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Institute for Metal and Lightweight Structures
Essen Laboratory for Lightweight Structures - ELLF
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www.uni-due.de/iml | ellf@uni-due.de
Testing Laboratory, Inspection and Certification Body NRW71

Test report on biaxial tensile test

Persons in charge: Ibrahim Alahmed Order No.: AF-M5145	Date: 03.01.2024

Customer:	Sattler Pro-Tex GmbH Sattlerstraße 45 8077 Gössendorf Austria
Subject of order:	Biaxiale Prüfungen für E-Moduln Bestimmung
Test procedure:	according to specifications by: MSAJ/M-02-1995
Material:	739 ATLAS Architecture Type II
Date of reception:	22.12.2023
Sampling:	The sample material was provided by the client.
Conditioning:	The sample was conditioned for more than 6 h in climate D following DIN EN ISO 2231 at 23 °C ± 2 K.
Test machine:	Biax I
Load cell:	Axis 1: 5 t HBM U2A F80791, F404894, AC 1.0 Axis 2: 5 t HBM U2A F80796, F404897, AC 1.0
Strain indicator:	Basler A622f camera with IR ring illuminator and VIS filter
Test series:	S020124
Protocol no.:	P-M5145-02
Comments:	Article: 739 11C 250 Charge: 84919 108
Approval:	signed: Thomas Homm 2024.01.04 08:24:10 +01'00' Dipl.-Ing.Thomas Homm Deputy Head of Essen Laboratory for Lightweight Structures

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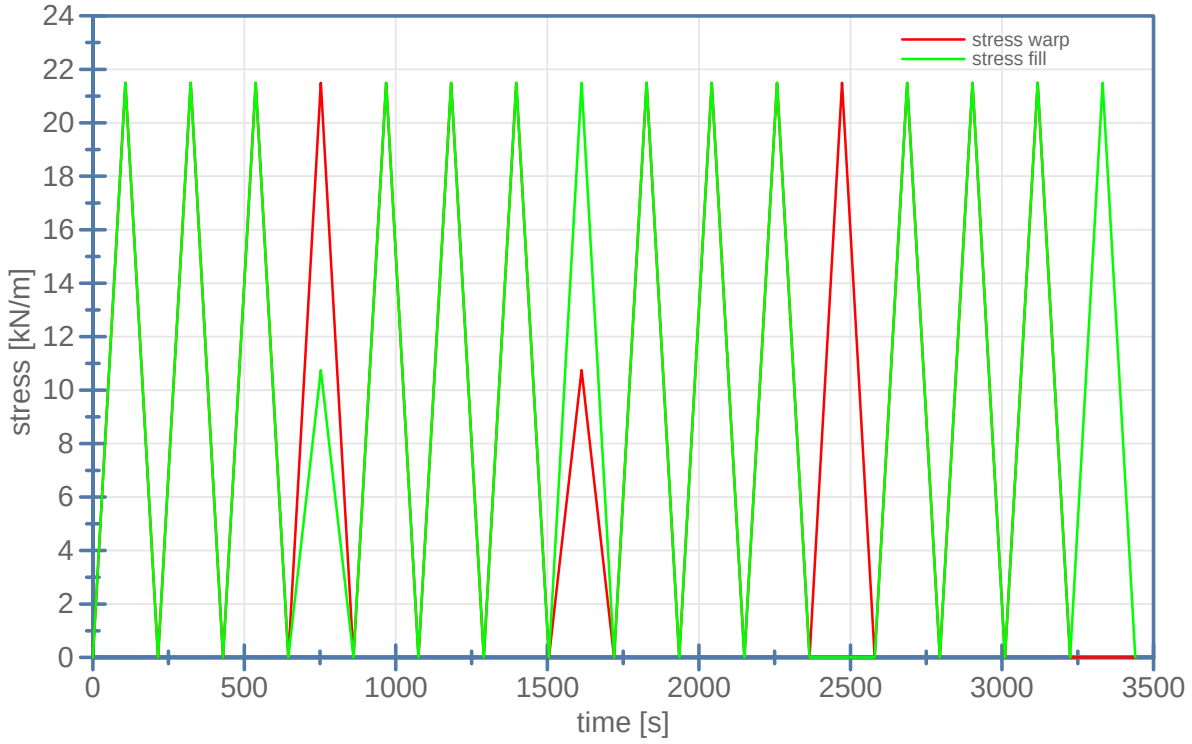
Date: 03.01.2024 Test: S020124	Persons in charge: Ibrahim Alahmed Material: 739 ATLAS Architecture Type II

Load diagram (reference values)



Axis 1: warp direction	- Minimum: 0.10 kN/m - Maximum: 21.50 kN/m
Axis 2: fill direction	- Minimum: 0.10 kN/m - Maximum: 21.50 kN/m
Loading rate:	0,2 (kN/m)/s at the higher gradient
Test temperature:	24.0°C
Time interval:	2.5 s
Date of testing:	03.01.2024
Stress correction factors:	Warp direction: 0.99 | Fill direction: 0.99
Comments:	The test values apply exclusively to the test sample used.

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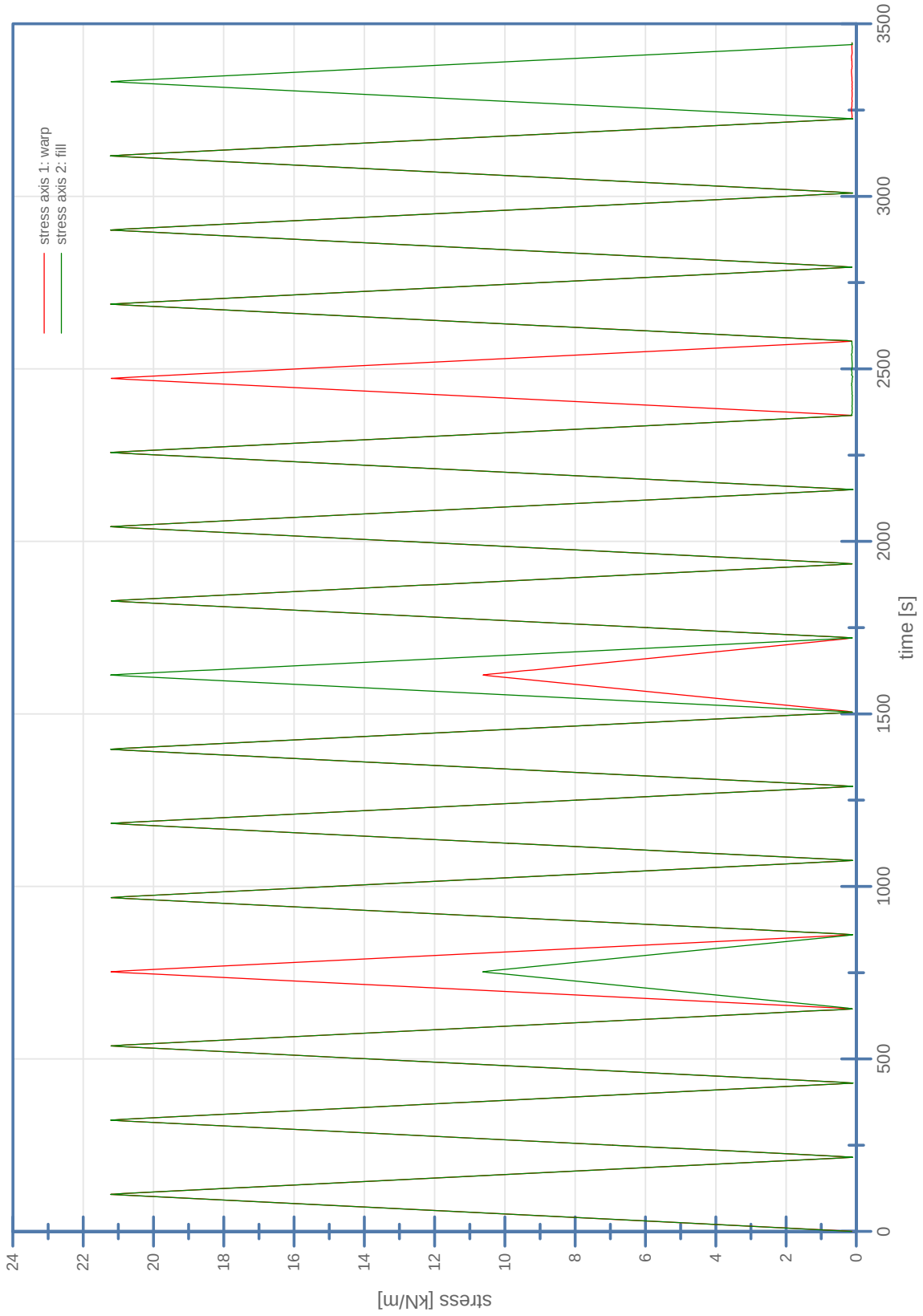
Control factor of load

Test: S020124	Material: 739 ATLAS Architecture Type II



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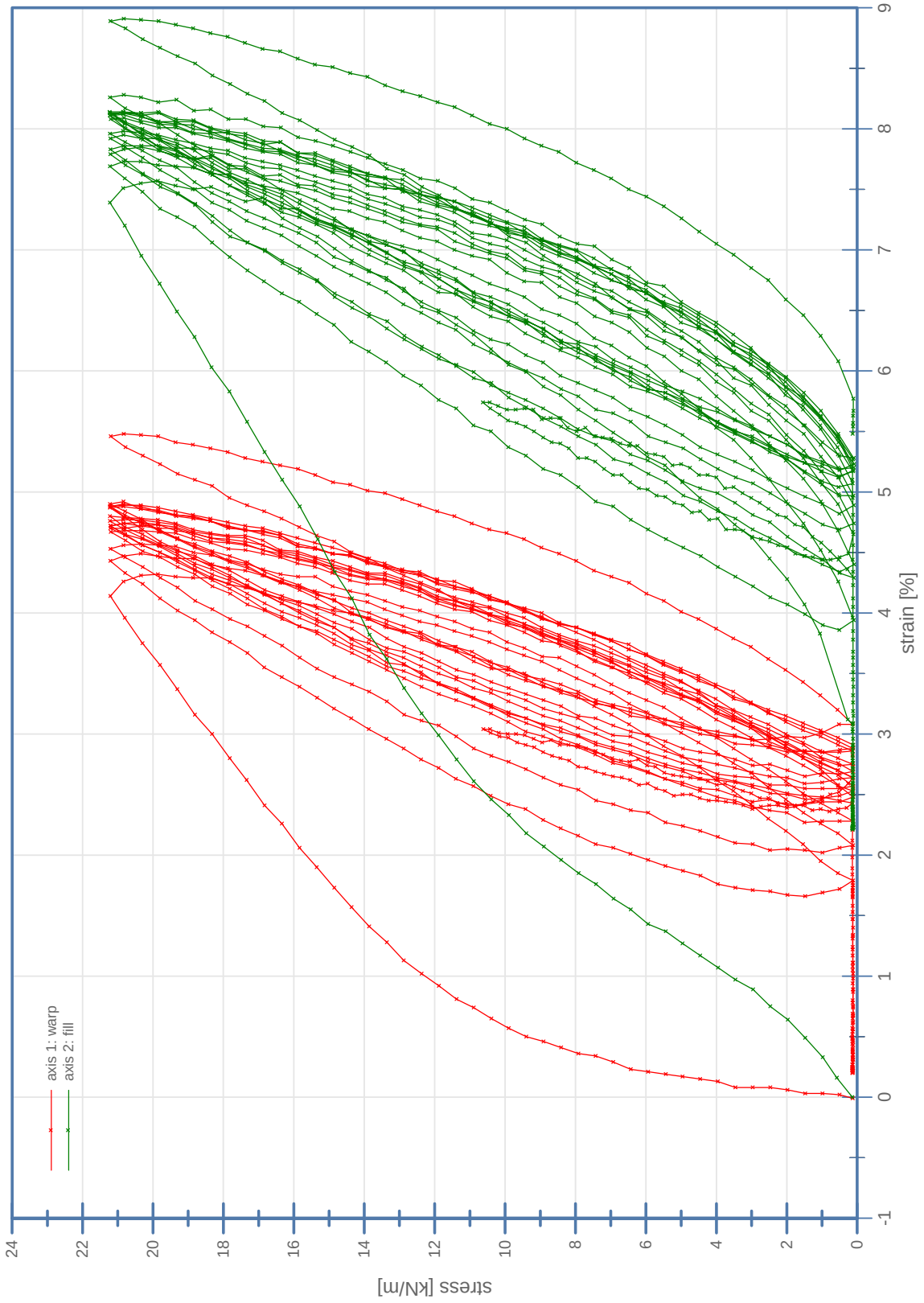
Stress-strain diagram to biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II



