORING

ThermoryUSA.com support@thermoryusa.com

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Batavia, NY 14020

DENVER

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Phone: 561-508-2830 E-mail: Engdep@blackwatertesting.com

REPORT NO: BT-TMY-21-002

TESTING FOR UNIFORM STATIC AIR PRESSURE AND CONCENTRATED LOADS FOR "THERMORY U.S.A. DECKING AND STAIR"

Test Dates: Start: 09/21/2021 End: 10/12/2021

Client:

Thermory U.S.A.

56 Harvester Ave. Suite 201-1

Batavia, NY 14020

Phone: (585) 250-4074

Product Description of Unit: Thermory U.S.A. Decking (1" and 3/4") and Stair (1")

Overall Size:

Specimen 1-10: 5-1/8"w X 3/4"d X47"l

Specimen 1A-10A: 5-1/8"w X 1"d X47"l

Specimen 1B-10B: 5-1/8"w X 1"d X47"l

Test Protocol:

Specimen 1-10: Uniform Distributed load to meet deflection criteria of L/360 at midspan. Air differential chamber used.

Specimen 1A-10A: Uniform Distributed load to meet deflection criteria of L/360 at midspan. Air differential chamber used.

Specimen 1B-10B: Point loads to meet deflection criteria of 1/8" at midspan. Hydraulic Jack used.

Disclaimer:

This is a general statement and does not supersede the specific product descriptions in this report. The specimens are in conformance with drawings provided by the manufacturer. These drawings have been marked to indicate the appropriate portions descriptive of this test series. Blackwater Technical Services Inc. does not take responsibility of product performance and whose only purpose is to test and gather pertinent data under test report format for the client.

Witness to Testing:

Michael Caldwell P.E., BT President/Test Engineer

Michael Hanrahan, BT Lab Technician

CONCENTRATED LOADS: Specimens were tested for point loads at mid span of supports to determine load necessary to induce deflections equal to a maximum deflection criteria of 1/8".

STATIC LOAD TEST: Specimens were tested for Uniform Distributed load to meet deflection criteria L/360, where L=16".

CONCLUSION: Following testing Specimens **1-10, 1A-10A, and 1B-10B** were disassembled. No failures were observed on the composite specimen systems. **The "Thermory U.S.A. Decking and Stair" products were tested in accordance with client requirements.**

BLACKWATER TECHNICAL SERVICES INC.

ISO 17025:2017 Certified ANAB Certificate AT-2584

Respectfully submitted,

Michael Caldwell, President _____

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Build Out

Specimens 1-10

Thermory Benchmark Ash Decking 5-1/8"x3/4"x47", were attached to a frame made from 2x10 SYP frame screwed at corners typical. The frame allowed two 16" spans and a 15" span from support to support. The Thermory Benchmark Ash Decking was screwed in at each support with x2_ø3/16"x3" Deck Lag Screws @ 1" from corner edges. Specimens were tested two at a time (side by side).

Specimens 1A-10A

Thermory Benchmark Ash Decking 5-1/8"x1"x47", were attached to a frame made from 2x10 SYP frame screwed at corners typical. The frame allowed two 16" spans and a 15" span from support to support. The Thermory Benchmark Ash Decking was screwed in at each support with x2_ø3/16"x3" Deck Lag Screws @ 1" from corner edges. Specimens were tested two at a time (side by side).

Specimens 1B-10B

Thermory Benchmark Ash Stair 5-1/8"x1"x47", were attached to a frame made from 2x10 SYP frame screwed at corners typical. The frame allowed two 16" spans and a 15" span from support to support. The Thermory Benchmark Ash Stair was screwed in at each support with x2_ø3/16"x3" Deck Lag Screws @ 1" from corner edges. Specimens were tested two at a time (side by side).

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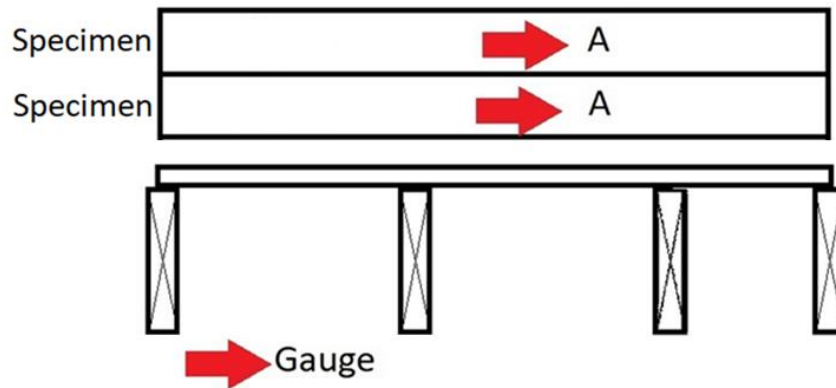
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Test Results



Specimens	Weight lb	Deflection Limit inch	Gauge A psf	Specimens	Weight lb	Deflection Limit inch	Gauge A psf
1	4.5	0.044"	501.61	1A	6.5	0.044"	626.21
2	4.5	0.044"	624.56	2A	5.0	0.044"	677.24
3	4.0	0.044"	505.94	3A	6.0	0.044"	524.68
4	4.5	0.044"	501.64	4A	5.5	0.044"	315.13
5	4.5	0.044"	595.12	5A	4.5	0.044"	537.53
6	4.5	0.044"	497.50	6A	5.5	0.044"	523.60
7	4.0	0.044"	518.64	7A	4.5	0.044"	338.32
8	4.0	0.044"	507.93	8A	5.0	0.044"	513.71
9	4.0	0.044"	498.07	9A	5.5	0.044"	587.69
10	4.5	0.044"	525.80	10A	5.0	0.044"	692.71
Averages	4.3	0.044"	527.68	Averages	5.3	0.044"	533.68

Notes:

Dimensions Specimens 1-10: 5-1/8"wx3/4"dx47"l and span length 16".

Dimensions Specimens 1A-10A: 5-1/8"wx1"dx47"l and span length 16".

Specimens 1-10 tested per the following sets:

1-6 | 2-5 | 3-8 | 4-10 | 7-9

Specimens 1A-10A tested per the following sets:

1A-9A | 2A-10A | 4A-7A | 5A-3A | 6A-8A

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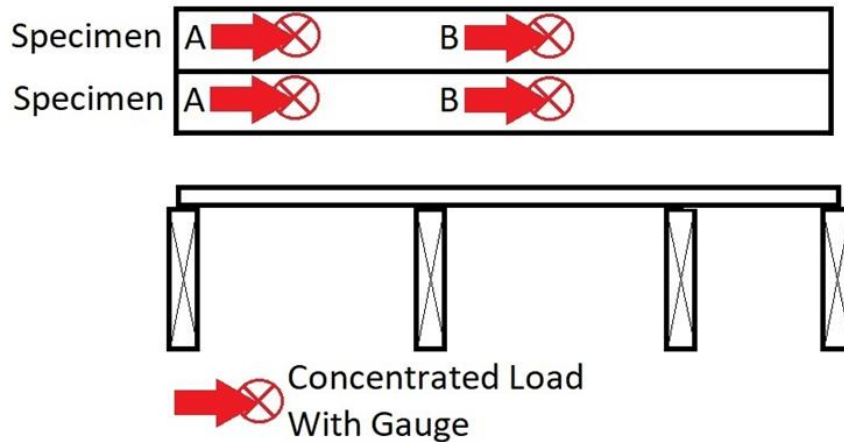
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Specimen	Weight lb	Deflection Limit	Gauge A lb	Gauge B lb	Notes
1B	5.5	1/8"(0.125")	1810.31	1508.59	Dimensions for all boards: 5-1/8"wx1"x47"l Span Length 16"
2B	6.0	1/8"(0.125")	1508.59	1357.73	
3B	5.0	1/8"(0.125")	1357.73	1131.44	
4B	5.5	1/8"(0.125")	1659.45	1508.59	
5B	5.5	1/8"(0.125")	1508.59	1546.31	
6B	5.5	1/8"(0.125")	1508.59	1508.59	
7B	5.0	1/8"(0.125")	1357.73	1357.73	
8B	4.5	1/8"(0.125")	1659.45	1659.45	
9B	5.0	1/8"(0.125")	1659.45	1810.31	
10B	5.0	1/8"(0.125")	1470.88	1508.59	
Averages	5.25	1/8"(0.125")	1550.08	1489.74	

Specimens 1B-10B tested per the following sets:

1B-2B | 3B-4B | 5B-6B | 7B-8B | 9B-10B

Note: Jack induced localized deformation at the loading site, but no structural failures were observed at the applied loads.

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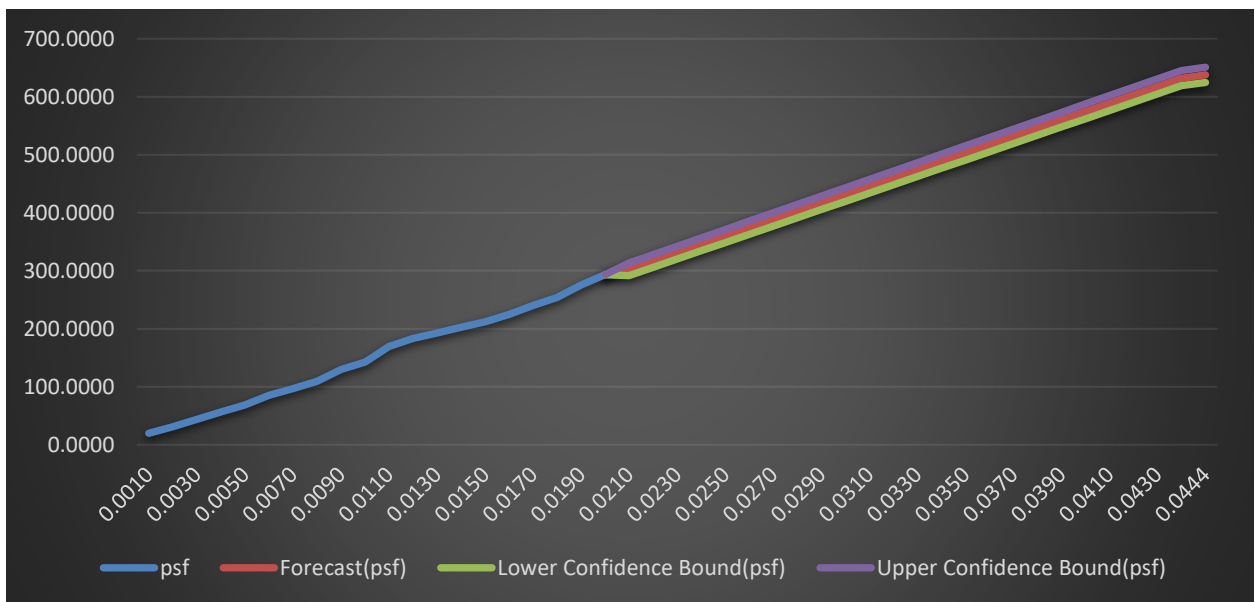
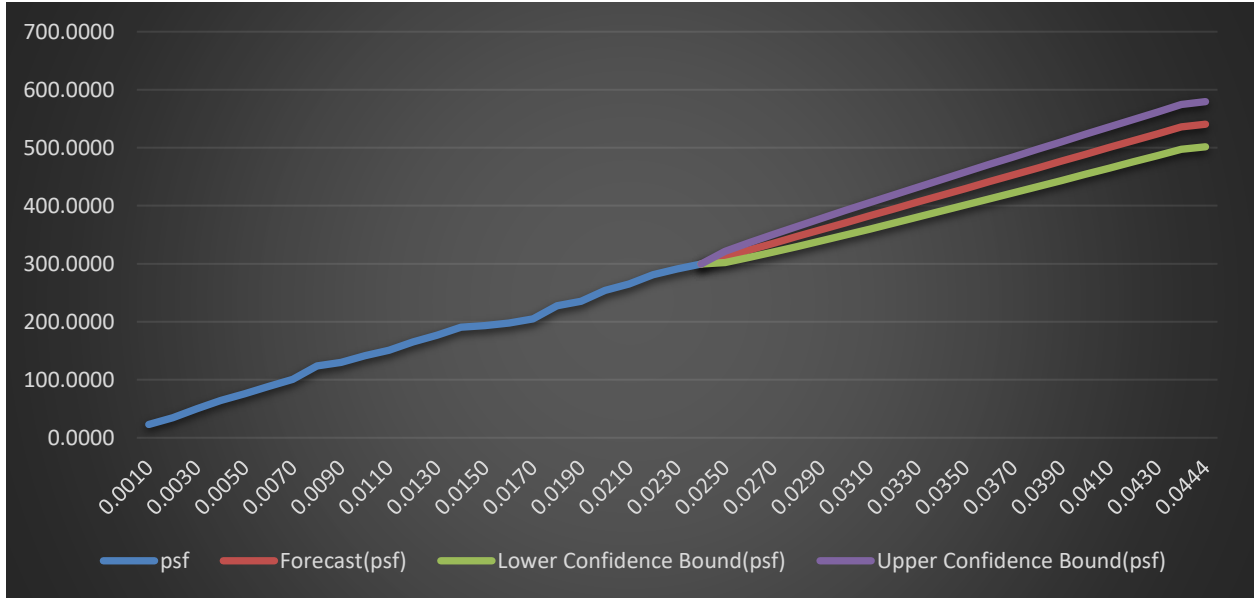
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Appendix

Graphs (deflection "inches" vs load "psf") for specimens 1-10 and 1A-10A.



