

United States District Court,  
D. Arizona.

**TECHNICAL WITTS, INC,**  
Plaintiff.

v.

**SKYNET ELECTRONIC COMPANY, LTD., a foreign corporation; Skynet Electronic Corporation, a California corporation, et al,**  
Defendant.

No. CV-04-2025-PHX-MHM

**Feb. 2, 2009.**

Daniel J. Noblitt, Douglas Warren Gilmore, Jr., Noblitt & Gilmore LLC, Scottsdale, AZ, Michael E. Gerity, Israel & Gerity PLLC, Phoenix, AZ, for Plaintiff.

Fei-Fei Chao, Frederick S. Frei, Aldo Noto, Andrews Kurth LLP, Washington, DC, Paul Kipp Charlton, Gallagher & Kennedy PA, Phoenix, AZ, for Defendants.

## **ORDER**

**MARY H. MURGUIA, District Judge.**

Currently pending before the Court is The Honorable Sidney Harris' Claim Construction Report of the Special Master (Dkt.# 139.), and Plaintiff Technical Witts' Objections to the Claim Construction Report of the Special Master. (Dkt. # 145.) After reviewing the pleadings and the Report, and determining oral argument unnecessary, the Court issues the following Order.

### **I. PROCEDURAL HISTORY**

This is a lawsuit between a U.S. company and a Taiwanese company dealing with computer power converters adapted to provide zero-voltage switching ("soft switching" or "ZVS") at turn-on and turn-off transitions. On September 27, 2004, Technical Witts filed suit against Skynet Electronic asserting a claim of patent infringement with respect to United States Patent No. 5,402,329 (the "329 patent"). (Dkt.# 1.) The patent is owned by Plaintiff and has eleven total claims, of which claim 1 and claim 10 are independent claims. On September 7, 2008, the Court appointed The Honorable Sidney Harris as Special Master to provide the Court with a recommended construction of the asserted claims of the 329 patent. (Dkt.# 101.) On January 30, 2008, the Special Master held a *Markman* Hearing. (Dkt.# 128.) After the Special Master issued his Report, Plaintiff filed written objections to the proposed claim construction, while Defendant filed a Notice of Non-Objection. (Dkt.# # 144,145.) FN1

### **II. STANDARD OF REVIEW**

In reviewing the Special Master's Report, the Court reviews de novo all objections to the findings of fact and/or conclusions of law made or recommended by the Special Master. *See* Fed.R.Civ.P. 53(g)(3)-(4). In addition, the Court reviews matters of procedure for abuse of discretion. *See* Fed.R.Civ.P. 53(g)(5). The construction of the claims and terms in a patent is a question of law for the Court. *Markman v. Westview*

Instruments, Inc., 52 F.3d 967, 983-84 (Fed.Cir.1995), *aff'd* 571 U.S. 370 (1996). "It is a bedrock principle of patent law that claims of a patent define the invention to which the patentee is entitled the right to exclude." Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir.2005 (en banc) (internal quotations and citations omitted). The focus of claim construction "is on the objective test of what one of ordinary skill in the art at the time of invention would have the term to mean." Markman, 52 F.3d at 978.

### III. THE SPECIAL MASTER'S CLAIM CONSTRUCTION

"The starting point for any claim construction must be the claims themselves." Pitney Bowes, Inc. v. Hewlett-Packard Co., 182 F.3d 1298, 1305 (Fed.Cir.1999). In the instant case, Plaintiff alleges infringement of claims 1 through 9 of the 329 patent. However, for the purposes of claim construction, the Parties have narrowed their dispute to focus on several key terms from claim 1 and claim 2. Claim 1 reads as follows:

A power converter comprising:

an input coupleable to a DC load,

a first coupled inductive element with substantial DC energy storage capability having a primary winding coupled to said input and a secondary winding coupled to said output,

a second inductive element connected in series with said first coupled inductive element,

a first capacitor coupled to said input and said primary winding,

a second capacitor coupled to said secondary winding and said output,

*first switch means* for coupling said first capacitor to said primary winding for exchanging stored energy between said first capacitor and said first coupled inductive element,

*second switch means* operable substantially in synchronization with said first switch means and coupled to said secondary winding for applying at least a portion of said exchanged energy to said DC load,