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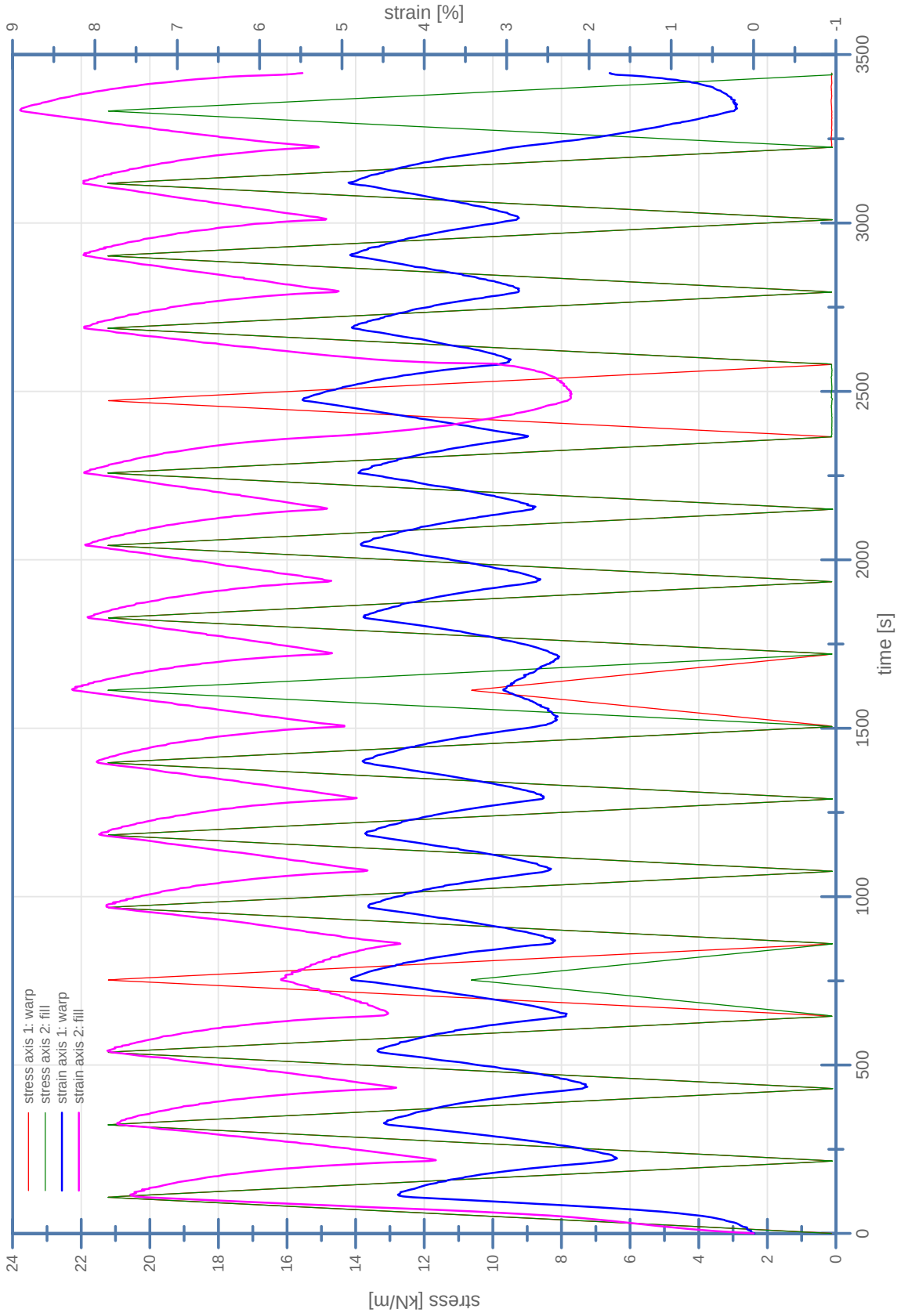
Stress-strain-time diagram to biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II



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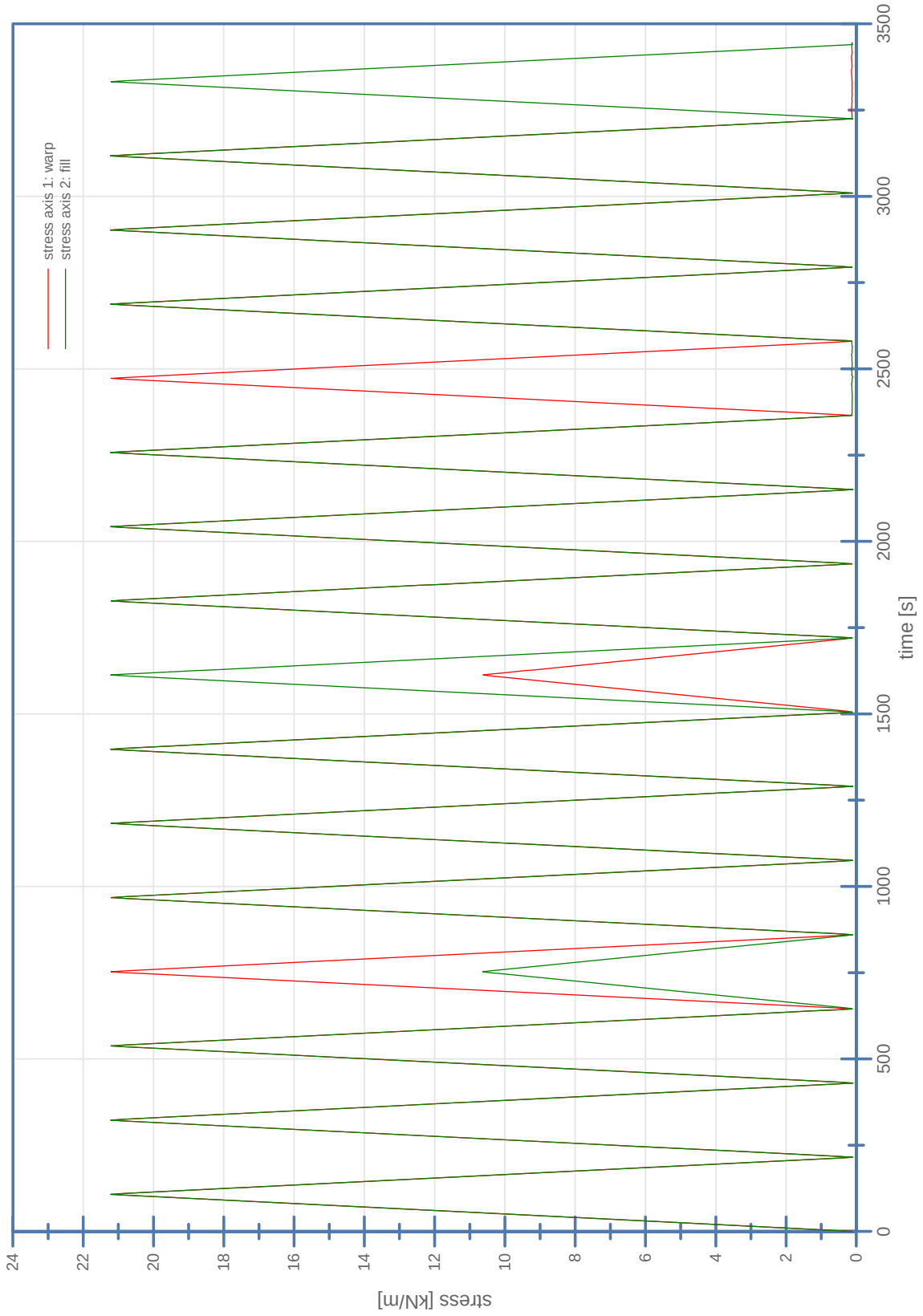
Stress-time-diagram to biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II



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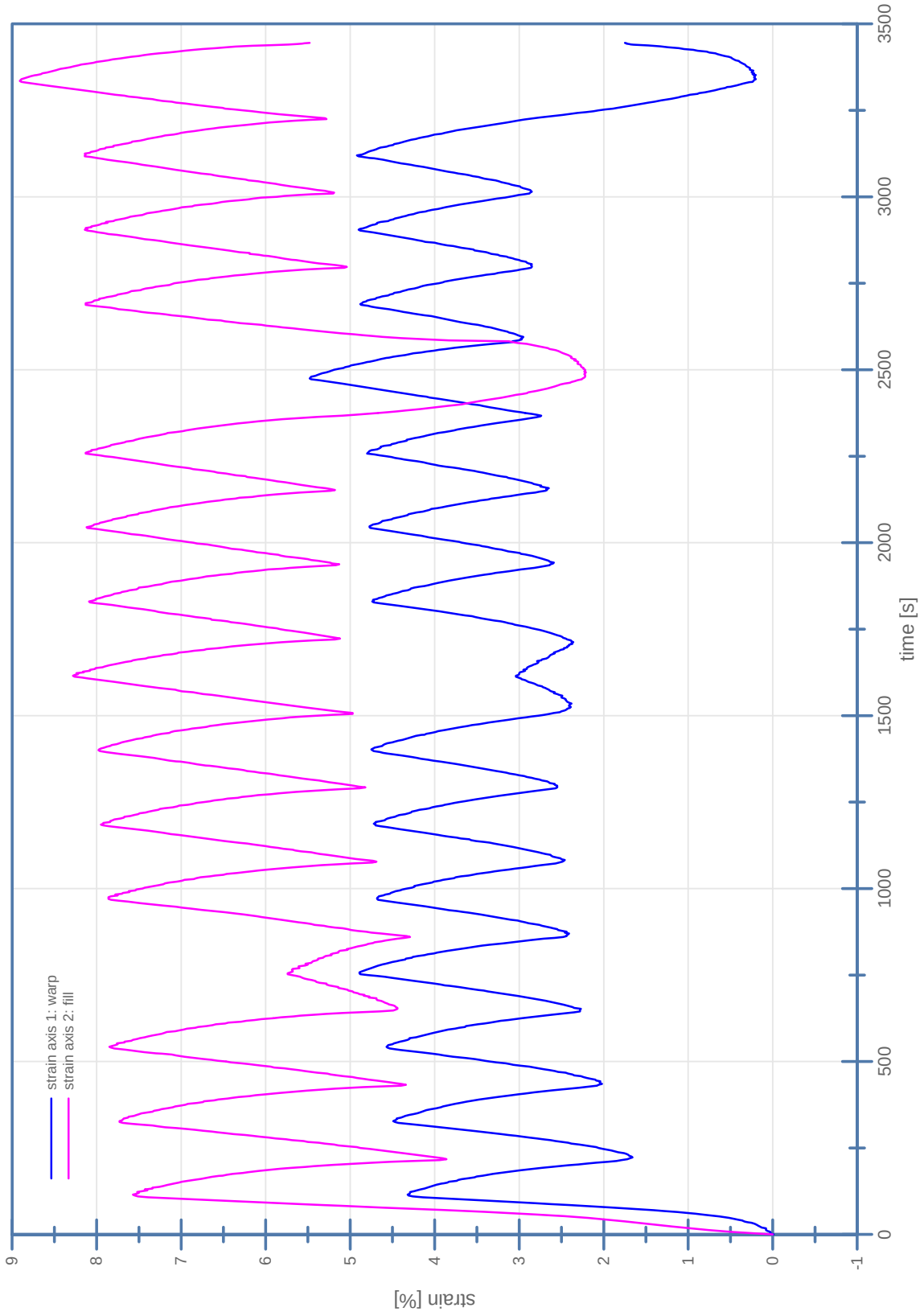
Strain-time diagram to biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II