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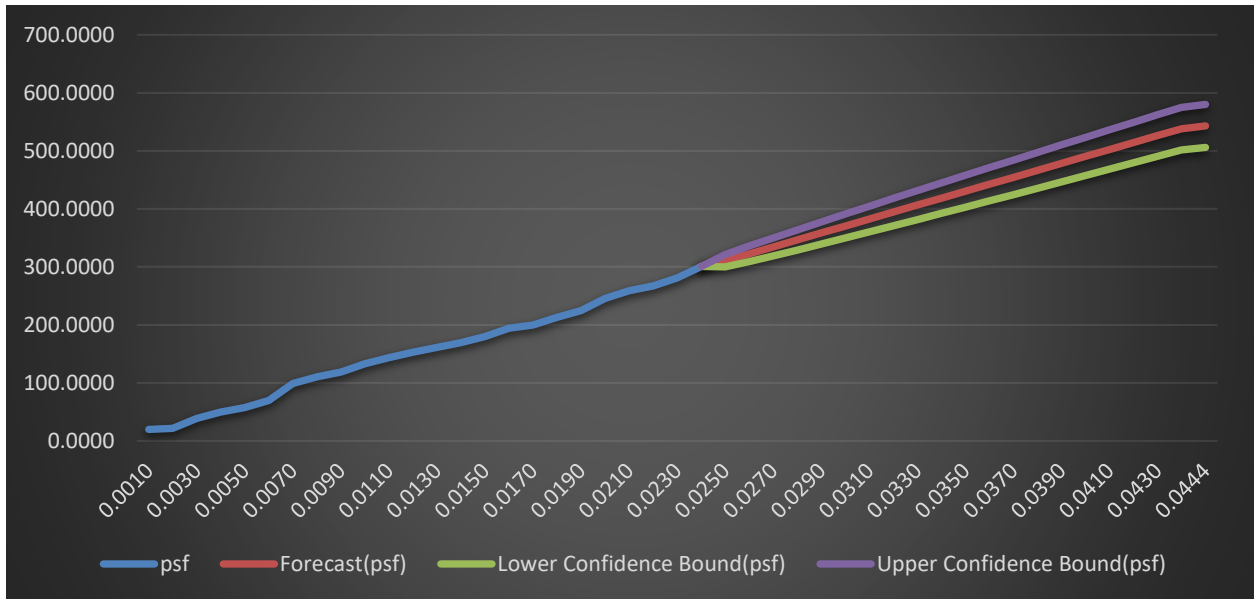
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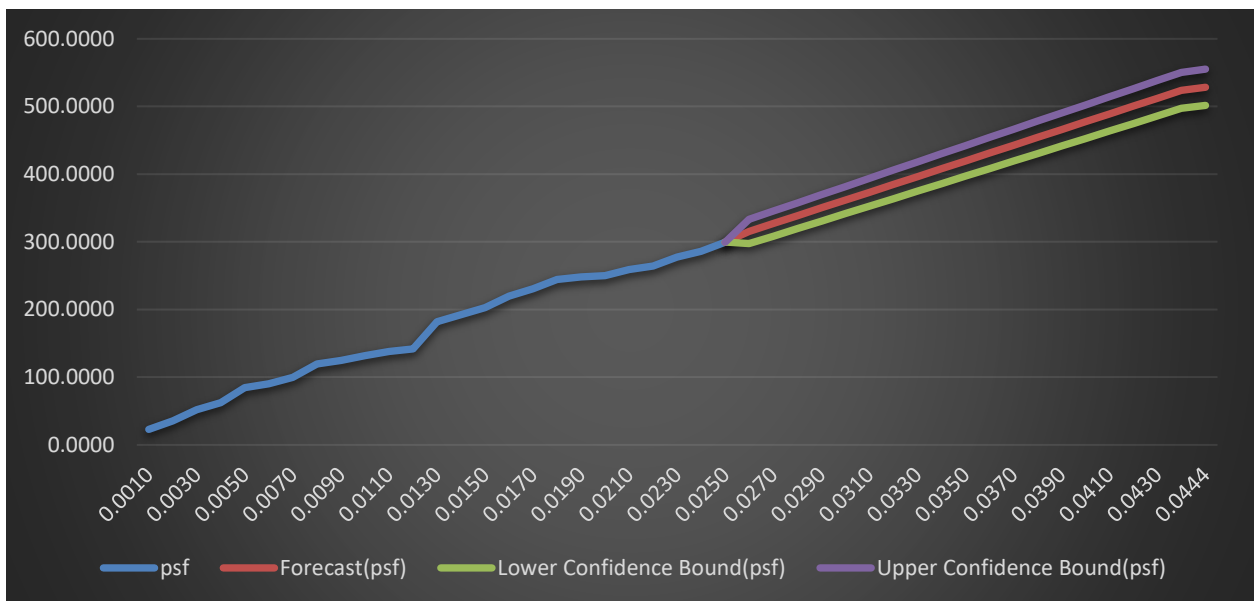
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Specimen 3