*third switch means* operable for coupling said primary winding to said source of DC potential alternatively and sequentially with the operation of said first and second switch means, so that said first capacitor exchanges energy with said primary winding when said first switch means is activated, and said second capacitor exchanges energy with said secondary winding when said secondary switch means is activated, and

*control means* for selectively activating said first, second, and third switch means, such that said switches are operated when the voltage drop therethrough is substantially zero, said third switch means being operable in opposition to said first and second switch means

*whereby said second inductive element contributes energy to the turn on transition of said third switch means in opposition to the energy stored in said first coupled inductive element accomplishing turn on of said third switch means at substantially zero voltage for the condition in which the peak to peak AC magnetizing current in the primary winding of said first coupled inductive element is less than twice the average magnetizing current in the primary winding of said first coupled inductive element.*

(Dkt.# 139, p. 2) (quoting 329 Patent, col. 24-25) (emphasis added). Claim 2 reads as follows: "A power converter as set forth in claim 1, wherein said second inductive element is *saturable*." ( Id.) The highlighted portion of the patent emphasizes the disputed terms. Thus, in constructing the relevant claims, the Special Master's Report focused on: (1) the term "switch means"; (2) the term "control means"; (3) the "whereby"

clause; and (4) the term "saturable."

### A. "Switch Means"

The Special Master determined that the term "switch means" was expressed in means-plus-function language of 35 U.S.C. s. 112, para. 6, which controlled its analysis.FN2 ( *Id.* at 7-9.) Using a means-plus-function analysis, the Special Master then construed the term "switch means" as (1) a diode-switch-capacitor subcircuit or (2) a metal oxide semiconductor field-effect transistor ("MOSFET"). Plaintiff has objected to the conclusions of the Special Master on the grounds that the term "switch means" cannot be properly construed under s. 112, para. 6, and in the alternative, even if expressed in means-plus-function language, the term "switch means" must be modified to include not only MOSFETs and diode-capacitor subcircuits, but also (1) switches; (2) diodes; and (3) equivalents thereof. The Court will address Plaintiff's objections in turn.

#### 1. Whether "Switch Means" Falls Under 35 U.S.C. s. 112, para. 6

The Parties have not disputed that the Special Master applied the correct legal framework for determining whether s. 112, para. 6 applies to the instant claims. The Court will now repeat the appropriate legal framework. Section 112, para. 6 of the Patent Act provides that "[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." 35 U.S.C. s. 112, para. 6.

When a claim limitation recites the word "means," s. 112, para. 6 presumptively applies. *See* *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1361 (Fed.Cir.2000). Additionally, failure to use the word "means" creates the presumption that s. 112, para. 6 does not apply. *Personalized Media Comms., LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 703 (Fed.Cir.1998). The presumption that s. 112, para. 6 applies may be overcome in two ways. *Allen Eng'g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1347 (Fed.Cir.2002). The presumption may be overcome if, despite use of the word "means," the claim element does not recite a corresponding function. *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed.Cir.1999). The presumption is also overcome where "even if the claim element specifies a function ... it also recites sufficient structure or material for performing that function." *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 531 (Fed.Cir.1999). In determining whether a claim recites sufficient structure, courts consider whether the term has "a reasonably well understood meaning in the art." *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed.Cir.1996).

Although Plaintiff agrees that use of the word "means" creates the presumption that the term falls within s. 112, para. 6, it contends that the term "switch" has a well understood meaning in the art and connotes sufficient structure to overcome the s. 112, para. 6 presumption. (See Dkt.145 pp. 11-15.) To this end, Plaintiff makes two primary arguments. First, Plaintiff argues that the Special Master impermissibly limited the scope of the term "switch" by focusing on the functional language of the claim. ( *Id.* at 12.) Second, Plaintiff argues that the multiple definitions applied to the term "switch" are not inconsistent, but merely refer to "different descriptions of the same element" ( *Id.* at 13.), and that under *Lighting World v. Birchwood Lighting*, 382 F.3d 1354, 1359-60 (Fed.Cir.2004), "[a] term need not call to mind a single well-defined structure, nor connote a precise physical structure," to have a reasonably well understood meaning in the art. According to Plaintiff, the term "switch" designates specific structure among those skilled in the art even though the term might cover a broad class of structures or encompass a variety of structures.

