

UNITED STATES INTERNATIONAL TRADE COMMISSION

In the Matter of:	)	Investigation No.
CERTAIN CAPACITIVE DISCHARGE	)	337-TA-1390
IGNITION SYSTEMS, COMPONENTS	)	
THEREOF, AND PRODUCTS CONTAINING	)	
THE SAME	)	

OPEN SESSIONS

Pages: 1 through 244 (with excerpts)
Place: Washington, D.C.
Date: September 23, 2024

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1 UNITED STATES INTERNATIONAL TRADE COMMISSION

2 Washington, D.C.

3 BEFORE THE HONORABLE CLARK S. CHENEY

4 Chief Administrative Law Judge

5 _____

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12

13 International Trade Commission

14 500 E Street, S.W.

15 Washington, D.C.

16

17 Monday, September 23, 2024

18

19 EVIDENTIARY HEARING - VOLUME I

20

21 The Hearing commenced in Courtroom A, pursuant to the
22 notice of the Judge, at 9:51 a.m. Eastern.

23

24 Reported by: Marjorie Peters, FAPR, RMR, CRR

25

1 show ringing when the current stops flowing?

2 A. Yes, it does.

3 That's because now that the spark has gone out,
4 it's no longer clamped, and it's now showing the internal
5 activity of the coil winding.

6 Q. Was the ringing there the whole time?

7 A. Yes, it was, inside the coil.

8 Q. How do you know that?

9 A. I've tested it.

10 It's verified by theory, and I have also tested
11 it.

12 Q. I'd like to turn to Exhibit JX-0038. Great.

13 Do you recognize this, which I'll refer to as
14 the '132 patent?

15 A. Yes, I do.

16 This is an additional patent about ion-sense
17 technology used with this type of system. I was a
18 coinventor.

19 Q. Now, I'd like to turn to Figures 3A and 3B of
20 the '132 patent.

21 Referring to these figures, do they support that
22 ringing action still occurs, even though it's not
23 measurable due to the flow of current?

24 A. Yes.

25 In this case, an obstacle to using the

1 ion-sensing technology, which uses the thermionic emissions
2 that occur in combustion, and can be measured through the
3 spark plug electrodes.

4 The ringing of the coil is a huge obstacle to
5 that when the spark is out because it still has continued
6 all through the entire event.

7 So the idea came up to use a diode across the
8 secondary to mute, or clamp that voltage in one polarity,
9 and make it, therefore, easier.

10 So 3A is the unclamped situation. 3B is the
11 clamped situation, with a diode across the secondary,
12 eliminating the ringing. However, the ringing continues
13 inside the coil winding. It's just that we can't see it
14 because it's clamped by the diode.

15 Q. Now, I'd like to refer to a couple of physical
16 exhibits that you have next to you right there, CPX-146 and
17 CPX-147.

18 Could you briefly describe what those are?

19 A. Yes.

20 These are cross-sections of typical ignition
21 coil constructions. These are two Altronic production
22 coils that have been cross-sectioned.

23 Q. Are these a typical coil that would be used with
24 an ignition control system of both parties in this case?

25 A. Yes, it is.

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Pages: 245 through 535 (with excerpts)
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13 International Trade Commission
14 500 E Street, S.W.
15 Washington, D.C.
16

17 Tuesday, September 24, 2024
18

19 EVIDENTIARY HEARING - VOLUME II
20

21 The Hearing commenced in Courtroom A, pursuant to the
22 notice of the Judge, at 9:04 a.m. Eastern.

23

24 Reported by: Marjorie Peters, FAPR, RMR, CRR
25

1 deposition; is that correct?

2 A. That is correct.

3 Q. If we go to Paragraph 56. If we could blow up
4 that paragraph. In Paragraph 56, starting with the second
5 sentence, you stated, "Although during my deposition, I
6 stated that you could not see that the pulses shown in
7 Figure 10 were arranged in time during the ring down cycle,
8 I understand that the ringing action still occurs in the
9 system although it is not measurable or visible due to the
10 flow of current."