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Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 1

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
0.0	0.13	0.14	-0.01	0.00
2.5	0.50	0.58	0.02	0.16
5.0	0.99	0.98	0.03	0.33
7.5	1.48	1.48	0.03	0.49
10.0	1.98	1.97	0.06	0.64
12.5	2.47	2.47	0.08	0.75
15.0	2.97	2.96	0.08	0.89
17.5	3.46	3.46	0.08	0.97
20.0	3.96	3.95	0.13	1.07
22.5	4.46	4.46	0.15	1.17
25.0	4.96	4.96	0.17	1.27
27.5	5.44	5.44	0.19	1.37
30.0	5.94	5.94	0.21	1.43
32.5	6.43	6.43	0.23	1.55
35.0	6.93	6.92	0.29	1.64
37.5	7.43	7.42	0.34	1.76
40.0	7.92	7.91	0.36	1.85
42.5	8.41	8.41	0.41	1.96
45.0	8.91	8.90	0.46	2.07
47.5	9.40	9.40	0.50	2.18
50.0	9.90	9.89	0.57	2.33
52.5	10.39	10.39	0.65	2.46
55.0	10.89	10.89	0.74	2.61
57.5	11.38	11.38	0.81	2.79
60.0	11.88	11.89	0.92	2.99
62.5	12.37	12.37	1.02	3.17
65.0	12.88	12.87	1.13	3.38
67.5	13.36	13.36	1.28	3.62
70.0	13.86	13.85	1.41	3.82
72.5	14.36	14.35	1.57	4.12
75.0	14.85	14.84	1.73	4.34
77.5	15.35	15.32	1.90	4.61
80.0	15.84	15.83	2.06	4.88
82.5	16.34	16.33	2.26	5.10
85.0	16.83	16.83	2.41	5.33
87.5	17.34	17.33	2.62	5.58
90.0	17.82	17.83	2.80	5.83
92.5	18.32	18.34	3.00	6.03
95.0	18.81	18.82	3.16	6.28
97.5	19.31	19.32	3.37	6.49
100.0	19.80	19.81	3.57	6.72
102.5	20.30	20.33	3.75	6.95
105.0	20.80	20.80	3.96	7.20
107.5	21.21	21.22	4.14	7.39
110.0	20.84	20.85	4.26	7.51
112.5	20.34	20.35	4.31	7.55
115.0	19.86	19.86	4.32	7.57
117.5	19.36	19.36	4.30	7.53
120.0	18.86	18.87	4.29	7.50
122.5	18.36	18.35	4.29	7.52
125.0	17.87	17.87	4.24	7.46
127.5	17.37	17.37	4.21	7.40
130.0	16.88	16.88	4.17	7.43
132.5	16.38	16.38	4.12	7.34
135.0	15.89	15.88	4.09	7.34
137.5	15.39	15.39	4.06	7.26
140.0	14.89	14.90	4.02	7.21
142.5	14.40	14.40	4.00	7.17
145.0	13.91	13.90	3.95	7.12
147.5	13.41	13.41	3.89	7.07
150.0	12.91	12.92	3.85	7.03
152.5	12.42	12.42	3.83	6.99
155.0	11.93	11.92	3.74	6.92
157.5	11.43	11.42	3.72	6.85
160.0	10.94	10.93	3.68	6.79
162.5	10.44	10.44	3.60	6.72
165.0	9.95	9.94	3.53	6.67
167.5	9.45	9.45	3.50	6.61
170.0	8.96	8.96	3.43	6.51
172.5	8.46	8.46	3.37	6.46

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
175.0	7.97	7.97	3.31	6.39
177.5	7.47	7.47	3.23	6.27
180.0	6.98	6.98	3.16	6.21
182.5	6.48	6.48	3.08	6.11
185.0	5.98	5.99	2.99	6.04
187.5	5.50	5.49	2.90	5.91
190.0	4.99	4.99	2.82	5.81
192.5	4.50	4.50	2.73	5.69
195.0	4.01	4.01	2.62	5.53
197.5	3.52	3.51	2.53	5.43
200.0	3.02	3.02	2.42	5.28
202.5	2.53	2.52	2.30	5.11
205.0	2.03	2.02	2.20	4.92
207.5	1.54	1.53	2.09	4.74
210.0	1.04	1.04	1.95	4.52
212.5	0.55	0.54	1.85	4.26
215.0	0.12	0.10	1.79	3.94
217.5	0.50	0.51	1.72	3.86
220.0	0.99	0.98	1.69	3.90
222.5	1.48	1.48	1.66	3.99
225.0	1.98	1.98	1.67	4.07
227.5	2.47	2.47	1.70	4.13
230.0	2.97	2.96	1.71	4.22
232.5	3.46	3.46	1.73	4.30
235.0	3.96	3.96	1.76	4.38
237.5	4.45	4.44	1.83	4.47
240.0	4.95	4.94	1.87	4.54
242.5	5.45	5.43	1.91	4.61
245.0	5.94	5.94	1.96	4.69
247.5	6.44	6.43	2.01	4.77
250.0	6.93	6.93	2.06	4.88
252.5	7.43	7.43	2.09	4.92
255.0	7.93	7.92	2.16	5.04
257.5	8.42	8.42	2.22	5.14
260.0	8.92	8.92	2.29	5.19
262.5	9.42	9.41	2.38	5.30
265.0	9.91	9.91	2.42	5.37
267.5	10.41	10.40	2.49	5.50
270.0	10.90	10.90	2.57	5.55
272.5	11.40	11.39	2.63	5.69
275.0	11.89	11.89	2.72	5.76
277.5	12.39	12.39	2.79	5.88
280.0	12.88	12.89	2.88	5.96
282.5	13.37	13.38	2.96	6.07
285.0	13.87	13.87	3.04	6.16
287.5	14.37	14.37	3.13	6.24
290.0	14.86	14.86	3.21	6.38
292.5	15.34	15.35	3.30	6.47
295.0	15.84	15.85	3.39	6.57
297.5	16.34	16.34	3.47	6.64
300.0	16.84	16.85	3.55	6.74
302.5	17.32	17.32	3.67	6.83
305.0	17.82	17.82	3.76	6.94
307.5	18.32	18.32	3.84	7.06
310.0	18.81	18.82	3.94	7.19
312.5	19.30	19.31	4.02	7.27
315.0	19.80	19.80	4.12	7.34
317.5	20.29	20.30	4.24	7.48
320.0	20.79	20.80	4.33	7.59
322.5	21.21	21.22	4.43	7.69
325.0	20.84	20.84	4.47	7.73
327.5	20.35	20.35	4.49	7.73
330.0	19.86	19.86	4.47	7.70
332.5	19.36	19.36	4.45	7.69
335.0	18.87	18.87	4.45	7.68
337.5	18.37	18.37	4.40	7.63
340.0	17.87	17.86	4.37	7.62
342.5	17.38	17.38	4.35	7.56
345.0	16.89	16.88	4.31	7.53
347.5	16.39	16.38	4.25	7.50

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Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 2

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
350.0	15.90	15.89	4.22	7.47
352.5	15.40	15.39	4.18	7.41
355.0	14.90	14.90	4.15	7.34
357.5	14.41	14.42	4.12	7.32
360.0	13.91	13.91	4.09	7.26
362.5	13.42	13.42	4.03	7.23
365.0	12.93	12.92	3.98	7.16
367.5	12.43	12.42	3.93	7.10
370.0	11.94	11.93	3.90	7.07
372.5	11.44	11.44	3.85	7.00
375.0	10.95	10.94	3.81	6.95
377.5	10.45	10.44	3.76	6.92
380.0	9.95	9.95	3.70	6.81
382.5	9.46	9.46	3.65	6.74
385.0	8.96	8.96	3.60	6.73
387.5	8.46	8.45	3.53	6.61
390.0	7.97	7.97	3.46	6.56
392.5	7.48	7.46	3.40	6.45
395.0	6.98	6.97	3.34	6.40
397.5	6.48	6.47	3.25	6.32
400.0	5.99	5.97	3.18	6.19
402.5	5.49	5.48	3.09	6.12
405.0	5.00	4.99	3.01	6.00
407.5	4.51	4.50	2.93	5.93
410.0	4.01	4.00	2.85	5.79
412.5	3.52	3.51	2.76	5.67
415.0	3.02	3.01	2.68	5.55
417.5	2.53	2.52	2.56	5.40
420.0	2.03	2.03	2.46	5.26
422.5	1.53	1.53	2.35	5.11
425.0	1.04	1.03	2.26	4.92
427.5	0.55	0.55	2.18	4.68
430.0	0.12	0.09	2.08	4.40
432.5	0.50	0.50	2.06	4.34
435.0	0.99	0.99	2.02	4.40
437.5	1.49	1.48	2.04	4.47
440.0	1.98	1.98	2.05	4.54
442.5	2.48	2.48	2.04	4.62
445.0	2.97	2.97	2.09	4.69
447.5	3.47	3.46	2.10	4.78
450.0	3.96	3.96	2.15	4.84
452.5	4.46	4.45	2.20	4.92
455.0	4.95	4.94	2.24	4.97
457.5	5.45	5.44	2.27	5.08
460.0	5.94	5.93	2.35	5.15
462.5	6.43	6.43	2.37	5.23
465.0	6.93	6.92	2.42	5.27
467.5	7.42	7.42	2.45	5.39
470.0	7.92	7.92	2.54	5.46
472.5	8.42	8.41	2.58	5.54
475.0	8.91	8.90	2.64	5.61
477.5	9.41	9.40	2.71	5.70
480.0	9.90	9.90	2.77	5.78
482.5	10.39	10.39	2.82	5.90
485.0	10.89	10.89	2.88	5.94
487.5	11.39	11.39	2.98	6.04
490.0	11.88	11.88	3.07	6.13
492.5	12.37	12.36	3.11	6.20
495.0	12.87	12.86	3.16	6.29
497.5	13.36	13.35	3.27	6.41
500.0	13.86	13.86	3.35	6.47
502.5	14.35	14.35	3.41	6.57
505.0	14.85	14.84	3.47	6.64
507.5	15.34	15.34	3.54	6.75
510.0	15.83	15.83	3.63	6.84
512.5	16.33	16.33	3.73	6.91
515.0	16.83	16.82	3.81	7.00
517.5	17.32	17.31	3.89	7.06
520.0	17.81	17.81	3.95	7.11
522.5	18.31	18.31	4.03	7.23