Specimen 4

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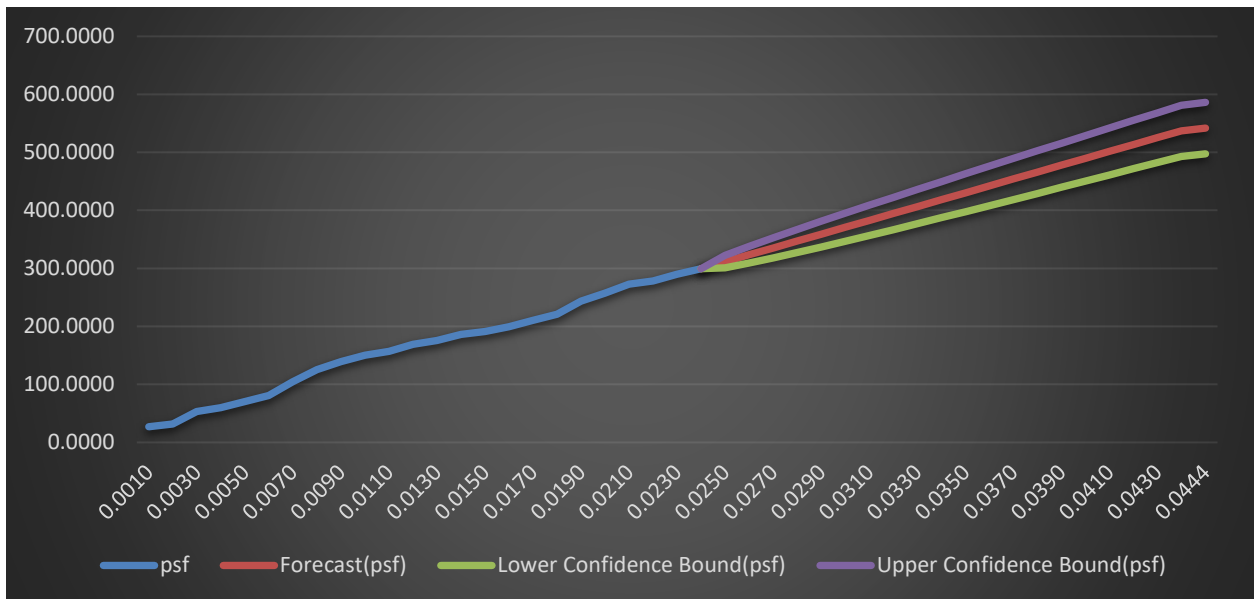
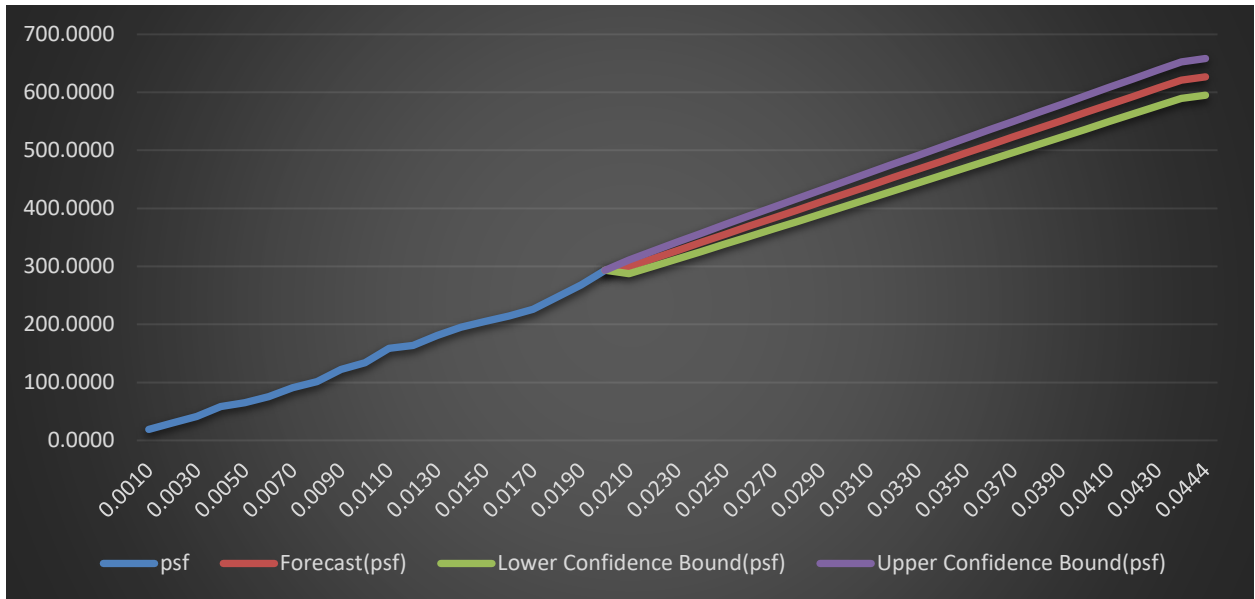
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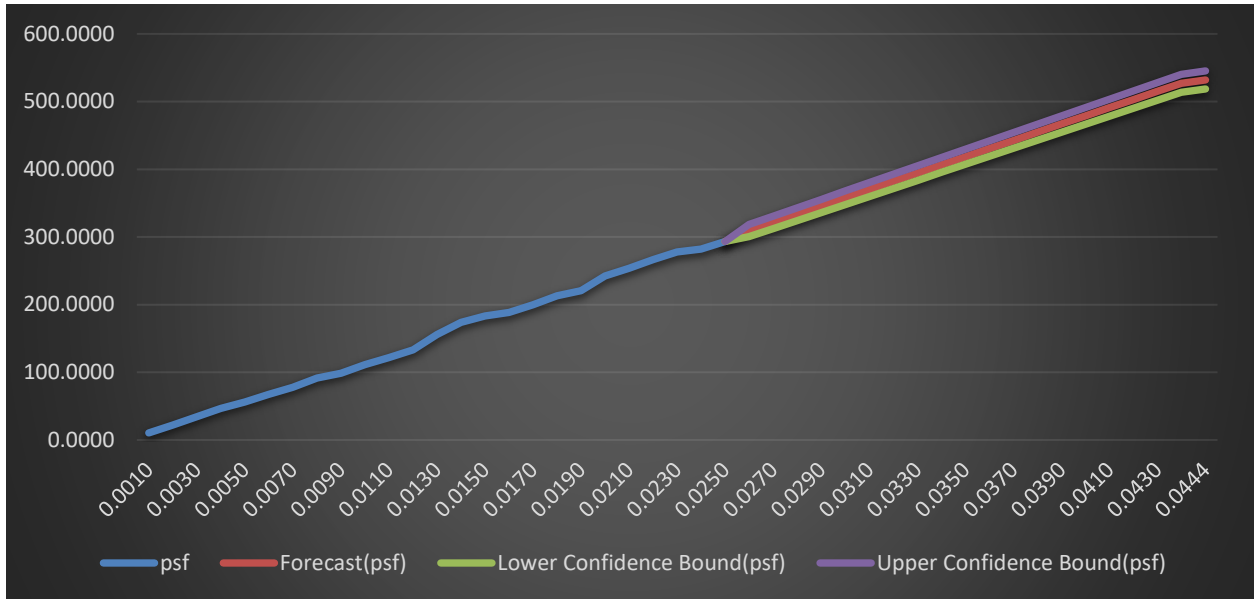
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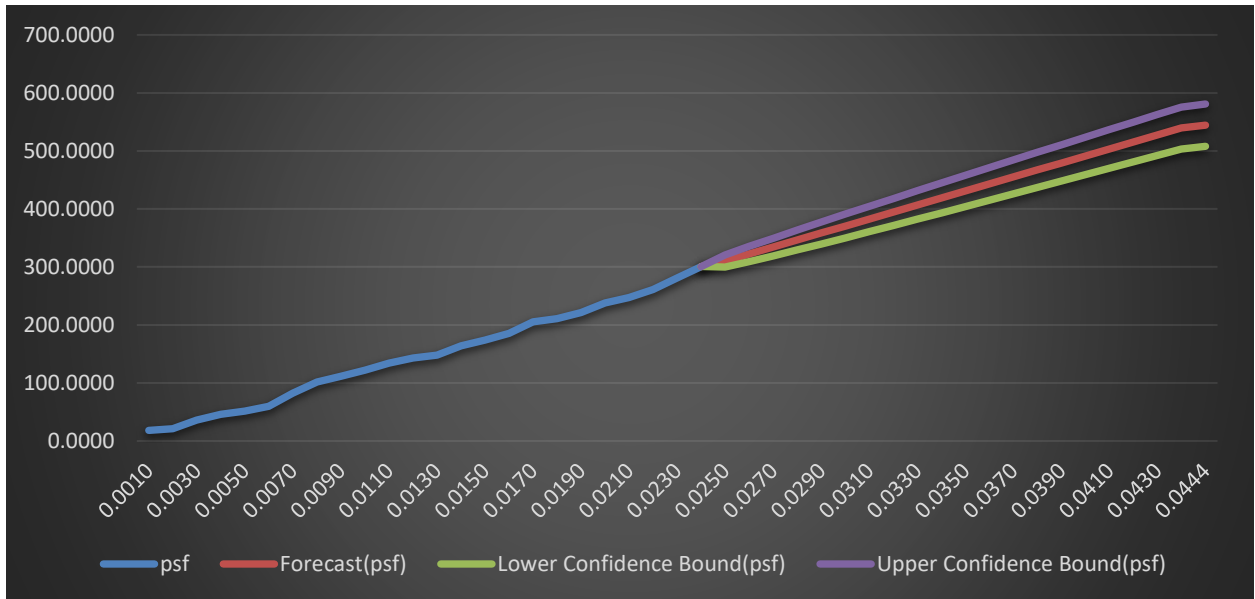
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Specimen 7



