

United States District Court,  
N.D. California.

**IMPACT SYSTEMS, INC., a California Corporation,**  
Plaintiff.

v.  
**ABB INDUSTRIAL SYSTEMS, INC., an Ohio Corporation,**  
Defendant.

No. C-96-20463-JW

**Nov. 21, 1997.**

Michael Barclay, Wilson, Sonsini, Goodrich & Rosati, Palo Alto, CA, for plaintiff.

Thomas J. Friel, Skjerven, Morrill, MacPherson, Franklin & Friel, San Jose, CA, Ronald St. Onge, William Speranza, St. Onge Steward Johnston & Reens, Stamford, Connecticut, for defendant.

## **ORDER DENYING DEFENDANT'S MOTION FOR SUMMARY JUDGMENT OF NON- INFRINGEMENT FN1**

FN1. This disposition is not appropriate for publication and may not be cited.

**WARE, J.**

### **I. INTRODUCTION**

This is a patent infringement suit. The subject technology relates to a process for making paper generally known as "calendering". Defendant ABB Industrial Systems, Inc. ("ABB") noticed a motion for summary judgment for hearing on May 12, 1997. After reviewing the motion papers, the Court vacated the hearing date and directed the parties to present a tutorial on the technology at issue. The tutorial was held on July 18, 1997. Ronald St. Onge and William Speranza appeared on behalf of ABB. Michael Barclay appeared on behalf of Plaintiff Impact Systems, Inc. ("Impact"). Based upon the pleadings filed to date, the evidence and testimony presented as part of the tutorial, as well of the oral argument of counsel on the merits of the summary judgment motion, the Court denies ABB's motion for the reasons set forth below.

### **II. BACKGROUND**

Impact filed this action on June 7, 1996, asserting that ABB infringes Impact's United States Patent No. 4,573,402, entitled "Caliper Control System And Method" which issued on March 4, 1986 ("the Sharma patent"). The subject matter of this suit relates to a process known as "calendering", in which paper stock is reduced in thickness ("caliper") by passing it between two cylindrical pressure rolls ("calender rolls"). The diameter of the calender rolls and the "nip" space between the rolls dictate the thickness of paper produced.

The calender rolls are constructed of a material which can be expanded and contracted by applying localized heating or cooling at various zones along the axial length of the rolls, in response to measurements of the sheet of paper downstream of the calendaring operation and suitable feedback signals.

The processes and apparatus generally described above were well known and in use long before the Sharma Patent. The Sharma patent covers a particular apparatus and method for effecting the localized air heating and cooling of the calender roll surfaces. The Abstract reads: "System and method for controlling the caliper of a web of material acted upon by one or more pressure rolls. The caliper is controlled by adjustment of the diameter of the roll, and the roll is locally heated and cooled by a combination of impingement, radiant and convective heat transfer." More simply, the Sharma patent discloses and claims the use of "axial zones," each with its own separately controlled heater, so that different portions of the calender roll can be separately heated. Figure 2 of the patent shows air flowing from a blower into a chamber called a "plenum," passing through heaters and then through "discharge openings" in the "faceplate," which is a piece of curved metal facing the calender roll. The heater is located between an inch to five inches away from faceplate. Claims 1 through 9 are directed to a "system" for treating a web material, while Claims 10 through 17 are directed to a method of treating a web of material.

There are two ABB products at issue in this lawsuit: the ThermoProfiler and the Smart Calender Profiler ("SCP"). By the present motion for summary judgment, ABB seeks a judicial determination that, as a matter of law, the ThermoProfiler does not infringe the Sharma patent because all sales of that product were made under a then-existing license agreement between ABB and Impact. ABB further seeks a judicial determination that the second product, the SCP, does not infringe the Sharma patent because the product does not fall within the literal scope of the claimed invention of the Sharma patent, and further is not the substantial equivalent of the claimed invention. The SCP system and method for controlling the nip space in a calendaring process were made the subject of an ABB application for a U.S. patent filed on August 19, 1994, and allowed by the Patent Office on September 10, 1996. ABB anticipates the formal issuance of the ABB patent to occur in the near future.