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
525.0	18.80	18.80	4.10	7.37
527.5	19.30	19.29	4.21	7.46
530.0	19.79	19.79	4.29	7.52
532.5	20.29	20.28	4.38	7.62
535.0	20.79	20.78	4.46	7.70
537.5	21.21	21.21	4.53	7.79
540.0	20.84	20.84	4.56	7.83
542.5	20.34	20.33	4.57	7.85
545.0	19.84	19.84	4.56	7.82
547.5	19.35	19.35	4.55	7.78
550.0	18.85	18.84	4.50	7.75
552.5	18.36	18.36	4.48	7.76
555.0	17.87	17.86	4.44	7.67
557.5	17.37	17.36	4.41	7.67
560.0	16.87	16.87	4.36	7.59
562.5	16.38	16.38	4.32	7.57
565.0	15.88	15.87	4.30	7.52
567.5	15.39	15.38	4.30	7.49
570.0	14.90	14.89	4.22	7.43
572.5	14.40	14.40	4.18	7.39
575.0	13.91	13.90	4.15	7.34
577.5	13.41	13.41	4.10	7.29
580.0	12.92	12.92	4.05	7.23
582.5	12.42	12.42	4.02	7.20
585.0	11.93	11.92	3.97	7.17
587.5	11.43	11.43	3.93	7.07
590.0	10.94	10.93	3.87	7.02
592.5	10.44	10.44	3.84	6.97
595.0	9.95	9.95	3.76	6.93
597.5	9.45	9.45	3.71	6.83
600.0	8.95	8.96	3.64	6.80
602.5	8.46	8.46	3.63	6.70
605.0	7.97	7.96	3.56	6.63
607.5	7.47	7.46	3.49	6.59
610.0	6.98	6.97	3.41	6.48
612.5	6.48	6.47	3.34	6.44
615.0	5.99	5.98	3.28	6.29
617.5	5.49	5.48	3.22	6.23
620.0	5.00	4.99	3.13	6.13
622.5	4.50	4.49	3.05	6.05
625.0	4.00	4.00	2.97	5.91
627.5	3.51	3.50	2.88	5.82
630.0	3.02	3.01	2.79	5.67
632.5	2.53	2.51	2.71	5.59
635.0	2.03	2.02	2.61	5.43
637.5	1.54	1.53	2.51	5.28
640.0	1.04	1.04	2.43	5.08
642.5	0.55	0.55	2.35	4.90
645.0	0.12	0.11	2.28	4.65
647.5	0.50	0.25	2.28	4.49
650.0	1.00	0.50	2.28	4.46
652.5	1.50	0.76	2.27	4.44
655.0	2.00	1.01	2.35	4.44
657.5	2.49	1.26	2.37	4.46
660.0	2.98	1.51	2.40	4.47
662.5	3.48	1.76	2.45	4.49
665.0	3.98	2.00	2.48	4.54
667.5	4.47	2.25	2.53	4.56
670.0	4.97	2.49	2.58	4.59
672.5	5.46	2.74	2.63	4.61
675.0	5.95	2.99	2.69	4.63
677.5	6.44	3.24	2.74	4.68
680.0	6.94	3.48	2.78	4.69
682.5	7.43	3.73	2.86	4.69
685.0	7.92	3.96	2.91	4.78
687.5	8.41	4.21	2.96	4.77
690.0	8.91	4.46	3.04	4.84
692.5	9.40	4.70	3.09	4.83
695.0	9.90	4.95	3.15	4.89
697.5	10.39	5.20	3.23	4.91

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Testing Laboratory, Inspection and Certification Body NRW71

Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 3

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
700.0	10.89	5.45	3.30	4.96
702.5	11.38	5.70	3.37	4.97
705.0	11.88	5.95	3.42	5.02
707.5	12.37	6.20	3.49	5.03
710.0	12.87	6.45	3.58	5.08
712.5	13.36	6.69	3.65	5.14
715.0	13.86	6.94	3.70	5.14
717.5	14.35	7.19	3.78	5.19
720.0	14.85	7.44	3.88	5.25
722.5	15.34	7.68	3.93	5.28
725.0	15.84	7.93	4.00	5.28
727.5	16.33	8.19	4.08	5.36
730.0	16.83	8.43	4.15	5.40
732.5	17.32	8.68	4.22	5.41
735.0	17.82	8.92	4.31	5.45
737.5	18.32	9.18	4.38	5.50
740.0	18.81	9.42	4.45	5.54
742.5	19.31	9.67	4.52	5.57
745.0	19.80	9.92	4.59	5.59
747.5	20.30	10.16	4.69	5.64
750.0	20.79	10.42	4.79	5.69
752.5	21.21	10.63	4.88	5.74
755.0	20.85	10.44	4.89	5.74
757.5	20.35	10.20	4.89	5.71
760.0	19.85	9.95	4.87	5.68
762.5	19.36	9.70	4.84	5.68
765.0	18.87	9.45	4.81	5.69
767.5	18.37	9.20	4.78	5.68
770.0	17.88	8.96	4.75	5.60
772.5	17.38	8.71	4.72	5.61
775.0	16.88	8.46	4.70	5.61
777.5	16.39	8.22	4.66	5.53
780.0	15.90	7.97	4.62	5.50
782.5	15.40	7.72	4.58	5.53
785.0	14.91	7.47	4.54	5.46
787.5	14.41	7.23	4.50	5.45
790.0	13.92	6.98	4.45	5.44
792.5	13.42	6.73	4.41	5.40
795.0	12.93	6.48	4.35	5.38
797.5	12.43	6.24	4.34	5.38
800.0	11.94	5.99	4.27	5.32
802.5	11.44	5.74	4.26	5.31
805.0	10.95	5.49	4.20	5.29
807.5	10.45	5.25	4.12	5.22
810.0	9.96	5.00	4.08	5.23
812.5	9.47	4.75	4.01	5.20
815.0	8.97	4.50	3.97	5.14
817.5	8.47	4.25	3.90	5.14
820.0	7.98	4.00	3.84	5.12
822.5	7.48	3.76	3.78	5.03
825.0	6.99	3.51	3.71	5.04
827.5	6.49	3.26	3.63	4.99
830.0	6.00	3.01	3.57	4.95
832.5	5.50	2.77	3.50	4.91
835.0	5.01	2.52	3.44	4.86
837.5	4.51	2.27	3.35	4.81
840.0	4.02	2.02	3.24	4.79
842.5	3.52	1.77	3.16	4.73
845.0	3.02	1.53	3.08	4.71
847.5	2.53	1.27	2.99	4.63
850.0	2.03	1.02	2.90	4.58
852.5	1.54	0.77	2.80	4.51
855.0	1.04	0.53	2.71	4.44
857.5	0.55	0.28	2.58	4.36
860.0	0.12	0.10	2.48	4.29
862.5	0.49	0.50	2.44	4.33
865.0	0.99	0.98	2.44	4.44
867.5	1.49	1.48	2.42	4.53
870.0	1.99	1.98	2.41	4.63
872.5	2.48	2.48	2.46	4.75

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
875.0	2.98	2.97	2.44	4.81
877.5	3.47	3.47	2.49	4.91
880.0	3.97	3.97	2.54	4.99
882.5	4.46	4.46	2.55	5.03
885.0	4.96	4.96	2.60	5.09
887.5	5.46	5.45	2.63	5.18
890.0	5.95	5.95	2.68	5.26
892.5	6.45	6.44	2.73	5.31
895.0	6.94	6.94	2.76	5.42
897.5	7.44	7.43	2.83	5.46
900.0	7.93	7.94	2.89	5.52
902.5	8.43	8.42	2.93	5.61
905.0	8.92	8.92	2.98	5.69
907.5	9.42	9.42	3.02	5.76
910.0	9.91	9.91	3.10	5.82
912.5	10.40	10.40	3.17	5.88
915.0	10.90	10.89	3.23	5.99
917.5	11.39	11.39	3.28	6.05
920.0	11.88	11.88	3.33	6.10
922.5	12.37	12.37	3.39	6.18
925.0	12.87	12.86	3.46	6.26
927.5	13.36	13.36	3.53	6.35
930.0	13.86	13.86	3.60	6.45
932.5	14.35	14.34	3.67	6.52
935.0	14.85	14.84	3.74	6.61
937.5	15.34	15.34	3.83	6.74
940.0	15.84	15.83	3.89	6.81
942.5	16.33	16.32	3.95	6.89
945.0	16.82	16.82	4.02	6.99
947.5	17.32	17.32	4.07	7.06
950.0	17.81	17.81	4.16	7.16
952.5	18.31	18.31	4.22	7.28
955.0	18.81	18.80	4.32	7.38
957.5	19.30	19.30	4.38	7.47
960.0	19.80	19.79	4.46	7.55
962.5	20.29	20.29	4.51	7.63
965.0	20.78	20.78	4.60	7.74
967.5	21.20	21.21	4.67	7.83
970.0	20.83	20.83	4.68	7.86
972.5	20.34	20.33	4.68	7.86
975.0	19.84	19.84	4.67	7.86
977.5	19.35	19.35	4.66	7.83
980.0	18.85	18.84	4.61	7.75
982.5	18.36	18.36	4.58	7.78
985.0	17.86	17.86	4.53	7.70
987.5	17.37	17.38	4.52	7.69
990.0	16.88	16.88	4.49	7.61
992.5	16.39	16.39	4.46	7.62
995.0	15.90	15.90	4.41	7.54
997.5	15.40	15.41	4.38	7.53
1000.0	14.91	14.91	4.33	7.46
1002.5	14.41	14.40	4.27	7.43
1005.0	13.91	13.91	4.24	7.37
1007.5	13.42	13.42	4.24	7.32
1010.0	12.93	12.92	4.19	7.26
1012.5	12.43	12.42	4.14	7.21
1015.0	11.94	11.93	4.08	7.19
1017.5	11.43	11.43	4.03	7.14
1020.0	10.94	10.93	4.01	7.05
1022.5	10.45	10.44	3.94	6.99
1025.0	9.95	9.94	3.90	6.96
1027.5	9.45	9.45	3.84	6.85
1030.0	8.96	8.95	3.77	6.82
1032.5	8.46	8.45	3.75	6.77
1035.0	7.96	7.95	3.69	6.66
1037.5	7.47	7.46	3.60	6.60
1040.0	6.98	6.98	3.55	6.50
1042.5	6.48	6.47	3.50	6.46
1045.0	5.99	5.98	3.42	6.34
1047.5	5.50	5.48	3.34	6.25

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Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 4

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
1050.0	4.99	4.99	3.29	6.17
1052.5	4.50	4.49	3.21	6.08
1055.0	4.01	4.00	3.12	5.97
1057.5	3.52	3.50	3.05	5.85
1060.0	3.02	3.01	2.97	5.73
1062.5	2.53	2.51	2.89	5.64
1065.0	2.03	2.01	2.82	5.47
1067.5	1.53	1.52	2.74	5.34
1070.0	1.03	1.03	2.66	5.17
1072.5	0.54	0.53	2.57	4.98
1075.0	0.12	0.10	2.53	4.74
1077.5	0.50	0.51	2.49	4.69
1080.0	1.00	0.98	2.47	4.73
1082.5	1.48	1.48	2.46	4.82
1085.0	1.98	1.97	2.50	4.90
1087.5	2.47	2.47	2.51	4.99
1090.0	2.97	2.96	2.56	5.07
1092.5	3.46	3.45	2.60	5.12
1095.0	3.96	3.96	2.62	5.19
1097.5	4.45	4.45	2.63	5.27
1100.0	4.95	4.94	2.69	5.36
1102.5	5.45	5.44	2.73	5.41
1105.0	5.94	5.93	2.77	5.46
1107.5	6.43	6.43	2.83	5.58
1110.0	6.93	6.93	2.87	5.65
1112.5	7.43	7.42	2.91	5.68
1115.0	7.92	7.92	2.98	5.79
1117.5	8.42	8.41	3.02	5.85
1120.0	8.91	8.91	3.07	5.94
1122.5	9.40	9.41	3.13	6.00
1125.0	9.90	9.91	3.18	6.07
1127.5	10.40	10.40	3.24	6.15
1130.0	10.90	10.90	3.30	6.22
1132.5	11.39	11.40	3.35	6.34
1135.0	11.89	11.89	3.41	6.40
1137.5	12.38	12.38	3.51	6.48
1140.0	12.88	12.89	3.57	6.55
1142.5	13.37	13.38	3.59	6.65
1145.0	13.87	13.87	3.69	6.72
1147.5	14.36	14.37	3.74	6.79
1150.0	14.86	14.86	3.83	6.86
1152.5	15.35	15.36	3.90	6.95
1155.0	15.84	15.85	3.96	7.03
1157.5	16.34	16.35	4.01	7.12
1160.0	16.83	16.84	4.08	7.18
1162.5	17.33	17.34	4.16	7.24
1165.0	17.83	17.83	4.24	7.33
1167.5	18.32	18.32	4.29	7.39
1170.0	18.81	18.81	4.36	7.50
1172.5	19.31	19.31	4.44	7.58
1175.0	19.80	19.80	4.50	7.66
1177.5	20.30	20.29	4.56	7.76
1180.0	20.79	20.79	4.64	7.85
1182.5	21.21	21.21	4.70	7.92
1185.0	20.84	20.84	4.70	7.95
1187.5	20.34	20.34	4.72	7.92
1190.0	19.85	19.85	4.70	7.92
1192.5	19.35	19.34	4.70	7.84
1195.0	18.85	18.85	4.64	7.84
1197.5	18.36	18.35	4.59	7.81
1200.0	17.87	17.87	4.58	7.79
1202.5	17.37	17.36	4.56	7.72
1205.0	16.87	16.88	4.52	7.68
1207.5	16.38	16.38	4.47	7.67
1210.0	15.89	15.88	4.45	7.60
1212.5	15.39	15.38	4.42	7.56
1215.0	14.89	14.89	4.35	7.51
1217.5	14.40	14.39	4.31	7.49
1220.0	13.90	13.89	4.28	7.42
1222.5	13.41	13.40	4.27	7.38