Specimen 8

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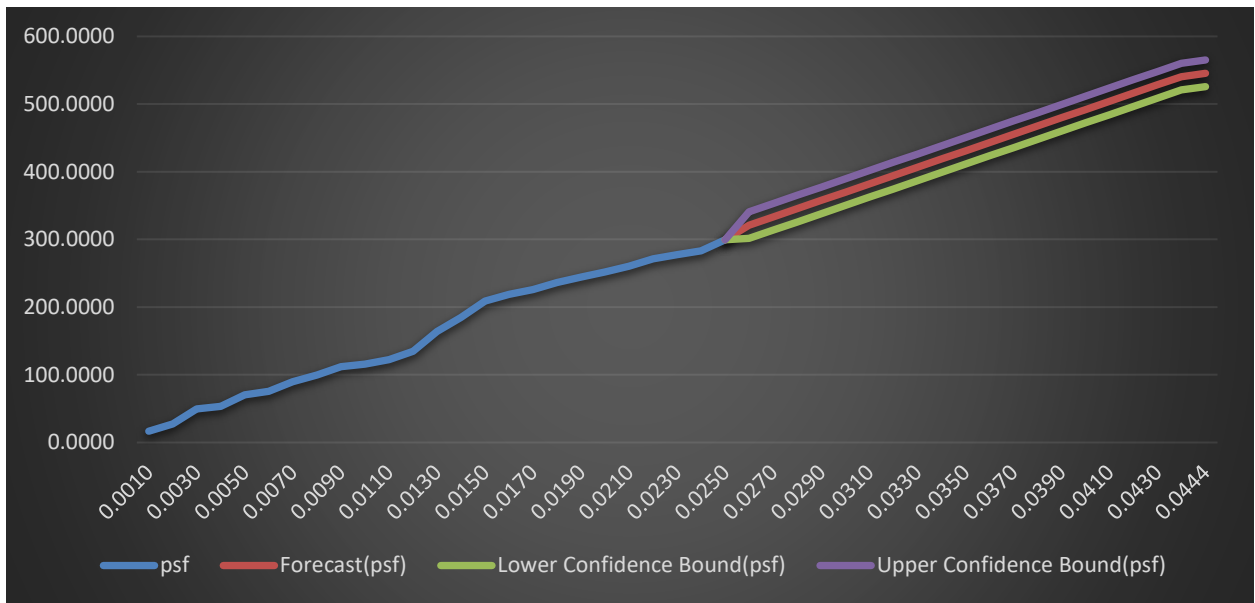
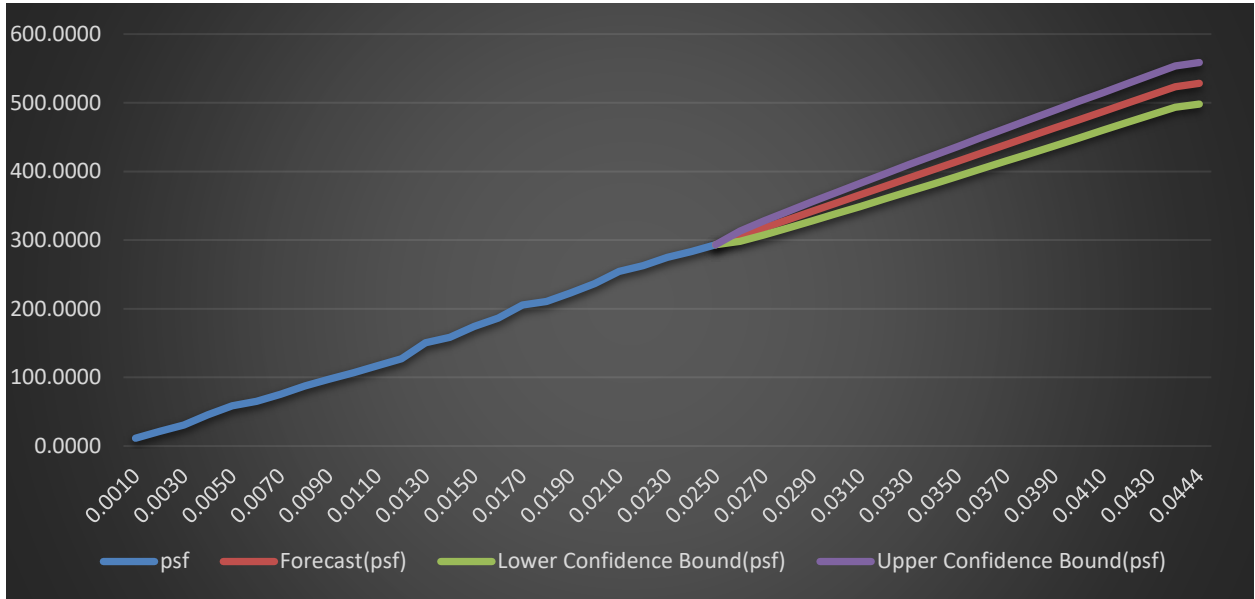
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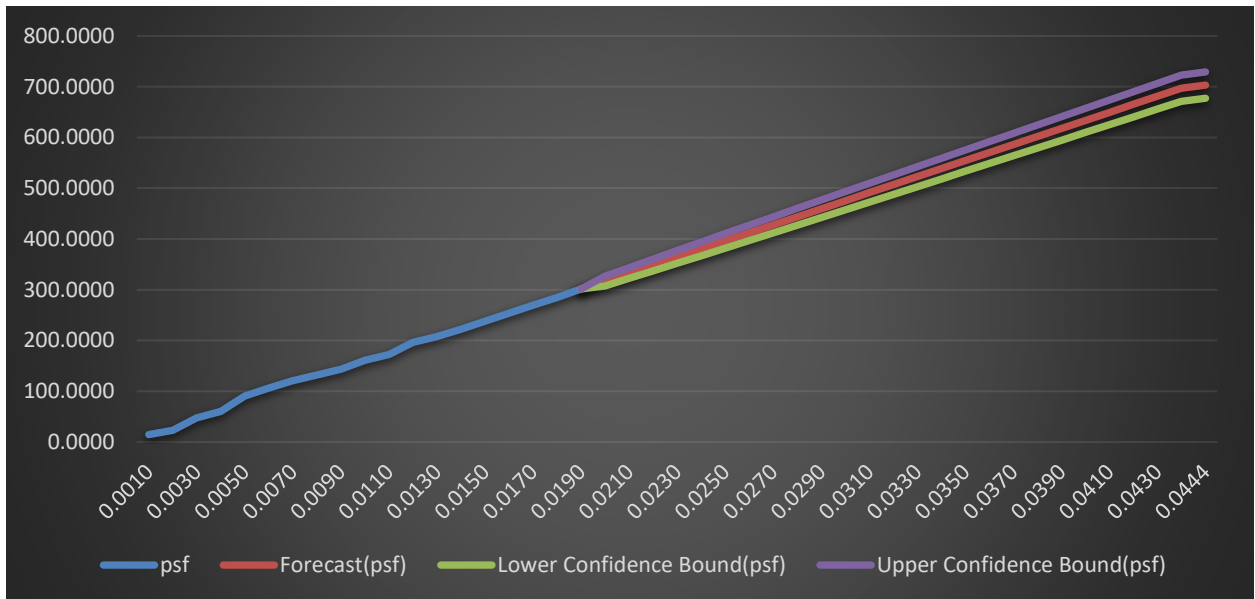
