

Article

Supplementary Materials: Comprehensive Characterization of Blue Wire NiTi File Failure: A Comparative Analysis of Cyclic Fatigue and Torsional Resistance Properties

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Table S1. Data set for cyclic fatigue testing

SERIAL	FILE 0=tia 1= Race	MEDIUM 0=saline 1=NaOCL	time in seconds	cycles to failure	length of fragment	NCF	GRP
1	0	0	295	1721	3.49	1720.833	1
2	0	0	788	4597	3.92	4596.667	1
3	0	0	721	4206	3.51	4205.833	1
4	0	0	612	3570	3.62	3570	1
5	0	0	710	4142	5.99	4141.667	1
6	0	0	502	2928	4.33	2928.333	1
7	0	0	693	4043	3.89	4042.5	1
8	0	0	624	3640	4.13	3640	1
9	0	0	517	3016	4.37	3015.833	1
10	0	0	474	2765	5.08	2765	1
11	0	0	645	3763	4.26	3762.5	1
12	0	0	547	3191	3.73	3190.833	1
13	0	0	750	4375	4.64	4375	1
14	0	0	563	3284	5.17	3284.167	1
15	0	0	595	3471	4.24	3470.833	1
16	0	1	396	2310	4.54	2310	2
17	0	1	449	2619	4.15	2619.167	2
18	0	1	430	2508	4.75	2508.333	2
19	0	1	360	2100	5.02	2100	2
20	0	1	348	2030	4.05	2030	2
21	0	1	355	2071	5.22	2070.833	2
22	0	1	295	1721	3.84	1720.833	2
23	0	1	510	2975	3.72	2975	2
24	0	1	529	3086	4.82	3085.833	2
25	0	1	489	2853	4.13	2852.5	2
26	0	1	503	2934	5.11	2934.167	2
27	0	1	512	2987	4.65	2986.667	2
28	0	1	481	2806	3.98	2805.833	2
29	0	1	471	2748	5.21	2747.5	2
30	0	1	467	2724	4.93	2724.167	2
31	1	0	371	4947	4.26	4946.667	3
32	1	0	641	8547	4.34	8546.667	3
33	1	0	415	5533	5.03	5533.333	3
34	1	0	591	7880	4.22	7880	3
35	1	0	369	4920	4.79	4920	3
36	1	0	420	5600	4.34	5600	3
37	1	0	445	5933	4.41	5933.333	3
38	1	0	541	7213	5.21	7213.333	3
29	1	0	389	5187	4.67	5186.667	3
40	1	0	363	4840	4.17	4840	3
41	1	0	557	7427	4.29	7426.667	3
42	1	0	603	8040	5.12	8040	3
43	1	0	639	8520	4.52	8520	3
44	1	0	588	7840	4.36	7840	3

45	1	0	551	7347	4.63	7346.667	3
46	1	1	330	4400	4.25	4400	4
47	1	1	586	7813	4.49	7813.333	4
48	1	1	506	6747	4.02	6746.667	4
49	1	1	601	8013	4.33	8013.333	4
50	1	1	616	8213	4.73	8213.333	4
51	1	1	633	8440	5.03	8440	4
52	1	1	578	7707	4.03	7706.667	4
53	1	1	531	7080	4.83	7080	4
54	1	1	636	8480	4.35	8480	4
55	1	1	474	6320	4.68	6320	4
56	1	1	641	8547	5.27	8546.667	4
57	1	1	607	8093	5.12	8093.333	4
58	1	1	552	7360	4.59	7360	4
59	1	1	658	8773	4.92	8773.333	4
60	1	1	583	7773	4.71	7773.333	4

Table S2. Data set for torsional fatigue testing.

	TiaDent				Race Evo			
	Torque at failure	seconds	Angular rotation	length	Torque at failure	seconds	Angular rotation	length
1	1.5	4.4	1056	5.17	1.2	3.6	864	5.37
2	1.2	2.6	624	5.1	1.1	3.8	912	4.91
3	1.4	3.5	840	4.98	1.1	2.8	672	5.33
4	1	2.8	672	5.24	1.1	3.1	744	5.17
5	1.3	3.2	768	5.42	1	3.3	792	4.98
6	1.2	3.3	792	5.09	1	4	960	5
7	1.2	3.2	768	5.38	1.1	3.3	792	4.85
8	1.2	3.7	888	5.29	1.1	3.7	888	4.92
9	1.1	3.1	744	5.1	0.9	3.7	888	5
10	1.2	3.4	816	5.26	0.8	2.9	696	4.98
11	1	2.9	696	5.25	0.9	3.5	840	4.99
12	1.1	3.5	840	4.47	1	2.7	648	5.02
13	1.2	3.4	816	5.38	1	3.6	864	4.88
14	1.3	4.1	984	4.72	1.1	3.7	888	5.06
15	1.3	4	960	5.34	1	3.4	816	5.24
AV G	1.21	3.41	817.60	5.15	1.03	3.41	817.60	5.05
SD	0.14	0.49	118.09	0.26	0.10	0.39	92.72	0.16
Min	1.00	2.60	624.00	4.47	0.80	2.70	648.00	4.85
Max	1.50	4.40	1056.00	5.42	1.20	4.00	960.00	5.37

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