

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MKS INSTRUMENTS, INC. and :
APPLIED SCIENCE AND :
TECHNOLOGY, INC., :
 :
Plaintiffs, :
 :
v. : Civil Action No. 00-1004 JJF
 :
ADVANCED ENERGY INDUSTRIES, :
INC., :
 :
Defendant. :

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Attorneys for Defendant.

MEMORANDUM OPINION

May 10, 2002
Wilmington, Delaware

FARNAN, District Judge.

Presently before the Court is a Motion For Summary Judgment of Non-Infringement (D.I. 105) filed by Defendant, Advanced Energy Industries, Incorporated. For the reasons discussed, the motion will be denied.

BACKGROUND

Plaintiff, MKS Instruments, Inc. and Applied Science and Technology, Inc. (collectively "MKS") filed this action against Defendant, Advanced Energy Industries, Inc. ("Advanced Energy") alleging infringement of United States Patent No. 6,150,628 (the "'628 Patent"). The '628 Patent, entitled "Toroidal Low-Field Reactive Gas Source," discloses a system that uses a plasma to produce a reactive gas, to be used, principally, for cleaning the interior of semiconductor processing chambers. (D.I. 104, Ex. A). By its Motion, Advanced Energy contends that it does not infringe the '628 Patent as a matter of law. Because the Court has issued a Memorandum Opinion and Order (D.I. 153, 154) setting forth its claim construction of the '628 Patent, the Court will now address the instant motion.

DISCUSSION

I. Standard of Review for Summary Judgment

A motion for summary judgment will be granted only if there is "no genuine issue as to any material fact and ... the moving

party is entitled to a judgment as a matter of law.”

Fed.R.Civ.P. 56(c). Material facts are those that might affect the outcome of the suit under the governing law. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). A genuine issue exists if the record taken as a whole could lead a rational trier of fact to find for the party opposing summary judgment.

Matsushita Electric Industries Co. v. Zenith Radio Corp., 475 U.S. 574, 587 (1986). In determining whether there is a triable dispute of material fact, a court must review all of the evidence and construe all inferences in the light most favorable to the non-moving party. Valhal Corp. v. Sullivan Assocs., Inc., 44 F.3d 195, 200 (3d Cir. 1995). However, a court should not make credibility determinations or weigh the evidence. Reeves v. Sanderson Plumbing Prods., Inc., 530 U.S. 133, 150 (2000).

To defeat a motion for summary judgment, the non-moving party must:

do more than simply show that there is some metaphysical doubt as to the material facts. . . . In the language of the Rule, the non-moving party must come forward with “specific facts showing that there is a genuine issue for trial.”

Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp., 475 U.S. 574, 586-87 (1986). However, the mere existence of some evidence in support of the nonmovant will not be sufficient to support a

denial of a motion for summary judgment; there must be enough evidence to enable a jury to reasonably find for the nonmovant on that issue. Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249, 106 S. Ct. 2505, 2510 (1986).

II. Non-Infringement

Advanced Energy contends that summary judgment is warranted because the accused products do not infringe any independent or dependent claims of the '628 Patent. (D.I. 106 at 20). Specifically, Advanced Energy contends that the accused products do not have do not have the "AC switching power supply" or "AC power supply" required by every independent claim of the '628 Patent. (D.I. 106 at 20). Advanced Energy further contends that the accused products do not contain the "coupling," "connected," or "driving current" limitations of the '628 Patent.

In response, MKS contends that summary judgment of non-infringement is inappropriate. (D.I. 137 at 7). In support of its opposition, MKS contends that the accused products do not incorporate the conventional, complex impedance matching networks excluded by the '628 Patent.¹ (D.I. 129 at 27). Specifically,

¹Because MKS does not respond to Advanced Energy's contentions that summary judgment of non-infringement is appropriate because the accused product does not contain an "AC switching power supply" or "AC power supply" required by every independent claim of the '628 Patent or the "coupling," "connected," or "driving current" limitations of the '628 Patent, the Court will presume the MKS does not dispute the contentions.

MKS contends that the accused products do not match the output impedance of a power supply, via a network, to the input impedance of a plasma load, such that the power transfer between the power supply and the plasma load is maximized. (D.I. 129 at 27-28).