Plaintiff's first argument lacks merit. The Court is not persuaded that the Report wrongly relied on the functional language of the claims to limit the definition of the word "switch" when determining whether sufficient structure was recited. To begin with, the portion of the Special Master's Report cited by Plaintiff on this point, page 7, lines 3-13, does not provide any support for Plaintiff's argument, since the Special

Master's discussion of s. 112, para. 6 did not even begin until line 15 of page 7. ( *See* Dkt.# 139, p. 7.) Indeed, on page 7, line 3, the Special Master announces that he would be addressing the claims themselves, " [b]efore deciding whether s. 112, para. 6 applies." ( *Id.*) (emphasis added). To the extent the Special Master goes on to mention the functional language of the claims in determining whether the term "switch means" has a reasonably well understood meaning in the art, the Court does not find any resulting prejudice. The Special Master has provided the Court with more than adequate justification-unrelated to the functional limitations of the claims themselves-in concluding that the s. 112, para. 6 presumption had not been overcome.

Plaintiff next argues that the definitions and examples that it provided from dictionaries and treatises were not inconsistent, but the Special Master's unfamiliarity with the relevant science led him to erroneously conclude that multiple definitions for the term "switch" were mutually exclusive and did not recite sufficient structure. (Dkt.# 145, pp. 12-13.)

Turning to the merits of Plaintiff's contention, the SMR lists six definitions supplied by Plaintiff for the term "switch": (1) "a device for making, breaking, or changing the connections in an electrical circuit." (2) "a device that allows current flow when closed and provides isolation when open." (3) "a mechanical or solid state device that can electrically connect or isolate two or more lines." (4) "a simple switch can be used in various configurations to generate a high voltage level when in one state and a low voltage level when in the opposite state." (5) "the basic function of a switch is to electrically isolate or connect two sections of a circuit." (6) "a passive switch does not contain a control terminal ... the most common example is a diode.... The conducting state of an active switch is determined by the signal applied to the control terminal." (Dkt.# 139, p. 8.)

With respect to whether these six definitions were inconsistent, the Special Master noted that "there are devices which may fall under one definition that would not fall under another." ( *Id.*) Specially, definition 2 and 4 cannot not be reconciled since definition 4 contends that a switch can "generate" voltage, while under definition 2, a switch merely "allows" current flow. ( *Id.*) In addition, according to the Special Master, Plaintiff's proffered definitions show at least three different types of switches which may exist: a "simple switch," an "active switch," and a "passive switch." ( *Id.*) It was not clear to the Special Master whether the term "simple switch" could encompass "some, all or any of 'active' or 'passive' switches, and vice versa." ( *Id.*) The Special Master further noted that the testimony of Plaintiff's expert, if taken as true, would "infinitely broadened the number of things which could fall under the term 'switch.'" ( *Id.* at 8-9.) This is because the definition provided by Plaintiff's expert, in describing a "switch means" as a device "permitting or inhibiting an electrical current," was so far reaching that it would encompass even a light switch-an object "no party would assert could function in a ZVS power converter." ( *Id.* at 9.)

In light of the Report, this Court is not convinced that using multiple definitions for the term "switch" is the equivalent of having different words describe a common object or phenomena, as Plaintiff contends. Instead, the term "switch" may indeed refer to inconsistent and mutually exclusive objects or structures. Given the presence of such ambiguity, the Special Master correctly concluded that the term "switch" does not have a *reasonably* well understood meaning within the art, such that it could not be used in common parlance or by persons of skill in the pertinent art to designate sufficient structure to overcome the s. 112, para. 6 presumption. *See* *Lighting World*, 382 F.3d at 1359-60.

Lastly, Plaintiff failed to adequately distinguish the case of *Sage Prod., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420 (Fed.Cir.1997), which was relied upon by the Special Master. The Special Master analogized the term "switch means" to the term "closure means" that was at issue in *Sage*. ( *Id.* at 9 n. 6.) The Special Master noted that much like the instant case, the Federal Circuit in *Sage* held that the presumption that s. 112, para. 6 applies had not been overcome given the multiple functions performed by the term "closure means." ( *Id.*) Special Master went on to reason:

The [ *Sage* ] Court found that where multiple functions (closing, controlling access, and selectively movable) were recited, and because no structure, material or acts were recited, s. 112, 6, applied. *Id.* Like "closure," the term "switch" is a term which may denote a broad range of potential structures. Additionally, like the use of the term "closure" in *Sage*, use of the term "switch" does not provide sufficient structure, standing alone, to perform a second function as required by the claims. Furthermore, the term "switch means" in claim 1 requires that the three switch means each perform multiple functions, i.e., coupling two components and a second function.

