

Appendix 1. Data acquired from the numerical analysis

Sl. No	Load (N)	Crack Length, a (mm)	Thickness, B(mm)	CMOD (μm)	CTOD (μm)	SIF, K ($\text{MPa}\cdot\text{mm}^{0.5}$)	Plastic zone size (maximum) (μm)
1.	100	9	8	3.072	0.115	1.153	6.159
2.	200	9	8	6.144	0.459	2.306	24.636
3.	300	9	8	9.217	1.033	3.459	55.432
4.	400	9	8	12.29	1.837	4.612	98.545
5.	500	9	8	15.356	2.870	5.765	153.982
6.	100	9	9	2.725	0.087	1.004	4.670
7.	200	9	9	5.454	0.348	2.008	18.680
8.	300	9	9	8.173	0.783	3.012	42.030
9.	400	9	9	10.9	1.392	4.016	74.715
10.	500	9	9	13.625	2.176	5.019	116.744
11.	100	9	10	2.45	0.066	0.877	3.563
12.	200	9	10	4.9	0.266	1.754	14.254
13.	300	9	10	7.347	0.598	2.631	32.073
14.	400	9	10	9.796	1.063	3.508	57.017
15.	500	9	10	12.25	1.660	4.385	89.090
16.	100	9	11	2.215	0.027	0.554	1.422
17.	200	9	11	4.433	0.106	1.108	5.690
18.	300	9	11	6.644	0.239	1.662	12.801
19.	400	9	11	8.861	0.424	2.216	22.757
20.	500	9	11	11.076	0.663	2.77	35.557
21.	100	10	8	3.192	0.129	1.221	6.905
22.	200	10	8	6.381	0.515	2.441	27.617
23.	300	10	8	9.572	1.158	3.662	62.140
24.	400	10	8	12.766	2.059	4.883	110.467
25.	500	10	8	15.954	3.217	6.103	172.608
26.	100	10	9	2.831	0.098	1.065	5.256
27.	200	10	9	5.661	0.392	2.13	21.021
28.	300	10	9	8.493	0.881	3.195	47.298
29.	400	10	9	11.322	1.567	4.26	84.087
30.	500	10	9	14.156	2.448	5.325	131.383
31.	100	10	10	2.545	0.074	0.925	3.965
32.	200	10	10	5.09	0.296	1.85	15.861
33.	300	10	10	7.629	0.665	2.775	35.685
34.	400	10	10	10.174	1.182	3.7	63.443
35.	500	10	10	12.725	1.847	4.625	99.127
36.	100	10	11	2.299	0.071	0.907	3.815
37.	200	10	11	4.599	0.284	1.815	15.261
38.	300	10	11	6.892	0.640	2.722	34.333
39.	400	10	11	9.205	1.138	3.63	61.045
40.	500	10	11	11.507	1.778	4.537	95.383
41.	100	11	8	3.294	0.182	0.73	9.749
42.	200	11	8	6.587	0.727	1.46	38.994
43.	300	11	8	9.882	1.635	2.19	87.738
44.	400	11	8	13.176	2.907	2.919	155.976
45.	500	11	8	16.47	4.542	3.649	243.715
46.	100	11	9	2.922	0.134	1.247	7.204
47.	200	11	9	5.845	0.530	2.478	28.463
48.	300	11	9	8.766	1.208	3.741	64.839
49.	400	11	9	11.69	2.148	4.988	115.270
50.	500	11	9	14.612	3.357	6.235	180.109
51.	100	11	10	2.626	0.102	1.089	5.491
52.	200	11	10	5.25	0.409	2.177	21.965
53.	300	11	10	7.877	0.921	3.266	49.424
54.	400	11	10	10.502	1.637	4.355	87.863
55.	500	11	10	13.128	2.558	5.443	137.285
56.	100	11	11	2.375	0.027	0.555	1.425
57.	200	11	11	4.75	0.106	1.109	5.699
58.	300	11	11	7.122	0.239	1.664	12.823
59.	400	11	11	9.496	0.425	2.218	22.796
60.	500	11	11	11.873	0.664	2.773	35.618