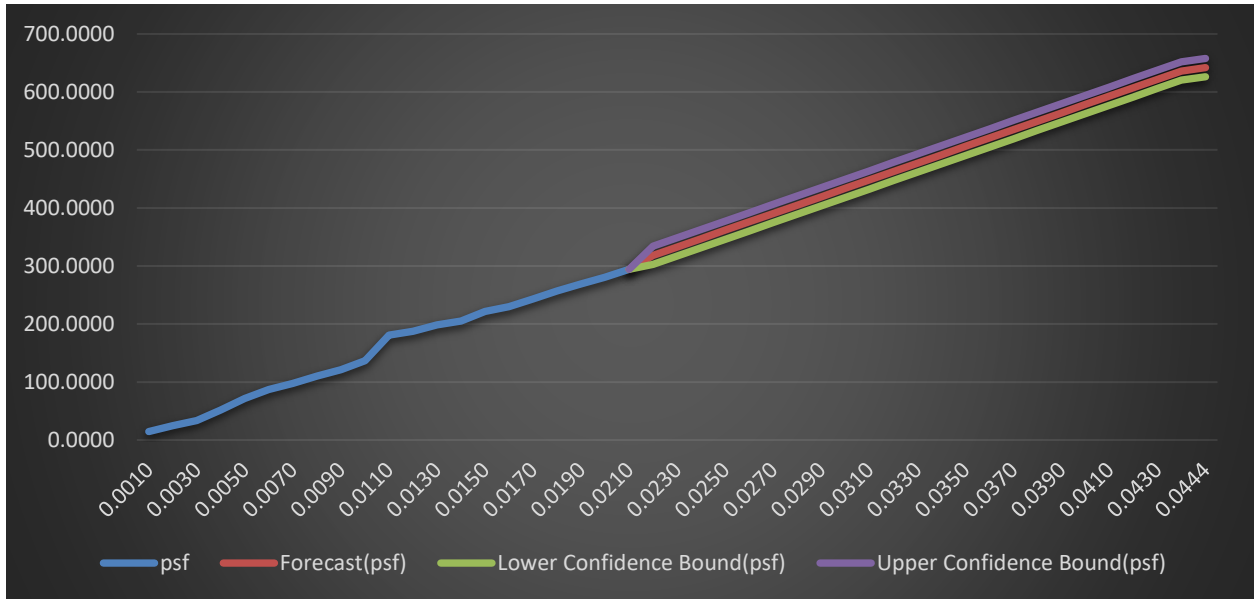
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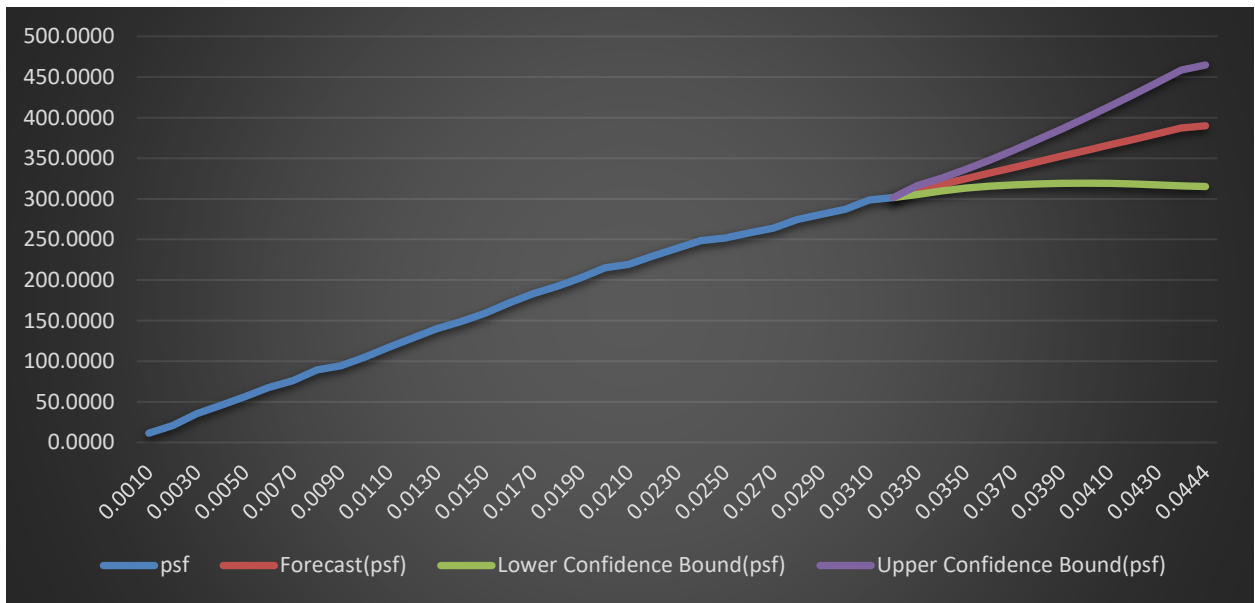
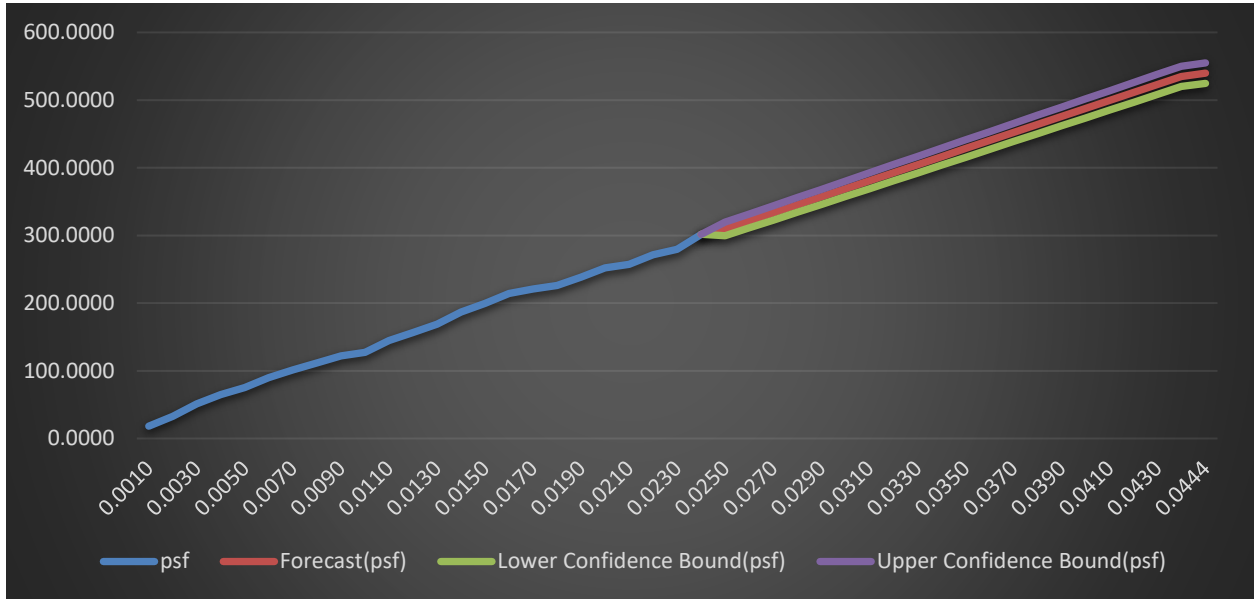
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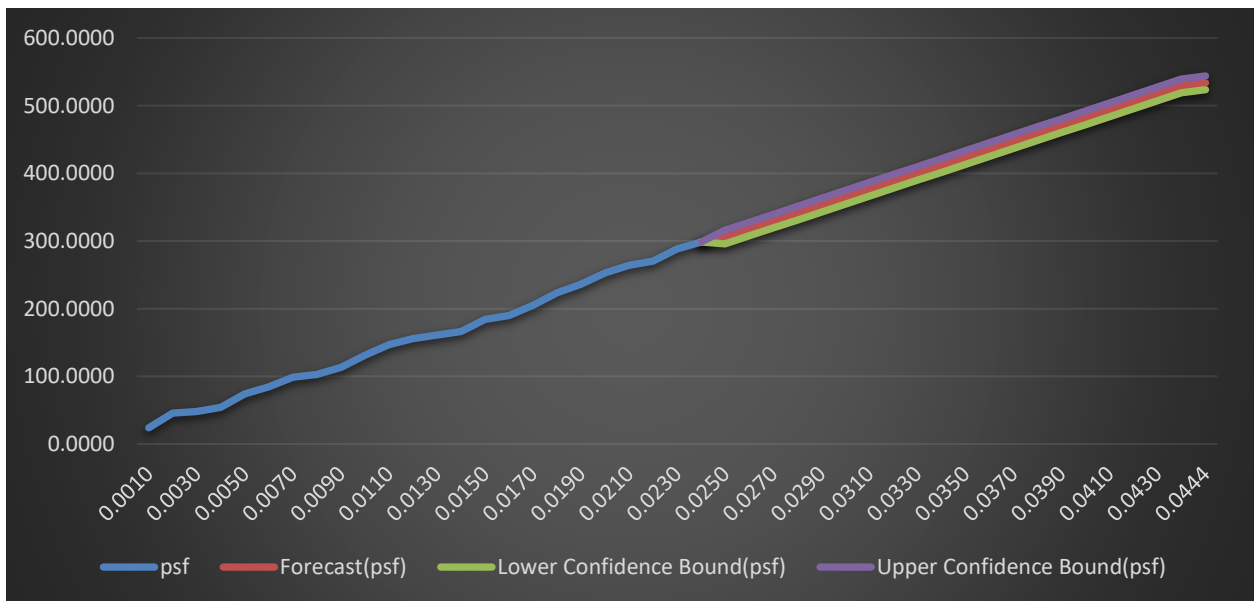