In reply, Advanced Energy contends that its accused products contain the complex and conventional impedance matching networks which were excluded from the '628 Patent. (D.I. 137 at 9). Specifically, Advanced Energy contends that the impedance matching network incorporated in the accused products is not a perfect matching network and is operated slightly off resonance, but is still an impedance matching network. (D.I. 137 at 10).

In its claim construction, the Court concluded that the '628 Patent "was not intended to encompass an impedance matching network," without defining the term. (D.I. 154 at 3). However, a construction of the phrase "impedance matching network" is now required to resolve the instant motion.

MKS contends that an "impedance matching network" is "a lossless network placed between the power supply and the discharge to ensure maximum power transfer." (D.I. 179 at 1). In reply, Advanced Energy contends that an "impedance matching network" is "a collection of electrical components comprising capacitors and inductors that adjusts the impedance of a circuit." (D.I. 178 at 1). Advanced Energy contends that there

is no single way to define the effect of "impedance matching network" on power, and therefore, a construction of the term should not include the effect an "impedance matching network" has on power transfer. (D.I. 178 at 5). Advanced Energy further contends that "a variance of up to ten percent 'off resonance' is acceptable for an "impedance matching network," and commercially, impedance matching networks may be operated deliberately off resonance to ensure effective power control. (D.I. 110 at 6-7).

With regard to this term, the parties' dispute centers on the characterization that an "impedance matching network," by definition, must seek to maximize power. The parties agree that an "impedance matching network" cannot be operated perfectly and at least ten percent 'off resonance' is considered acceptable for an "impedance matching network." (D.I. 111 at A330, D.I. 137 at 10). However, the parties cannot agree to what extent an "impedance matching network" may operate "off resonance" and still be the type of "impedance matching network" the '628 Patent sought to exclude. MKS argues that the type of "impedance matching network," used in conjunction with a linear power supply and excluded by the '628 Patent, sought to maximize power and operate with as much resonance as possible. Advanced Energy argues that the construction offered by MKS is too narrow, and only encompasses one subset of the broader category of "impedance matching networks." Advanced Energy argues that the generic term

"impedance matching network" includes all networks that allow a power supply to adapt to the dynamics of a load having complex (variable) impedance characteristics. Further, Advanced Energy argues that such an "impedance matching network" might be operated deliberately off resonance to ensure effective power control. (D.I. 110 at 6-7).

In construing the disputed phrase the Court has reviewed the claim language, patent specification, and prosecution history. (D.I. 111 at A9 col. 2 ln. 22-26, A12 col. 7 ln. 49-60, A13 col. 10 ln. 19-21, A121-22, 124, A169-70). The parties agree that the disputed term is not used in any of the claims and the specification does not contain a definition of the term. Based upon a review of the sources cited, the Court concludes that the term "impedance matching network" is used in the '628 Patent exclusively with reference to conventional linear power supply systems. (D.I. 111 at A9 col. 1 ln. 60-65 col. 2, ln. 23-25, col. 7 ln. 55-58, col. 10 ln. 13-12). Accordingly, the Court concludes that the patentee did not intend to exclude all "impedance matching networks" from the '628 Patent, but only those conventional "impedance matching networks" used with conventional linear power supplies. Therefore, the Court concludes that "impedance matching network" means "a lossless network placed between the power supply and the discharge to ensure maximum transfer."

Given the Court's construction of the term "impedance matching network," and after considering the parties' contentions and viewing the record evidence in a light most favorable to MKS, the Court concludes that a genuine issue of material fact exists to prohibit a grant of summary judgment of non-infringement of '628 Patent. In the Court's view, there are factual issues as to the absence of presence of an "impedance matching network" in the accused products, and therefore, Advanced Energy's motion will be denied.

CONCLUSION

An appropriate Order will be entered.

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O R D E R

At Wilmington, this 10th day of May 2002, for the reasons set forth in the Memorandum Opinion issued this date, IT IS HEREBY ORDERED THAT:

- 1) The term "impedance matching network" means "a lossless network placed between the power supply and the discharge to ensure maximum transfer."
- 2) Advanced Energy's Motion For Summary Judgment Of Non-Infringement (D.I. 105) is DENIED.

JOSEPH J. FARNAN, JR.
UNITED STATES DISTRICT JUDGE