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
1225.0	12.92	12.91	4.22	7.33
1227.5	12.42	12.42	4.18	7.27
1230.0	11.92	11.91	4.10	7.25
1232.5	11.43	11.42	4.06	7.20
1235.0	10.94	10.93	4.03	7.10
1237.5	10.44	10.43	3.98	7.05
1240.0	9.95	9.94	3.91	7.02
1242.5	9.45	9.44	3.88	6.92
1245.0	8.96	8.95	3.82	6.86
1247.5	8.46	8.45	3.77	6.82
1250.0	7.97	7.96	3.71	6.73
1252.5	7.47	7.47	3.65	6.66
1255.0	6.98	6.98	3.59	6.61
1257.5	6.49	6.48	3.52	6.51
1260.0	5.99	5.97	3.46	6.45
1262.5	5.50	5.49	3.39	6.33
1265.0	5.00	4.99	3.32	6.28
1267.5	4.51	4.50	3.27	6.17
1270.0	4.01	4.00	3.17	6.09
1272.5	3.52	3.51	3.11	5.94
1275.0	3.02	3.01	3.05	5.88
1277.5	2.52	2.51	2.94	5.72
1280.0	2.03	2.02	2.88	5.59
1282.5	1.53	1.52	2.80	5.48
1285.0	1.04	1.03	2.73	5.29
1287.5	0.54	0.54	2.66	5.12
1290.0	0.12	0.10	2.57	4.89
1292.5	0.50	0.51	2.55	4.82
1295.0	0.99	0.99	2.55	4.90
1297.5	1.49	1.48	2.55	4.96
1300.0	1.99	1.98	2.58	5.03
1302.5	2.48	2.48	2.58	5.10
1305.0	2.98	2.97	2.64	5.18
1307.5	3.47	3.47	2.65	5.25
1310.0	3.97	3.97	2.67	5.31
1312.5	4.46	4.46	2.73	5.37
1315.0	4.96	4.96	2.76	5.47
1317.5	5.46	5.45	2.81	5.55
1320.0	5.95	5.95	2.85	5.62
1322.5	6.45	6.44	2.91	5.68
1325.0	6.94	6.94	2.94	5.78
1327.5	7.43	7.43	3.00	5.84
1330.0	7.93	7.93	3.05	5.90
1332.5	8.43	8.43	3.11	5.96
1335.0	8.92	8.92	3.15	6.07
1337.5	9.41	9.41	3.21	6.13
1340.0	9.91	9.91	3.27	6.22
1342.5	10.40	10.41	3.34	6.26
1345.0	10.90	10.90	3.38	6.33
1347.5	11.39	11.39	3.45	6.44
1350.0	11.89	11.89	3.50	6.50
1352.5	12.39	12.38	3.56	6.57
1355.0	12.88	12.88	3.63	6.66
1357.5	13.38	13.37	3.68	6.77
1360.0	13.87	13.87	3.75	6.82
1362.5	14.37	14.37	3.79	6.89
1365.0	14.86	14.86	3.88	6.94
1367.5	15.35	15.36	3.95	7.06
1370.0	15.84	15.86	4.02	7.14
1372.5	16.35	16.35	4.08	7.20
1375.0	16.84	16.84	4.16	7.26
1377.5	17.33	17.34	4.21	7.32
1380.0	17.83	17.83	4.27	7.40
1382.5	18.32	18.33	4.32	7.47
1385.0	18.82	18.82	4.39	7.56
1387.5	19.31	19.32	4.47	7.68
1390.0	19.81	19.81	4.55	7.74
1392.5	20.30	20.30	4.61	7.82
1395.0	20.79	20.79	4.65	7.89
1397.5	21.21	21.22	4.72	7.96

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Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 5

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
1400.0	20.84	20.85	4.74	7.98
1402.5	20.35	20.35	4.75	7.97
1405.0	19.86	19.86	4.73	7.95
1407.5	19.36	19.35	4.71	7.91
1410.0	18.86	18.86	4.66	7.88
1412.5	18.37	18.37	4.62	7.84
1415.0	17.87	17.87	4.61	7.82
1417.5	17.38	17.39	4.59	7.76
1420.0	16.88	16.89	4.56	7.73
1422.5	16.39	16.39	4.50	7.70
1425.0	15.90	15.90	4.47	7.66
1427.5	15.40	15.40	4.43	7.61
1430.0	14.90	14.90	4.38	7.57
1432.5	14.40	14.41	4.35	7.53
1435.0	13.91	13.91	4.31	7.46
1437.5	13.42	13.42	4.28	7.43
1440.0	12.92	12.92	4.25	7.36
1442.5	12.42	12.42	4.20	7.33
1445.0	11.93	11.93	4.12	7.29
1447.5	11.43	11.43	4.10	7.23
1450.0	10.94	10.94	4.04	7.14
1452.5	10.44	10.44	3.99	7.12
1455.0	9.95	9.95	3.96	7.08
1457.5	9.45	9.45	3.91	7.00
1460.0	8.96	8.95	3.84	6.92
1462.5	8.46	8.46	3.78	6.87
1465.0	7.97	7.97	3.74	6.77
1467.5	7.47	7.47	3.67	6.70
1470.0	6.97	6.97	3.61	6.66
1472.5	6.48	6.48	3.56	6.57
1475.0	5.99	5.98	3.47	6.50
1477.5	5.49	5.49	3.42	6.40
1480.0	5.00	4.99	3.37	6.33
1482.5	4.50	4.50	3.29	6.24
1485.0	4.01	4.01	3.22	6.11
1487.5	3.51	3.51	3.14	6.03
1490.0	3.02	3.02	3.08	5.93
1492.5	2.52	2.52	3.01	5.80
1495.0	2.03	2.03	2.92	5.71
1497.5	1.53	1.53	2.85	5.55
1500.0	1.04	1.04	2.77	5.39
1502.5	0.54	0.54	2.70	5.20
1505.0	0.12	0.11	2.64	4.97
1507.5	0.26	0.51	2.59	4.97
1510.0	0.52	1.00	2.52	5.06
1512.5	0.77	1.50	2.50	5.16
1515.0	1.01	1.99	2.46	5.27
1517.5	1.26	2.49	2.44	5.33
1520.0	1.50	2.98	2.43	5.42
1522.5	1.76	3.47	2.40	5.49
1525.0	2.00	3.97	2.39	5.57
1527.5	2.24	4.46	2.41	5.66
1530.0	2.50	4.95	2.41	5.72
1532.5	2.74	5.45	2.40	5.78
1535.0	2.98	5.94	2.38	5.88
1537.5	3.23	6.43	2.41	5.98
1540.0	3.48	6.93	2.43	6.04
1542.5	3.73	7.43	2.44	6.11
1545.0	3.98	7.92	2.45	6.18
1547.5	4.22	8.41	2.45	6.25
1550.0	4.47	8.91	2.47	6.34
1552.5	4.72	9.40	2.50	6.42
1555.0	4.96	9.90	2.50	6.50
1557.5	5.21	10.40	2.49	6.56
1560.0	5.46	10.89	2.53	6.64
1562.5	5.71	11.38	2.55	6.74
1565.0	5.95	11.88	2.59	6.80
1567.5	6.20	12.37	2.58	6.86
1570.0	6.45	12.87	2.62	6.99
1572.5	6.69	13.36	2.64	7.04

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
1575.0	6.94	13.85	2.65	7.07
1577.5	7.19	14.35	2.67	7.16
1580.0	7.44	14.85	2.69	7.26
1582.5	7.69	15.34	2.72	7.34
1585.0	7.93	15.83	2.73	7.41
1587.5	8.18	16.32	2.78	7.49
1590.0	8.43	16.82	2.80	7.58
1592.5	8.67	17.31	2.82	7.64
1595.0	8.92	17.81	2.85	7.70
1597.5	9.17	18.30	2.89	7.78
1600.0	9.42	18.80	2.91	7.86
1602.5	9.66	19.30	2.93	7.95
1605.0	9.91	19.79	2.97	8.04
1607.5	10.16	20.29	2.98	8.10
1610.0	10.41	20.79	3.01	8.17
1612.5	10.62	21.22	3.04	8.26
1615.0	10.43	20.83	3.04	8.28
1617.5	10.18	20.34	3.01	8.26
1620.0	9.93	19.85	3.00	8.22
1622.5	9.69	19.33	3.00	8.24
1625.0	9.44	18.84	2.99	8.15
1627.5	9.19	18.36	2.96	8.16
1630.0	8.95	17.86	2.93	8.08
1632.5	8.70	17.36	2.95	8.08
1635.0	8.45	16.87	2.91	8.02
1637.5	8.20	16.37	2.91	8.01
1640.0	7.96	15.88	2.90	7.93
1642.5	7.71	15.38	2.88	7.90
1645.0	7.46	14.89	2.85	7.86
1647.5	7.21	14.39	2.83	7.81
1650.0	6.96	13.90	2.80	7.76
1652.5	6.71	13.40	2.78	7.71
1655.0	6.47	12.90	2.77	7.66
1657.5	6.22	12.41	2.79	7.59
1660.0	5.97	11.91	2.74	7.57
1662.5	5.73	11.42	2.73	7.51
1665.0	5.48	10.93	2.68	7.42
1667.5	5.23	10.43	2.66	7.39
1670.0	4.99	9.94	2.65	7.32
1672.5	4.74	9.44	2.64	7.25
1675.0	4.49	8.94	2.63	7.21
1677.5	4.24	8.45	2.61	7.11
1680.0	3.99	7.95	2.58	7.05
1682.5	3.75	7.46	2.59	7.03
1685.0	3.50	6.97	2.56	6.92
1687.5	3.25	6.47	2.53	6.85
1690.0	3.01	5.99	2.51	6.73
1692.5	2.77	5.49	2.47	6.70
1695.0	2.52	5.00	2.47	6.57
1697.5	2.27	4.50	2.43	6.48
1700.0	2.02	4.01	2.43	6.40
1702.5	1.78	3.52	2.41	6.30
1705.0	1.53	3.02	2.41	6.19
1707.5	1.28	2.53	2.37	6.04
1710.0	1.04	2.03	2.38	5.94
1712.5	0.79	1.54	2.36	5.79
1715.0	0.54	1.04	2.38	5.63
1717.5	0.30	0.55	2.39	5.44
1720.0	0.14	0.11	2.43	5.18
1722.5	0.51	0.52	2.45	5.12
1725.0	1.00	1.00	2.48	5.17
1727.5	1.50	1.50	2.49	5.24
1730.0	1.99	1.99	2.51	5.29
1732.5	2.49	2.49	2.55	5.35
1735.0	2.98	2.99	2.58	5.41
1737.5	3.48	3.48	2.61	5.48
1740.0	3.97	3.97	2.64	5.54
1742.5	4.46	4.47	2.68	5.61
1745.0	4.96	4.96	2.71	5.69
1747.5	5.45	5.45	2.75	5.77