( *Id.* at n. 6.) This Court agrees with the Special Master's reading and finds the case to be highly persuasive.

In conclusion, with respect to the construction of the term "switch means," the Court adopts the findings in the Report and holds that the patentee's use of a means-plus-function limitation triggered the application of s. 112, para. 6.

## **2. The Construction of "Switch Means" Under 35 U.S.C. s. 112, para. 6**

As stated above, pursuant to 35 U.S.C. s. 112, para. 6, a claim limitation can be expressed as a means for performing a given function. Using this analysis, the Special Master construed the term "switch means" to include a diode-switch-capacitor subcircuit and a MOSFET, which he determined were the only two structures capable of performing the recited function of the first, second and third "switch means." ( *Id.* at 11.) Plaintiff now asks the Court to reject the Special Master's findings and to broadly construe the term "switch means" to also include a switch, a diode and equivalents thereof. (Dkt.# 145, pp. 15-18.)

The Court will again repeat the legal framework outlined in the Report and Recommendation. As a matter of law, means-plus-function elements are limited to the corresponding structure disclosed in the specification and equivalents thereto. *Valmont Indis., Inc. v. Reinke Mfg. Co.*, 983 F.2d 1039, 1042 (Fed.Cir.1993). If s. 112, para. 6 is found applicable, courts then identify the function explicitly recited in the claim. *Cardiac Pacemakers, Inc. v. Saint Jude Med., Inc.*, 296 F.3d 1106, 1113 (Fed.Cir.2002). "After identifying the specified function of the unrecited means, a court must consult the specification to define the structure, material or acts corresponding to this claimed function." *Sage*, 126 F.3d at 1428. Lastly, the Court determines what structure, if any, is disclosed in the specification that corresponds to the claimed function. *B. Braun Med., Inc. v. Abbott Labs.*, 124 F.3d 1419, 1424 (Fed.Cir.1997). Section 112, para. 6 does not "permit incorporation of structure from the written description beyond that necessary to perform the claimed function." *Asyst Techs., Inc. v. Empak, Inc.*, 268 F.3d 1364, 1369 (Fed.Cir.1999). Additionally, the corresponding structure to a function set forth in a means-plus-function limitation must actually perform the recited function, not merely enable the pertinent structure to operate as intended. *Id.* at 1371. The "corresponding structure" must actually be "described in the specification," and therefore cannot constitute non-disclosed structure that could merely be inferred by one skilled in the art. *B. Braun Med.*, 124 F.3d at 1424.

After conducting a de novo review of the Special Master's findings, this Court is convinced that the term "switch means" has been correctly construed; the term "switch means" should be limited to a diode-switch-capacitor subcircuit or a MOSFET. The Court also notes that the Special Master convincingly addressed Plaintiff's central objections-that "switch means" should be construed to include switches and a diode-and his reasoning on these two proposed constructions are instructive and should be adopted by the Court.

First, with respect to whether the term "switch means" should be construed to include "switches," the Special Master found that the term "switch means" could only include a diode-switch-capacitor subcircuit and a MOSFET, since these were the only two structures capable of performing the recited function. (Dkt.# 139, pp. 9-11.) This was the correct construction under s. 112, para. 6.

The Special Master reached this conclusion after reviewing the recited function and then analyzing the

specification. With respect to the functional language, the Special Master first noted that all three of the "switch means" must be controllable by and selectively activatable by the "control means." (*Id.* at 9.) He next determined that the first "switch means" must be capable of coupling the first capacitor to the primary winding and exchanging stored energy. (*Id.*) The second "switch means" must apply a portion of the exchanged energy. (*Id.* at 9-10.) Lastly, the third "switch means" must couple the primary winding to the DC potential source and alternately and sequentially operate to provide access to the DC potential source for the other switch means. (*Id.*) With respect to the function of the three "switch means," the Special Master went on to write:

As previously noted, claim 1 does not recite the structure, material, or acts needed to perform the required functions. Plaintiff's arguments all assume that the second function of the term "switch means" are supplementary to the "coupling" function. See PRMB at 10-11. This argument reads the majority of the three "switch means" clauses out of the interpretation, improperly making that language superfluous.