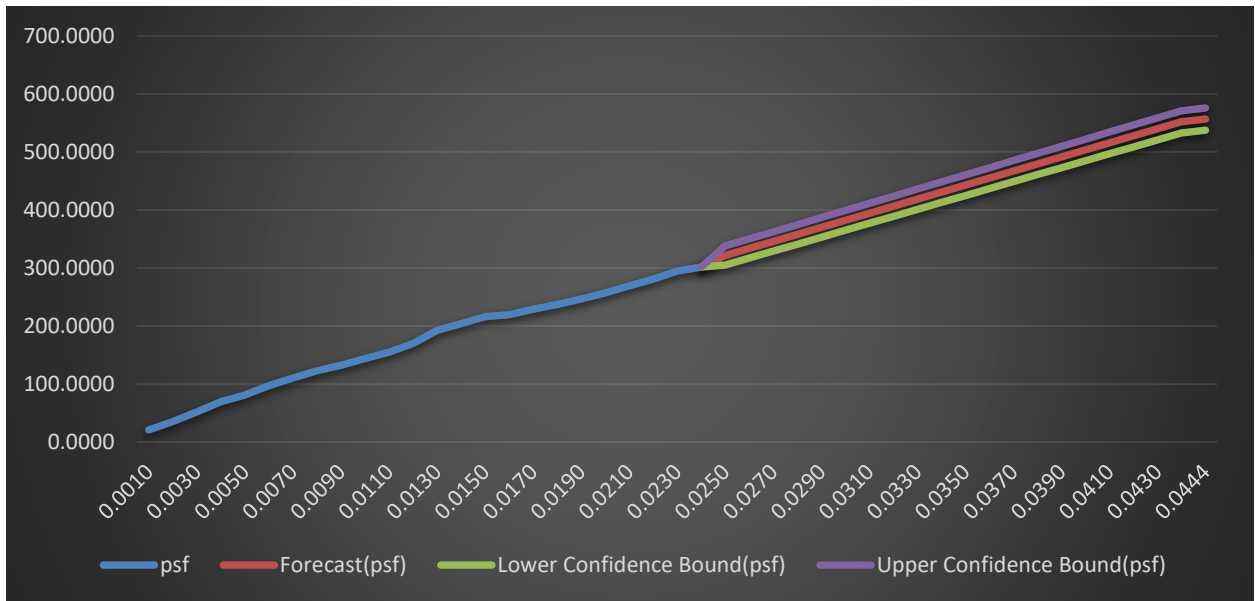
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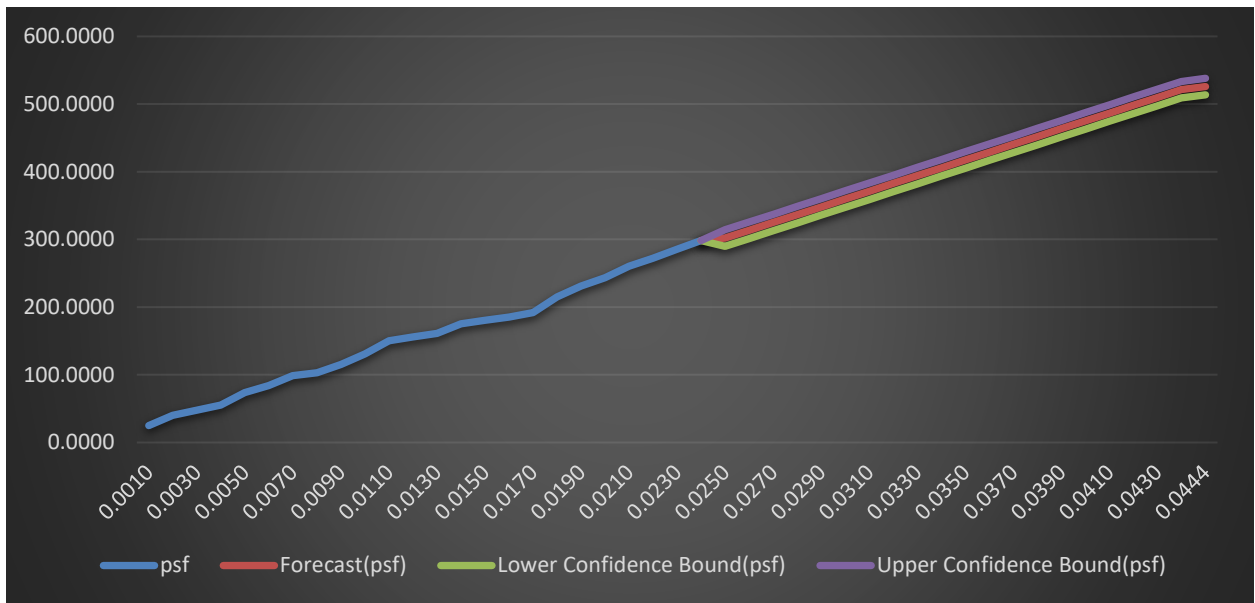
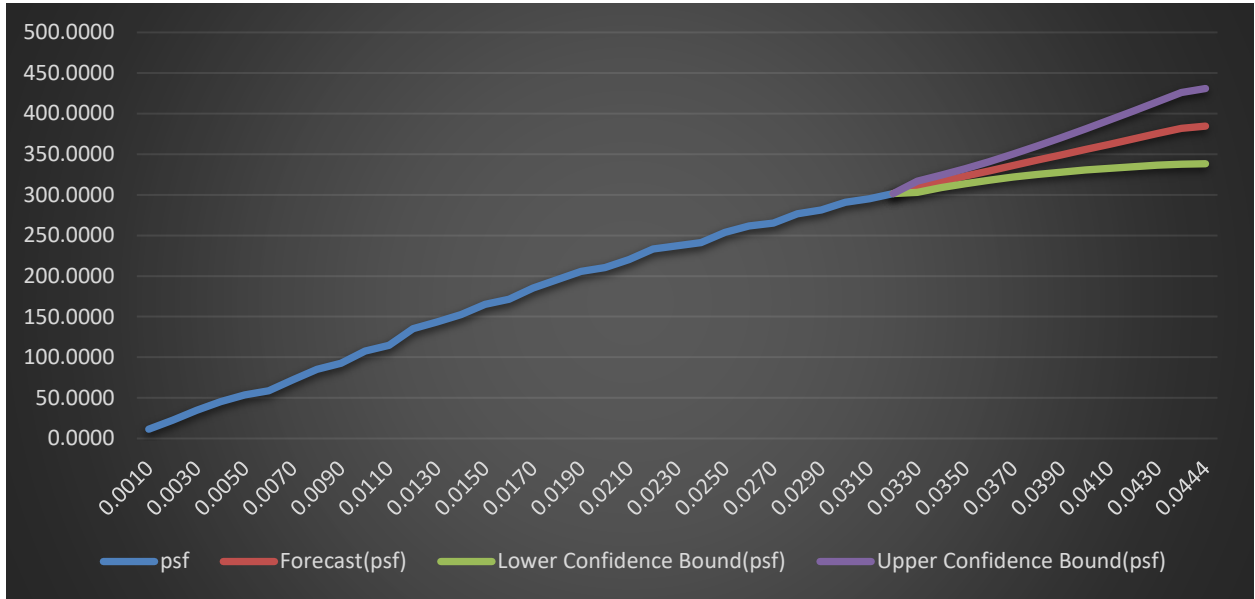