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Testing Laboratory, Inspection and Certification Body NRW71

Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 6

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
1750.0	5.95	5.95	2.80	5.83
1752.5	6.44	6.44	2.85	5.87
1755.0	6.94	6.94	2.89	5.97
1757.5	7.43	7.44	2.93	6.03
1760.0	7.93	7.93	2.99	6.11
1762.5	8.42	8.43	3.05	6.17
1765.0	8.92	8.93	3.08	6.24
1767.5	9.41	9.43	3.13	6.31
1770.0	9.91	9.91	3.17	6.41
1772.5	10.40	10.41	3.22	6.45
1775.0	10.90	10.91	3.29	6.53
1777.5	11.39	11.40	3.35	6.64
1780.0	11.89	11.90	3.42	6.65
1782.5	12.38	12.39	3.46	6.73
1785.0	12.88	12.88	3.52	6.83
1787.5	13.37	13.38	3.56	6.89
1790.0	13.87	13.87	3.64	6.96
1792.5	14.36	14.37	3.71	7.03
1795.0	14.86	14.87	3.78	7.14
1797.5	15.35	15.36	3.85	7.21
1800.0	15.85	15.85	3.89	7.27
1802.5	16.34	16.34	3.97	7.31
1805.0	16.83	16.83	4.03	7.38
1807.5	17.32	17.32	4.12	7.45
1810.0	17.82	17.82	4.20	7.53
1812.5	18.31	18.31	4.27	7.62
1815.0	18.81	18.81	4.35	7.68
1817.5	19.30	19.30	4.42	7.76
1820.0	19.80	19.79	4.50	7.82
1822.5	20.29	20.29	4.56	7.91
1825.0	20.79	20.78	4.65	8.00
1827.5	21.20	21.20	4.72	8.08
1830.0	20.83	20.82	4.74	8.09
1832.5	20.34	20.33	4.72	8.05
1835.0	19.84	19.83	4.73	8.01
1837.5	19.35	19.34	4.68	8.01
1840.0	18.85	18.85	4.66	7.96
1842.5	18.36	18.35	4.62	7.93
1845.0	17.87	17.87	4.59	7.90
1847.5	17.38	17.38	4.57	7.84
1850.0	16.88	16.88	4.52	7.81
1852.5	16.39	16.37	4.49	7.79
1855.0	15.89	15.89	4.44	7.72
1857.5	15.40	15.39	4.41	7.70
1860.0	14.91	14.91	4.38	7.64
1862.5	14.41	14.40	4.32	7.61
1865.0	13.92	13.91	4.29	7.53
1867.5	13.42	13.42	4.28	7.51
1870.0	12.93	12.93	4.24	7.50
1872.5	12.43	12.43	4.18	7.40
1875.0	11.94	11.93	4.12	7.36
1877.5	11.44	11.44	4.07	7.31
1880.0	10.95	10.95	4.03	7.23
1882.5	10.45	10.45	3.99	7.20
1885.0	9.96	9.96	3.94	7.16
1887.5	9.46	9.46	3.89	7.11
1890.0	8.97	8.96	3.83	7.01
1892.5	8.47	8.47	3.78	6.95
1895.0	7.98	7.97	3.72	6.90
1897.5	7.48	7.48	3.68	6.81
1900.0	6.99	6.98	3.60	6.75
1902.5	6.49	6.49	3.52	6.70
1905.0	6.00	6.00	3.47	6.59
1907.5	5.50	5.50	3.41	6.53
1910.0	5.01	5.01	3.33	6.40
1912.5	4.52	4.51	3.28	6.35
1915.0	4.02	4.01	3.19	6.26
1917.5	3.52	3.53	3.12	6.15
1920.0	3.03	3.02	3.05	6.05
1922.5	2.53	2.53	2.98	5.97

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
1925.0	2.04	2.04	2.90	5.80
1927.5	1.55	1.54	2.82	5.71
1930.0	1.05	1.05	2.76	5.55
1932.5	0.56	0.56	2.70	5.37
1935.0	0.13	0.12	2.64	5.17
1937.5	0.51	0.52	2.63	5.13
1940.0	1.00	1.00	2.60	5.21
1942.5	1.50	1.49	2.59	5.24
1945.0	1.99	1.99	2.64	5.31
1947.5	2.49	2.48	2.65	5.38
1950.0	2.99	2.98	2.68	5.46
1952.5	3.48	3.47	2.72	5.50
1955.0	3.98	3.97	2.75	5.58
1957.5	4.46	4.46	2.78	5.67
1960.0	4.96	4.96	2.81	5.76
1962.5	5.45	5.45	2.86	5.82
1965.0	5.95	5.94	2.92	5.85
1967.5	6.44	6.44	2.98	5.95
1970.0	6.94	6.93	2.99	6.00
1972.5	7.43	7.43	3.05	6.10
1975.0	7.93	7.92	3.13	6.15
1977.5	8.42	8.41	3.17	6.23
1980.0	8.91	8.91	3.21	6.29
1982.5	9.41	9.41	3.28	6.40
1985.0	9.90	9.89	3.33	6.45
1987.5	10.40	10.40	3.37	6.51
1990.0	10.89	10.89	3.44	6.57
1992.5	11.38	11.38	3.47	6.63
1995.0	11.87	11.87	3.55	6.69
1997.5	12.37	12.36	3.62	6.81
2000.0	12.87	12.86	3.68	6.86
2002.5	13.36	13.36	3.71	6.93
2005.0	13.86	13.85	3.78	7.00
2007.5	14.35	14.35	3.87	7.10
2010.0	14.85	14.84	3.92	7.17
2012.5	15.34	15.34	3.99	7.22
2015.0	15.84	15.83	4.06	7.29
2017.5	16.33	16.33	4.11	7.36
2020.0	16.83	16.82	4.16	7.42
2022.5	17.33	17.32	4.23	7.49
2025.0	17.82	17.82	4.29	7.59
2027.5	18.32	18.32	4.36	7.64
2030.0	18.82	18.81	4.41	7.71
2032.5	19.31	19.31	4.49	7.81
2035.0	19.81	19.81	4.56	7.85
2037.5	20.30	20.30	4.62	7.93
2040.0	20.80	20.80	4.69	8.01
2042.5	21.22	21.22	4.76	8.11
2045.0	20.85	20.85	4.77	8.12
2047.5	20.35	20.36	4.77	8.07
2050.0	19.86	19.85	4.75	8.04
2052.5	19.36	19.37	4.73	8.03
2055.0	18.86	18.88	4.67	7.97
2057.5	18.37	18.37	4.65	7.96
2060.0	17.87	17.87	4.63	7.91
2062.5	17.37	17.37	4.62	7.87
2065.0	16.88	16.89	4.56	7.82
2067.5	16.38	16.38	4.51	7.81
2070.0	15.89	15.89	4.49	7.75
2072.5	15.39	15.39	4.45	7.70
2075.0	14.90	14.90	4.40	7.65
2077.5	14.40	14.40	4.36	7.64
2080.0	13.91	13.91	4.32	7.58
2082.5	13.41	13.41	4.31	7.51
2085.0	12.92	12.91	4.26	7.50
2087.5	12.42	12.42	4.21	7.43
2090.0	11.93	11.92	4.14	7.37
2092.5	11.43	11.42	4.10	7.34
2095.0	10.94	10.93	4.06	7.28
2097.5	10.44	10.43	4.04	7.22

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Testing Laboratory, Inspection and Certification Body NRW71

Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 7

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
2100.0	9.95	9.94	3.97	7.17
2102.5	9.45	9.44	3.91	7.13
2105.0	8.96	8.95	3.86	7.04
2107.5	8.46	8.45	3.80	6.97
2110.0	7.96	7.95	3.75	6.92
2112.5	7.47	7.47	3.69	6.86
2115.0	6.98	6.97	3.63	6.75
2117.5	6.48	6.47	3.57	6.70
2120.0	5.99	5.98	3.51	6.64
2122.5	5.50	5.49	3.46	6.54
2125.0	5.00	4.99	3.37	6.48
2127.5	4.50	4.49	3.33	6.36
2130.0	4.01	4.00	3.24	6.31
2132.5	3.51	3.50	3.19	6.16
2135.0	3.02	3.01	3.10	6.09
2137.5	2.52	2.51	3.04	5.98
2140.0	2.03	2.02	2.97	5.86
2142.5	1.52	1.52	2.91	5.74
2145.0	1.04	1.03	2.81	5.60
2147.5	0.54	0.53	2.76	5.41
2150.0	0.12	0.09	2.69	5.23
2152.5	0.50	0.50	2.67	5.18
2155.0	0.99	0.99	2.68	5.23
2157.5	1.49	1.49	2.65	5.29
2160.0	1.98	1.98	2.70	5.39
2162.5	2.48	2.47	2.75	5.46
2165.0	2.97	2.97	2.74	5.52
2167.5	3.47	3.47	2.79	5.59
2170.0	3.96	3.96	2.83	5.66
2172.5	4.46	4.46	2.85	5.70
2175.0	4.95	4.95	2.88	5.77
2177.5	5.45	5.44	2.94	5.86
2180.0	5.94	5.93	2.99	5.92
2182.5	6.43	6.43	3.02	5.99
2185.0	6.93	6.93	3.07	6.06
2187.5	7.43	7.42	3.13	6.13
2190.0	7.92	7.92	3.15	6.22
2192.5	8.41	8.41	3.23	6.24
2195.0	8.91	8.91	3.28	6.35
2197.5	9.41	9.40	3.33	6.41
2200.0	9.90	9.89	3.38	6.47
2202.5	10.39	10.39	3.43	6.57
2205.0	10.89	10.88	3.49	6.61
2207.5	11.38	11.38	3.53	6.67
2210.0	11.88	11.87	3.60	6.76
2212.5	12.37	12.36	3.67	6.86
2215.0	12.87	12.86	3.72	6.90
2217.5	13.36	13.36	3.79	6.97
2220.0	13.85	13.85	3.88	7.05
2222.5	14.35	14.35	3.93	7.13
2225.0	14.85	14.85	3.99	7.20
2227.5	15.34	15.34	4.04	7.25
2230.0	15.84	15.83	4.09	7.32
2232.5	16.33	16.33	4.14	7.39
2235.0	16.83	16.82	4.19	7.46
2237.5	17.32	17.32	4.27	7.52
2240.0	17.82	17.82	4.35	7.61
2242.5	18.31	18.31	4.40	7.67
2245.0	18.80	18.80	4.47	7.74
2247.5	19.30	19.30	4.51	7.81
2250.0	19.80	19.79	4.57	7.90
2252.5	20.30	20.30	4.65	7.96
2255.0	20.80	20.80	4.71	8.05
2257.5	21.22	21.22	4.80	8.13
2260.0	20.84	20.85	4.79	8.13
2262.5	20.35	20.34	4.78	8.10
2265.0	19.86	19.84	4.77	8.06
2267.5	19.36	19.35	4.74	8.06
2270.0	18.87	18.86	4.69	8.00
2272.5	18.37	18.37	4.66	7.98