(*Id.* at 10.)

The Special Master then turned to the specification for the purpose of determining what the inventor considered to be the structures by which the functions are performed. *See Sage*, 126 F.3d at 1428. The Special Master stated that the specification is filled with references to a multi-component switch subcircuit, which was clearly capable of performing both the coupling function and the two secondary functions, as required by the claim. (*Id.*) Furthermore, the Special Master noted that the specification does not refer to a "switch means," but only makes references to a three component structure comprised of (1) a switch; (2) a diode; and (3) a capacitor, which form the first, second and third switch subcircuit. (*Id.*) Based on this language, as well as references to a MOFSET in the specification, the Special Master concluded that the term "switch means" can only include a three component subcircuit (diode-switch-capacitor) and a MOFSET. This Court agrees with the Special Master's construction. Nothing presented by Plaintiff in its Objections has persuaded the Court that the Special Master committed error by refusing to construe an additional structure, such as "switches" within the scope of the term "switch means."

The Court will next address the merit of Plaintiff's second objection, namely, whether the term "switch means" should be construed to include a diode. (See Dkt.# 145, pp. 16-17, 22-31.) In concluding that the term "switch means" cannot be construed to include a diode, the Special Master drew on the specification itself as well as the prosecution history of the 329 patent. (See Dkt.# 139, p. 11 n.7.) FN3 Turning to the specification, the Special Master recognized that there is an alternative embodiment in which one of the switch subcircuits is replaced with a diode. (*Id.* at 12.) However, as the Special Master noted, this disclosure only refers to an embodiment of a low-efficiency ZVS power converter that has two "switch means" plus a diode, instead of the claimed ZVS converter with three "switch means." (*Id.*) The Special Master therefore found that this *alternative embodiment is not claimed*. Additionally, the specification for the alternative embodiment states that "bidirectional power flow is no longer possible if the bidirectional secondary switch ... is replaced with a diode rectifier." (*Id.*) (quoting 329 Patent, Col. 19, 11. 2-3.) Because current flow through the diode rectifier could not be controlled and each of the "switch means" in the 329 patent must be controllable by the "control means," a diode is not a structure capable of performing the recited function. (*Id.*) Plaintiff has strenuously objected to this reasoning on a variety of grounds, including that bidirectionality and controllability are unrelated and that by conflating the two the Special Master has failed to properly grasp the underlying science of the 329 patent. (*See* Dkt.# 145, pp. 22-23.) The Court is mindful of Plaintiff's position, but remains unconvinced of the scientific accuracy of its contention.

Turning to the prosecution history of the 329 patent, the Special Master recognized that earlier claims which eventually evolved into the 329 patent included multiple switch and diode configurations. (Dkt.# 139, p. 12.) However, these claims were rejected and subsequent claims did not include the term diode. (*Id.*) Furthermore, the Special Master found that the testimony of the inventor of the 329 patent and Plaintiff's expert were, when viewed in their entirety, entirely inconsistent with a construction that includes a diode as

a "switch means." FN4 ( Id. at 13.) Plaintiff has failed to convince the Court that interpreting their testimony in such a manner was in error. The Special Master therefore properly rejected construing the term "switch means" to include a diode, and the Court will not set aside his findings on this issue.

In sum, the Court will adopt the Special Master's proposed claim construction as to the term "switch means."

## **B. "Control Means"**

The Special Master determined that the term "control means" was also expressed in the means-plus-function language of 35 U.S.C. s. 112, para. 6. Using a means-plus-function analysis, the Special Master then construed the term "control means" to include (1) a Pulse Width Modulator (PWM) controller and (2) a conventional timing circuit. ( Id. at 17.) Plaintiff has likewise objected to the conclusions of the Special Master on the grounds that the term "control means" does not fall within s. 112, para. 6, and even if expressed in means-plus-function language, "control means" must be modified to also include control circuits. (Dkt.# 145, pp. 31-35.)