11 Do you see that?

12 A. Yes, I do.

13 Q. So this is the point in time in which you
14 changed your opinion; is that correct?

15 A. That is correct.

16 Q. The only evidence that you cite for this change
17 of opinion is what we have been referring to as the
18 '132 patent; is that correct?

19 A. That's the only thing cited there.

20 Q. Even with your new revised opinion, after you
21 changed it, you still say in this sentence we have
22 highlighted, that the ringing action in the system with the
23 spark present is not measurable; is that right?

24 A. Yeah. I do.

25 Q. You say that the ringing action in this system

1 while the spark is occurring is not visible; is that
2 correct?

3 A. Yeah. I say it's not visible due to the flow of
4 current in the spark, which creates a voltage on the spark.
5 So it's not visible at the spark.

6 Q. Okay.

7 Because the ringing action is not measurable or
8 visible, it's not possible to compare whether control
9 pulses occur during a down cycle of that ringing action, is
10 it?

11 A. It was not at that time.

12 Q. As a matter of fact, you have conducted three
13 sets of tests in this case; correct?

14 A. Correct.

15 Q. None of those three sets of tests did you ever
16 measure any ringing action of the ignition transformer
17 secondary voltage during the time that a spark is present;
18 correct?

19 A. That is correct.

20 Q. I'd like to turn to JX-0016.

21 This is what we have referred to as the
22 '904 patent. Is that okay if I refer to it that way?

23 A. Yes.

24 Q. Okay.

25 The '904 patent is a patent that you have

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OPEN SESSIONS

Pages: 536 through 812 (with excerpts)
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Date: September 25, 2024

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12
13 International Trade Commission
14 500 E Street, S.W.
15 Washington, D.C.
16

17 Wednesday, September 25, 2024
18

19 EVIDENTIARY HEARING - VOLUME III
20

21 The Hearing commenced in Courtroom A, pursuant to the
22 notice of the Judge, at 9:01 a.m. Eastern.

23

24 Reported by: Marjorie Peters, FAPR, RMR, CRR
25

1 after the current starts, there is a voltage established
2 across the spark plug, and it is maintained at constant
3 value.

4 Then that's what you're seeing on the blue line,
5 that voltage across the spark plug.

6 Then when the current goes down, it tells me
7 that the voltage is removed from the spark plug, and that
8 now the -- or the current's removed from the spark plug,
9 and now the voltage is allowed to roam free on the spark
10 plug.

11 Q. Would it have been possible to extend the spark
12 current as shown on this image if the pulses after the
13 first pulse were not reinforcing the secondary voltage
14 inside the transformer?

15 A. So you're saying would it be possible to have
16 that shape of the waveform that long?

17 Q. Correct.

18 A. If you subtracted pulses, then the
19 waveform would be -- the positive current waveform would be
20 shorter.

21 Q. Is it extending because it's hitting
22 reinforcing -- is it extending because the control pulses
23 are hitting areas of reinforcement on the waveform?

24 A. Can you say that again?

25 Q. Yes.

1 Is the current extending because the control
2 pulses are hitting areas of reinforcement on the secondary
3 voltage waveform?

4 A. Yes.

5 Q. Now I'd like to turn back to some of the other
6 testimony that came out in your cross-examination.

7 Can we pull up JX-16. It's the '904 patent.
8 Are you familiar with this patent?

9 A. Yes.

10 Q. Okay. Can we scroll down to the bottom of the
11 front page.

12 Do you see the control circuit described in this
13 '904 patent?

14 A. Yes. I see the control circuit described in the
15 '904 patent.

16 Q. Is the basic architecture of the MIC series
17 different than the basic architecture shown in the
18 '904 patent?

19 A. Yes.

20 Q. Okay.

21 Can you scroll down to Figure 4. Okay.

22 You testified on direct about some scale issues
23 with the figure that they were showing you. Does Figure 4
24 help to show you the scale of the reenergizing pulses in
25 the '904 patent?