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
2275.0	17.88	17.88	4.64	7.92
2277.5	17.38	17.38	4.64	7.88
2280.0	16.88	16.89	4.60	7.84
2282.5	16.39	16.40	4.52	7.83
2285.0	15.89	15.89	4.51	7.78
2287.5	15.39	15.40	4.46	7.72
2290.0	14.89	14.89	4.43	7.67
2292.5	14.40	14.40	4.38	7.65
2295.0	13.91	13.91	4.33	7.57
2297.5	13.41	13.41	4.33	7.54
2300.0	12.92	12.91	4.28	7.51
2302.5	12.42	12.41	4.24	7.46
2305.0	11.92	11.92	4.18	7.39
2307.5	11.44	11.42	4.13	7.35
2310.0	10.93	10.93	4.09	7.29
2312.5	10.44	10.44	4.05	7.22
2315.0	9.95	9.94	4.00	7.18
2317.5	9.46	9.45	3.96	7.16
2320.0	8.96	8.96	3.88	7.06
2322.5	8.47	8.47	3.82	6.98
2325.0	7.97	7.97	3.77	6.94
2327.5	7.48	7.48	3.73	6.87
2330.0	6.99	6.98	3.67	6.80
2332.5	6.49	6.49	3.61	6.73
2335.0	6.00	6.00	3.54	6.67
2337.5	5.50	5.50	3.48	6.56
2340.0	5.01	5.01	3.43	6.49
2342.5	4.51	4.51	3.36	6.40
2345.0	4.02	4.02	3.29	6.33
2347.5	3.53	3.53	3.20	6.22
2350.0	3.03	3.03	3.14	6.12
2352.5	2.53	2.53	3.08	6.02
2355.0	2.03	2.04	3.00	5.91
2357.5	1.54	1.54	2.93	5.76
2360.0	1.05	1.05	2.86	5.62
2362.5	0.55	0.56	2.80	5.46
2365.0	0.13	0.12	2.75	5.27
2367.5	0.51	0.14	2.74	5.10
2370.0	0.99	0.13	2.79	4.95
2372.5	1.49	0.12	2.85	4.81
2375.0	1.99	0.12	2.93	4.67
2377.5	2.48	0.12	2.98	4.56
2380.0	2.97	0.13	3.06	4.44
2382.5	3.47	0.12	3.13	4.34
2385.0	3.96	0.12	3.18	4.23
2387.5	4.46	0.12	3.26	4.12
2390.0	4.95	0.12	3.31	4.05
2392.5	5.45	0.13	3.36	3.96
2395.0	5.94	0.12	3.43	3.85
2397.5	6.44	0.12	3.47	3.78
2400.0	6.93	0.12	3.55	3.68
2402.5	7.43	0.12	3.61	3.63
2405.0	7.92	0.12	3.67	3.57
2407.5	8.42	0.12	3.73	3.51
2410.0	8.91	0.12	3.80	3.45
2412.5	9.40	0.11	3.87	3.39
2415.0	9.90	0.12	3.92	3.32
2417.5	10.40	0.12	3.99	3.26
2420.0	10.89	0.12	4.06	3.19
2422.5	11.38	0.11	4.10	3.15
2425.0	11.88	0.12	4.19	3.09
2427.5	12.38	0.13	4.25	3.04
2430.0	12.88	0.12	4.31	2.96
2432.5	13.37	0.12	4.37	2.91
2435.0	13.86	0.12	4.45	2.89
2437.5	14.36	0.13	4.50	2.83
2440.0	14.85	0.13	4.59	2.78
2442.5	15.35	0.13	4.64	2.72
2445.0	15.85	0.13	4.71	2.68
2447.5	16.35	0.13	4.78	2.64

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Testing Laboratory, Inspection and Certification Body NRW71

Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 8

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
2450.0	16.84	0.13	4.84	2.60
2452.5	17.33	0.14	4.89	2.58
2455.0	17.83	0.13	4.95	2.54
2457.5	18.32	0.14	5.05	2.51
2460.0	18.81	0.13	5.10	2.46
2462.5	19.30	0.12	5.15	2.40
2465.0	19.80	0.13	5.23	2.38
2467.5	20.29	0.12	5.30	2.34
2470.0	20.78	0.12	5.37	2.31
2472.5	21.20	0.12	5.46	2.26
2475.0	20.83	0.11	5.48	2.25
2477.5	20.34	0.10	5.47	2.23
2480.0	19.85	0.12	5.46	2.22
2482.5	19.36	0.14	5.41	2.22
2485.0	18.87	0.13	5.39	2.22
2487.5	18.37	0.13	5.36	2.23
2490.0	17.88	0.13	5.33	2.22
2492.5	17.38	0.13	5.28	2.21
2495.0	16.89	0.14	5.25	2.23
2497.5	16.39	0.14	5.22	2.22
2500.0	15.88	0.13	5.19	2.22
2502.5	15.39	0.13	5.14	2.24
2505.0	14.89	0.12	5.08	2.24
2507.5	14.40	0.12	5.06	2.26
2510.0	13.91	0.12	5.01	2.27
2512.5	13.41	0.12	4.99	2.27
2515.0	12.92	0.12	4.94	2.28
2517.5	12.43	0.12	4.89	2.31
2520.0	11.93	0.12	4.84	2.31
2522.5	11.44	0.13	4.80	2.30
2525.0	10.95	0.13	4.74	2.32
2527.5	10.45	0.13	4.69	2.35
2530.0	9.96	0.13	4.66	2.33
2532.5	9.46	0.13	4.61	2.37
2535.0	8.97	0.13	4.54	2.39
2537.5	8.47	0.13	4.49	2.38
2540.0	7.98	0.14	4.43	2.40
2542.5	7.48	0.14	4.35	2.42
2545.0	6.98	0.13	4.30	2.45
2547.5	6.48	0.12	4.25	2.48
2550.0	5.99	0.12	4.16	2.50
2552.5	5.49	0.13	4.10	2.52
2555.0	5.00	0.12	4.01	2.55
2557.5	4.51	0.12	3.95	2.59
2560.0	4.01	0.12	3.87	2.64
2562.5	3.52	0.11	3.79	2.66
2565.0	3.02	0.12	3.72	2.71
2567.5	2.53	0.12	3.62	2.76
2570.0	2.04	0.13	3.53	2.80
2572.5	1.54	0.13	3.43	2.86
2575.0	1.05	0.13	3.32	2.91
2577.5	0.56	0.13	3.20	3.02
2580.0	0.13	0.13	3.08	3.08
2582.5	0.52	0.27	3.08	3.12
2585.0	1.00	1.06	3.01	3.83
2587.5	1.50	1.50	2.97	4.07
2590.0	1.99	1.99	2.98	4.28
2592.5	2.49	2.49	2.96	4.45
2595.0	2.98	2.98	2.95	4.62
2597.5	3.48	3.48	2.99	4.73
2600.0	3.97	3.97	3.02	4.86
2602.5	4.47	4.47	3.04	4.95
2605.0	4.96	4.97	3.07	5.08
2607.5	5.46	5.46	3.12	5.22
2610.0	5.95	5.96	3.14	5.29
2612.5	6.44	6.45	3.18	5.40
2615.0	6.94	6.93	3.22	5.49
2617.5	7.43	7.43	3.26	5.59
2620.0	7.92	7.92	3.30	5.68
2622.5	8.42	8.42	3.34	5.80

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
2625.0	8.91	8.91	3.40	5.87
2627.5	9.41	9.40	3.44	5.99
2630.0	9.91	9.90	3.49	6.05
2632.5	10.39	10.40	3.56	6.18
2635.0	10.89	10.89	3.64	6.30
2637.5	11.38	11.39	3.69	6.38
2640.0	11.88	11.88	3.74	6.48
2642.5	12.37	12.37	3.80	6.53
2645.0	12.87	12.87	3.84	6.68
2647.5	13.37	13.37	3.88	6.75
2650.0	13.86	13.86	3.95	6.83
2652.5	14.35	14.35	3.99	6.91
2655.0	14.85	14.84	4.04	7.01
2657.5	15.34	15.33	4.12	7.11
2660.0	15.84	15.83	4.19	7.18
2662.5	16.33	16.32	4.25	7.26
2665.0	16.83	16.82	4.31	7.39
2667.5	17.32	17.32	4.37	7.47
2670.0	17.82	17.81	4.42	7.53
2672.5	18.31	18.31	4.48	7.62
2675.0	18.81	18.81	4.54	7.74
2677.5	19.31	19.30	4.61	7.78
2680.0	19.81	19.80	4.69	7.84
2682.5	20.30	20.31	4.75	7.95
2685.0	20.80	20.79	4.79	8.05
2687.5	21.22	21.22	4.87	8.13
2690.0	20.84	20.84	4.88	8.13
2692.5	20.35	20.34	4.86	8.13
2695.0	19.85	19.85	4.85	8.06
2697.5	19.36	19.36	4.81	8.04
2700.0	18.86	18.87	4.80	8.03
2702.5	18.37	18.38	4.76	7.97
2705.0	17.87	17.87	4.70	7.97
2707.5	17.38	17.38	4.69	7.91
2710.0	16.88	16.88	4.65	7.88
2712.5	16.39	16.40	4.62	7.82
2715.0	15.90	15.90	4.55	7.77
2717.5	15.40	15.41	4.53	7.75
2720.0	14.91	14.91	4.49	7.70
2722.5	14.40	14.41	4.48	7.64
2725.0	13.91	13.91	4.41	7.61
2727.5	13.41	13.41	4.38	7.59
2730.0	12.92	12.91	4.34	7.48
2732.5	12.42	12.42	4.31	7.46
2735.0	11.93	11.92	4.24	7.42
2737.5	11.43	11.43	4.20	7.34
2740.0	10.94	10.93	4.17	7.30
2742.5	10.44	10.43	4.14	7.23
2745.0	9.95	9.93	4.09	7.14
2747.5	9.45	9.44	4.02	7.11
2750.0	8.96	8.95	3.95	7.08
2752.5	8.47	8.46	3.91	7.01
2755.0	7.97	7.97	3.88	6.93
2757.5	7.48	7.47	3.82	6.86
2760.0	6.99	6.98	3.77	6.80
2762.5	6.49	6.49	3.70	6.68
2765.0	5.99	5.99	3.65	6.65
2767.5	5.50	5.49	3.58	6.55
2770.0	5.00	5.00	3.52	6.45
2772.5	4.51	4.50	3.44	6.37
2775.0	4.02	4.01	3.39	6.26
2777.5	3.51	3.51	3.29	6.16
2780.0	3.02	3.02	3.25	6.06
2782.5	2.52	2.52	3.18	5.94
2785.0	2.03	2.02	3.10	5.83
2787.5	1.54	1.54	3.03	5.68
2790.0	1.04	1.04	2.98	5.52
2792.5	0.55	0.55	2.91	5.31
2795.0	0.13	0.13	2.86	5.07
2797.5	0.51	0.53	2.85	5.04

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Testing Laboratory, Inspection and Certification Body NRW71

Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 9

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
2800.0	1.00	1.00	2.85	5.09
2802.5	1.50	1.49	2.86	5.17
2805.0	1.99	1.99	2.85	5.27
2807.5	2.49	2.48	2.89	5.37
2810.0	2.98	2.98	2.91	5.44
2812.5	3.47	3.47	2.92	5.51
2815.0	3.97	3.97	2.98	5.58
2817.5	4.46	4.46	3.00	5.64
2820.0	4.96	4.96	3.05	5.74
2822.5	5.46	5.45	3.08	5.82
2825.0	5.95	5.95	3.13	5.85
2827.5	6.45	6.44	3.15	5.92
2830.0	6.94	6.94	3.23	6.02
2832.5	7.43	7.43	3.25	6.08
2835.0	7.92	7.92	3.33	6.19
2837.5	8.41	8.41	3.36	6.19
2840.0	8.91	8.90	3.39	6.31
2842.5	9.41	9.39	3.46	6.39
2845.0	9.90	9.89	3.53	6.45
2847.5	10.39	10.39	3.54	6.53
2850.0	10.89	10.89	3.60	6.58
2852.5	11.38	11.39	3.68	6.67
2855.0	11.88	11.88	3.73	6.76
2857.5	12.37	12.38	3.78	6.82
2860.0	12.87	12.87	3.85	6.88
2862.5	13.37	13.36	3.91	6.98
2865.0	13.86	13.86	3.96	7.06
2867.5	14.35	14.35	4.00	7.12
2870.0	14.85	14.86	4.11	7.19
2872.5	15.34	15.35	4.15	7.24
2875.0	15.84	15.84	4.21	7.32
2877.5	16.34	16.34	4.26	7.43
2880.0	16.84	16.84	4.31	7.49
2882.5	17.33	17.34	4.39	7.54
2885.0	17.83	17.84	4.43	7.61
2887.5	18.32	18.32	4.50	7.69
2890.0	18.82	18.81	4.55	7.76
2892.5	19.31	19.31	4.62	7.86
2895.0	19.81	19.81	4.68	7.91
2897.5	20.31	20.31	4.74	7.99
2900.0	20.80	20.80	4.81	8.04
2902.5	21.22	21.22	4.88	8.11
2905.0	20.84	20.84	4.90	8.14
2907.5	20.34	20.34	4.88	8.11
2910.0	19.85	19.83	4.84	8.13
2912.5	19.34	19.34	4.80	8.06
2915.0	18.85	18.84	4.78	8.06
2917.5	18.36	18.35	4.76	8.00
2920.0	17.86	17.87	4.71	7.96
2922.5	17.37	17.37	4.68	7.94
2925.0	16.88	16.87	4.68	7.87
2927.5	16.38	16.38	4.64	7.89
2930.0	15.89	15.89	4.55	7.80
2932.5	15.40	15.39	4.53	7.78
2935.0	14.90	14.91	4.49	7.73
2937.5	14.41	14.41	4.47	7.67
2940.0	13.92	13.91	4.42	7.63
2942.5	13.42	13.41	4.38	7.60
2945.0	12.93	12.92	4.34	7.54
2947.5	12.43	12.42	4.31	7.46
2950.0	11.93	11.93	4.25	7.43
2952.5	11.44	11.44	4.22	7.40
2955.0	10.94	10.93	4.18	7.32
2957.5	10.44	10.43	4.11	7.26
2960.0	9.95	9.94	4.08	7.22
2962.5	9.45	9.45	4.03	7.14
2965.0	8.96	8.96	3.96	7.08
2967.5	8.46	8.46	3.91	7.03
2970.0	7.97	7.97	3.88	6.99
2972.5	7.48	7.47	3.83	6.87