With respect to whether the term "control means" recites sufficient structure to escape s. 112, para. 6, Plaintiff argues that one having skill in the art at the time of invention would have understood "control means" to mean a control circuit, a controller, or other system that controls the operation of the converter. ( Id. at 31-33.) However, this Court cannot find error in the Special Master's conclusion that the term "control means" is not synonymous with control circuit or another one of Plaintiff's proffered definitions. As the Special Master stated, the issue is not whether control circuit recites sufficient structure; Plaintiff did not use that term in the claim. Instead, the term "control" standing alone must have a reasonably well understood meaning in the art. Plaintiff has not explained, either before the Special Master or in its Objections, why the term "control means," rather than its supposed synonym, recites sufficient structure to overcome the s. 112, para. 6 presumption.

With respect to a means-plus-function analysis, Plaintiff argues that the Special Master correctly construed the term "control means" to include PWM controllers and conventional timing circuits, but missed a third structure capable of performing the recited function: a control circuit. ( Id. at 34.) Plaintiff claims that one skilled in the art would have understood the term "control means" as used in the 329 patent to include a control circuit. ( Id. at 34.) Plaintiff also contends that a control circuit was a known means for selectively activating switches at the time of the invention, and that the 329 patent specification even uses the term control circuit. ( Id. at 34-35.) Before turning to the Special Master's reasoning, it is critical in this context to view the language of the claim to focus on the functional language that a disclosed structure must be capable of performing. The relevant aspect of claim 1 of the 329 patent is as follows:

control means for selectively activating said first, second, and third switch means, such that said switches are operated when the voltage drop therethrough is substantially zero, said third switch means being operable in opposition to said first and second switch means.

( See Dkt.# 139, p. 2.) (quoting 329 Patent, col. 24.) In other words, the functional language requires that the "control means" be capable of selectively activating the first, second and third switch means, such that the switches are operated when the voltage drop therethrough is substantially zero. In addition, as stated in the preceding section of this Order, the term "switch means" has been construed to include no more than a MOSFET or a diode-switch-capacitor subcircuit.

With this function in mind, the Court will turn to Plaintiff's contentions. With respect to Plaintiff's position that one skilled in the art would have understood the term "control means" as used in the 329 patent to include a control circuit, the Court notes that the corresponding structure must actually be described in the specification, and cannot be simply inferred by one having skill in the art. *See* B. Braun Med., 124 F.3d at

1424. With respect to whether the "control means" should be construed to include a control circuit, the Federal Circuit has routinely held that a corresponding structure must be capable of actually performing the recited function in the claim. *See Asyst Techs.*, 268 F.3d at 1371. In the instant case, this means that a control circuit, like a PWM controller and a conventional timing circuit, must be capable of selectively activating a MOSFET or a diode-switch-capacitor subcircuit, such that the "switch means" are operated when the voltage drop therethrough is substantially zero. On the one hand, the Special Master has provided ample justification for concluding that a PWM controller and a conventional timing circuit were capable of performing this function. Plaintiff, however, has failed to provide this Court with a convincing argument that a control circuit is likewise capable of performing the same function, particularly in light of the Special Master's construction of the term "switch means," which this Court has already adopted. The Special Master's construction of the term "control means" should therefore remain as is.

### C. The "Whereby" Clause

The Special Master found that there was insufficient evidence to determine whether the "whereby" clause was a claim limitation, and that the proper place for the Parties to address this and other issues was in the upcoming infringement/and or validity analysis. ( *See* Dkt.# 139, pp. 18-19.) Nevertheless, the Special Master proposed a construction of the "whereby" clause in the event it is found to be a limitation on the claim.FN5 That construction reads as follows:

the second inductive element contributes energy to the turn on transition of the third switch means, thereby turning on the third switch means at substantially zero voltage where the voltage in the primary current is negative at the same time as the average magnetizing current is positive and the peak to peak AC magnetizing current in the primary winding of the first coupled inductive element is less than twice the average magnetizing current in the primary winding of the first coupled inductive element.

( *Id.*) Plaintiff generally agrees with this construction, but has objected for the purpose of correcting what it believes are technical errors committed by the Special Master. ( *See* Dkt.# 145, p. 39.) Plaintiff has suggested that the construction of the "whereby" clause should be modified as follows:

the second inductive element contributes energy to the turn on transition of the third switch means, thereby turning on the third switch means at substantially zero voltage *when the current in the primary winding is opposite in direction to the average primary magnetizing current* and the peak to peak AC magnetizing current in the primary winding of the first coupled inductive element is less than twice the average magnetizing current in the primary winding of the first coupled inductive element.