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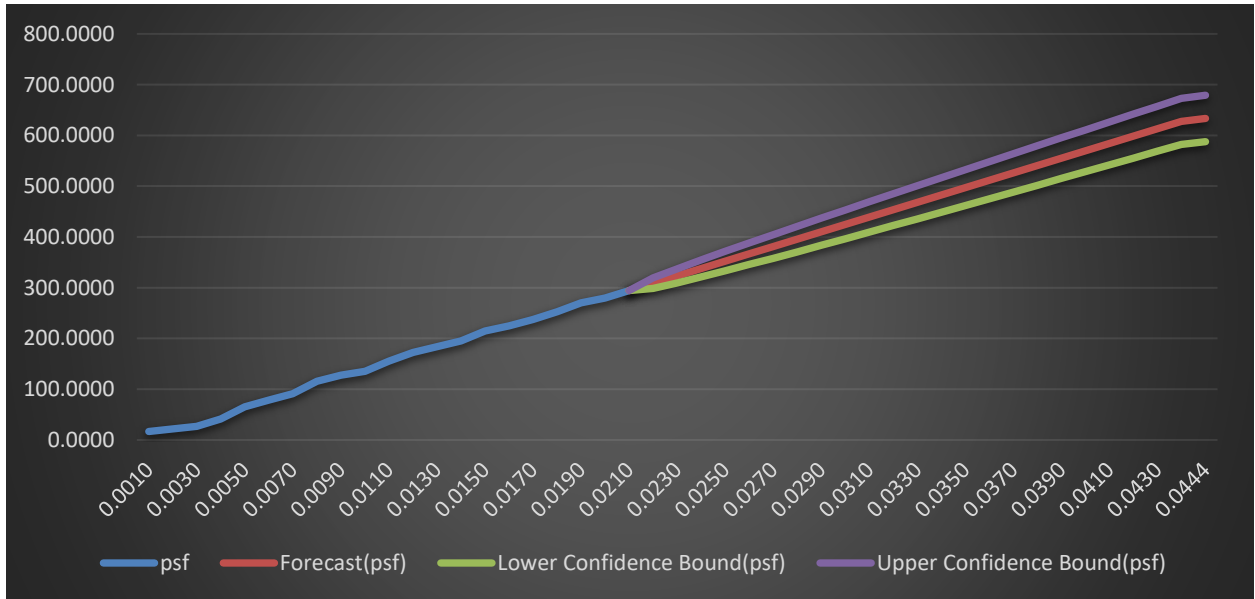
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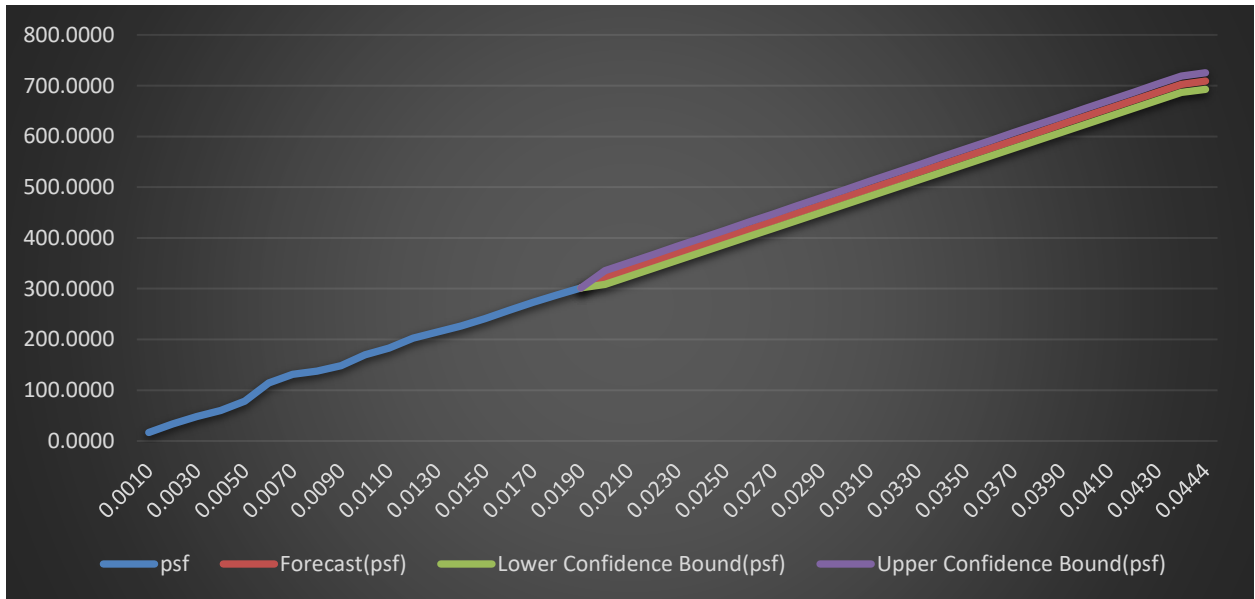
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Specimen 9A



Specimen 10A