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
2975.0	6.99	6.98	3.77	6.84
2977.5	6.49	6.49	3.70	6.76
2980.0	6.00	6.00	3.65	6.64
2982.5	5.51	5.51	3.57	6.57
2985.0	5.01	5.01	3.51	6.52
2987.5	4.51	4.51	3.46	6.43
2990.0	4.02	4.02	3.39	6.32
2992.5	3.52	3.52	3.31	6.21
2995.0	3.02	3.02	3.26	6.14
2997.5	2.53	2.53	3.17	6.05
3000.0	2.04	2.03	3.12	5.87
3002.5	1.54	1.53	3.06	5.78
3005.0	1.04	1.03	3.01	5.62
3007.5	0.54	0.54	2.94	5.46
3010.0	0.12	0.10	2.88	5.20
3012.5	0.49	0.51	2.87	5.19
3015.0	0.99	0.99	2.85	5.25
3017.5	1.49	1.49	2.86	5.30
3020.0	1.98	1.98	2.87	5.39
3022.5	2.48	2.48	2.91	5.46
3025.0	2.98	2.98	2.95	5.54
3027.5	3.48	3.48	2.98	5.60
3030.0	3.97	3.98	2.99	5.69
3032.5	4.47	4.46	3.04	5.77
3035.0	4.96	4.96	3.09	5.83
3037.5	5.46	5.45	3.12	5.88
3040.0	5.95	5.94	3.17	5.96
3042.5	6.44	6.43	3.21	6.03
3045.0	6.93	6.92	3.24	6.09
3047.5	7.42	7.42	3.28	6.20
3050.0	7.92	7.92	3.35	6.24
3052.5	8.42	8.42	3.41	6.32
3055.0	8.91	8.91	3.45	6.40
3057.5	9.41	9.41	3.48	6.46
3060.0	9.91	9.91	3.55	6.55
3062.5	10.40	10.41	3.59	6.61
3065.0	10.90	10.90	3.64	6.65
3067.5	11.40	11.40	3.72	6.76
3070.0	11.89	11.89	3.77	6.83
3072.5	12.39	12.38	3.84	6.89
3075.0	12.88	12.88	3.89	6.98
3077.5	13.37	13.37	3.94	7.04
3080.0	13.86	13.86	4.00	7.11
3082.5	14.35	14.35	4.04	7.17
3085.0	14.85	14.84	4.10	7.24
3087.5	15.34	15.34	4.16	7.30
3090.0	15.84	15.84	4.23	7.38
3092.5	16.33	16.33	4.28	7.46
3095.0	16.83	16.83	4.34	7.51
3097.5	17.32	17.32	4.42	7.58
3100.0	17.82	17.82	4.47	7.64
3102.5	18.31	18.32	4.51	7.72
3105.0	18.81	18.81	4.57	7.82
3107.5	19.31	19.31	4.61	7.88
3110.0	19.81	19.81	4.67	7.93
3112.5	20.30	20.30	4.77	8.00
3115.0	20.79	20.81	4.84	8.06
3117.5	21.22	21.23	4.90	8.14
3120.0	20.84	20.85	4.92	8.14
3122.5	20.35	20.34	4.86	8.13
3125.0	19.85	19.85	4.83	8.14
3127.5	19.36	19.35	4.81	8.08
3130.0	18.86	18.85	4.79	8.07
3132.5	18.37	18.37	4.76	8.01
3135.0	17.87	17.87	4.72	7.98
3137.5	17.38	17.37	4.69	7.96
3140.0	16.88	16.87	4.67	7.90
3142.5	16.38	16.38	4.64	7.89
3145.0	15.89	15.88	4.57	7.80
3147.5	15.39	15.39	4.54	7.80

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Measured data of biaxial tensile test

Test: S020124	Material: 739 ATLAS Architecture Type II	page: 10

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
3150.0	14.89	14.89	4.49	7.74
3152.5	14.40	14.40	4.48	7.69
3155.0	13.91	13.90	4.43	7.63
3157.5	13.41	13.40	4.39	7.59
3160.0	12.92	12.91	4.36	7.58
3162.5	12.42	12.42	4.32	7.49
3165.0	11.93	11.93	4.28	7.44
3167.5	11.43	11.43	4.22	7.40
3170.0	10.94	10.93	4.19	7.35
3172.5	10.44	10.44	4.14	7.29
3175.0	9.95	9.95	4.08	7.23
3177.5	9.45	9.45	4.04	7.19
3180.0	8.96	8.96	4.00	7.09
3182.5	8.47	8.46	3.92	7.04
3185.0	7.98	7.98	3.88	7.00
3187.5	7.48	7.48	3.83	6.93
3190.0	6.99	6.99	3.78	6.84
3192.5	6.49	6.50	3.74	6.78
3195.0	6.00	6.00	3.66	6.71
3197.5	5.51	5.49	3.60	6.62
3200.0	5.01	5.01	3.54	6.55
3202.5	4.51	4.51	3.48	6.46
3205.0	4.02	4.01	3.41	6.37
3207.5	3.52	3.52	3.35	6.24
3210.0	3.03	3.02	3.26	6.17
3212.5	2.53	2.52	3.20	6.06
3215.0	2.03	2.02	3.15	5.95
3217.5	1.54	1.52	3.09	5.82
3220.0	1.04	1.03	3.03	5.67
3222.5	0.55	0.54	2.97	5.48
3225.0	0.12	0.10	2.91	5.28
3227.5	0.13	0.51	2.82	5.30
3230.0	0.12	0.99	2.73	5.41
3232.5	0.13	1.49	2.63	5.55
3235.0	0.12	1.98	2.56	5.66
3237.5	0.13	2.48	2.49	5.78
3240.0	0.13	2.97	2.37	5.89
3242.5	0.13	3.47	2.31	6.01
3245.0	0.14	3.97	2.21	6.05
3247.5	0.14	4.47	2.12	6.16
3250.0	0.14	4.96	2.06	6.27
3252.5	0.14	5.46	1.98	6.37
3255.0	0.14	5.95	1.89	6.48
3257.5	0.14	6.44	1.84	6.51
3260.0	0.13	6.94	1.77	6.60
3262.5	0.13	7.43	1.71	6.72
3265.0	0.13	7.93	1.66	6.80
3267.5	0.13	8.42	1.58	6.86
3270.0	0.13	8.91	1.53	6.95
3272.5	0.13	9.40	1.47	7.06
3275.0	0.12	9.89	1.40	7.11
3277.5	0.12	10.38	1.34	7.22
3280.0	0.13	10.88	1.31	7.29
3282.5	0.13	11.38	1.22	7.34
3285.0	0.13	11.87	1.17	7.45
3287.5	0.12	12.36	1.11	7.52
3290.0	0.13	12.86	1.08	7.62
3292.5	0.12	13.36	1.02	7.67
3295.0	0.12	13.85	0.98	7.78
3297.5	0.12	14.34	0.89	7.85
3300.0	0.12	14.84	0.87	7.91
3302.5	0.13	15.34	0.80	7.99
3305.0	0.12	15.83	0.74	8.07
3307.5	0.13	16.33	0.69	8.13
3310.0	0.12	16.83	0.67	8.23
3312.5	0.12	17.32	0.62	8.29
3315.0	0.12	17.81	0.56	8.37
3317.5	0.13	18.31	0.54	8.44
3320.0	0.12	18.80	0.47	8.54
3322.5	0.12	19.30	0.43	8.60

time [s]	stress [kN/m] warp	stress [kN/m] fill	strain [%] warp	strain [%] fill
3325.0	0.13	19.80	0.38	8.67
3327.5	0.12	20.29	0.35	8.74
3330.0	0.12	20.78	0.31	8.83
3332.5	0.12	21.21	0.24	8.89
3335.0	0.13	20.83	0.23	8.91
3337.5	0.13	20.34	0.22	8.90
3340.0	0.13	19.84	0.20	8.89
3342.5	0.13	19.35	0.21	8.86
3345.0	0.13	18.86	0.22	8.83
3347.5	0.13	18.37	0.21	8.79
3350.0	0.13	17.88	0.22	8.76
3352.5	0.14	17.39	0.20	8.71
3355.0	0.14	16.89	0.24	8.66
3357.5	0.14	16.39	0.22	8.64
3360.0	0.14	15.89	0.25	8.58
3362.5	0.14	15.40	0.24	8.53
3365.0	0.14	14.90	0.23	8.51
3367.5	0.14	14.40	0.27	8.46
3370.0	0.13	13.91	0.27	8.43
3372.5	0.13	13.41	0.27	8.36
3375.0	0.13	12.91	0.29	8.31
3377.5	0.12	12.41	0.31	8.27
3380.0	0.13	11.92	0.32	8.22
3382.5	0.13	11.43	0.33	8.18
3385.0	0.13	10.94	0.35	8.11
3387.5	0.13	10.44	0.37	8.04
3390.0	0.13	9.95	0.39	8.00
3392.5	0.13	9.45	0.40	7.92
3395.0	0.14	8.97	0.44	7.86
3397.5	0.13	8.48	0.46	7.81
3400.0	0.14	7.98	0.48	7.72
3402.5	0.14	7.48	0.49	7.66
3405.0	0.14	6.99	0.52	7.59
3407.5	0.14	6.49	0.57	7.50
3410.0	0.13	5.99	0.61	7.44
3412.5	0.13	5.49	0.65	7.36
3415.0	0.12	4.99	0.68	7.26
3417.5	0.12	4.49	0.75	7.15
3420.0	0.13	4.00	0.78	7.05
3422.5	0.12	3.51	0.89	6.96
3425.0	0.13	3.01	0.94	6.85
3427.5	0.13	2.53	1.05	6.75
3430.0	0.13	2.03	1.11	6.59
3432.5	0.13	1.53	1.24	6.46
3435.0	0.13	1.04	1.33	6.29
3437.5	0.13	0.54	1.47	6.08
3440.0	0.13	0.11	1.65	5.77
3441.0	0.13	0.11	1.68	5.67
3442.0	0.13	0.12	1.70	5.63
3443.0	0.13	0.12	1.73	5.57
3444.0	0.13	0.12	1.73	5.54
3445.0	0.12	0.13	1.75	5.48