( *Id.* at 40.) (emphasis in original).

Plaintiff argues that these proposed changes do not change the meaning of the Special Master's construction but are only intended for clarification purposes. (Dkt.# 154, p. 36.) Defendants counter by suggesting that Plaintiff's new interpretation is different from what it had previously proposed, and the new interpretation has therefore not been subject to the rigors of discovery, briefing, an evidentiary hearing, and oral argument. (Dkt.# 150, pp. 29-30.) Defendant alleges that making the sort of minor revisions that Plaintiff proposes would only introduce confusion. In its reply, Plaintiff has argued that Defendants have had ample opportunity to understand the contours of the 329 patent and rebut any suggested changes. (Dkt.# 154, p. 36.) Furthermore, because the Special Master independently generated the construction of the "whereby" clause, Plaintiff contends that it must have the opportunity to correct the novel construction. ( *Id.*) While mindful that the Special Master's independent construction of the "whereby" clause placed the Parties into somewhat of a precarious position, the Court is inclined to agree with Defendants. The Court is hesitant to make the minor changes suggested by Plaintiff when such changes have not been subject to adversarial testing-particularly when these revisions differ from Plaintiff's earlier proposed constructions. Additionally, if the Court is to modify the Special Master's construction of the "whereby" clause it should not be to

effectuate what Plaintiff even admits is a meaningless technical change that will not even alter the clause's essential construction. Thus, the Court will adopt the Special Master's proposed construction of the "whereby" clause, pending the outcome of a future infringement/and or validity analysis.

#### **D. The "Saturable" Clause**

Both Parties appear to agree with the Special Master's construction of the term "saturable" as "capable of reaching a maximum magnetic field above which inductance decreases." ( *See* Dkt.# 145, p. 40; Dkt.# 144.) Also finding no error with such a construction, the Court will adopt the Special Master's interpretation of the term "saturable."

**Accordingly,**

**IT IS HEREBY ORDERED** adopting the Special Master's Report and Recommendation in its entirety as the Order of this Court. (Dkt.# 139.)

**IT IS FURTHER ORDERED** overruling Plaintiff's Objections to the Claim Construction Report of the Special Master. (Dkt.# 145.)

FN1. As a preliminary matter, Plaintiff's argument that its Objections are uncontested is without merit. ( *See* Dkt.# 154, pp. 5-6.) It is of little relevance that Plaintiff believes its Objections have not been adequately addressed by Defendant. The only question before the Court is whether the Special Master's claim construction is legally and factually accurate, such that it should be adopted as the Order of this Court.

FN2. The Special Master provided the Court with an alternative analysis, should the Court now conclude that 35 U.S.C. s. 112, para. 6 does not apply. (See Dkt.# 139, pp. 11-14.) However, that portion of the Special Master's findings need not be specifically addressed, since the Court finds that the term "switch means" falls squarely within s. 112, para. 6. Similarly, the Court will not address Plaintiff's request to modify the portion of the Special Master's Report dealing with a construction of claims not falling under s. 112, para. 6. (See Dkt.# 145, pp. 18-31.)

FN3. Although much of this analysis is included in the section of the Report labeled "Interpretation of 'switch means' as not falling under s. 112, para. 6," footnote 7 on page 11 appears to incorporate by reference the later analysis into the preceding section, which solely deals with a means-plus-function determination. Thus, in order to more fully develop the record, the Court will assume that the portion of the Report concerning a diode is not only relevant to a general claim construction, but also relates to the specialized s. 112, para. 6 analysis which seeks to determine whether a diode is a structure capable of performing the recited function of the claim.

FN4. Contrary to Plaintiff's Objections, the Court finds no legal error in the Special Master's limited use of extrinsic evidence, such as testimony of the inventor and Plaintiff's expert, under the circumstances of the instant case. *See Vitronics Corp.*, 90 F.3d at 1584 n. 6.

FN5. Contrary to Plaintiff's assertions in its Objections, this Court agrees with the Special Master's regarding the Court's present inability to conclusively determine whether the "whereby" clause operates as limitation on the claim.

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