### **III. STANDARDS**

Summary judgment is appropriate in patent cases, as in any other case, "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to judgment as a matter of law," Fed.R.Civ. P. 56(c). The moving party bears the initial burden of demonstrating the absence of a genuine issue of material fact. *Celotex v. Catrett*, 477 U.S. 317, 323, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). The burden then shifts to the non-moving party to "designate 'specific facts showing that there is a genuine issue for trial.'" *Id.* at 324 (quoting Rule 56(e)). To carry this burden, the non-moving party must "do more than simply show that there is some metaphysical doubt as to the material facts." *Matsushita Electric Industrial Co., Ltd. v. Zenith Radio*, 475 U.S. 574, 586, 106 S.Ct. 1348, 89 L.Ed.2d 538 (1986). Nor is it sufficient to produce a mere "scintilla of evidence" to defeat a motion for summary judgment. *Celotex v. Catrett*, 477 U.S. at 322. Instead, the nonmoving party must produce sufficient evidence upon which a reasonable jury could return a verdict for the non-moving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248-251, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986).

In deciding a motion for summary judgment, the evidence is viewed in the light most favorable to the non-moving party, and all justifiable inferences are to be drawn in its favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986); *see also* *Sischo-Nownejad v. Merced*

Community College Dist., 934 F.2d 1104 (9th Cir.1991). Credibility determinations, the weighing of evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge [when] he is ruling on a motion for summary judgment." Anderson, supra, 477 U.S. at 255.

## IV. DISCUSSION

### *A. The ThermoProfiler and the License Agreement*

As early as 1986, Impact asserted that the ThermoProfiler infringed the Sharma patent. At that time, the ThermoProfiler was manufactured and sold by AccuRay Corporation, which was later acquired by ABB. Pursuant to an agreement effective November 1, 1986, Impact granted AccuRay a license and right to make, use, and sell any invention described in the Sharma patent. FN2 The license, succeeded to by ABB, was in full force and effect until May 11, 1995, when it was permitted to lapse by ABB.

FN2. In accepting the license under the Sharma patent, AccuRay did not concede that the ThermoProfiler infringed the patent.

ABB contends that the last sale of the ThermoProfiler product was pursuant to a purchase order received at ABB's Columbus manufacturing facility in April, 1995, and thus while the license under the Sharma patent was still in force. Therefore, ABB contends that it is entitled to a judicial determination of noninfringement as to the ThermoProfiler product. However, Impact asserts that the date of the last sale is not dispositive of the issue for a number of reasons. First, Impact asserts that ABB has failed to produce the actual purchase order, and therefore ABB has failed to carry its burden of proof on its affirmative defense. Second, Impact asserts because ABB's 1995 annual report reflects that it recognized sales of products upon delivery of the product, the date of sale for the ThermoProfiler should be determined based upon the date it was shipped, July 31, 1995. Third, Impact asserts that notwithstanding when the sale occurred, ABB infringed the patent-in-suit by manufacturing the ThermoProfiler sometime after May 26, 1995, after the license agreement had already lapsed. This evidence creates a genuine issue of material fact with respect to a potentially infringing manufacture or sale of ThermoProfilers after ABB's license expired. Accordingly, ABB's motion for partial summary judgment with respect to the ThermoProfiler product is denied.

### *B. The ABB Smart Calender Profiler*

The second ABB product at issue is the Smart Calender Profiler ("SCP"), which has been made and sold by ABB since early 1995. ABB asserts that the SCP does not infringe the Sharma patent because the product does not fall within the literal scope of the claimed invention, and further is not the substantial equivalent of the claimed invention.

Summary judgment of noninfringement is appropriate where the patent claims do not read on the accused product to establish literal infringement and the prosecution history precludes infringement under the Doctrine of Equivalents. Townsend Engineering Co. v. HiTec Co., 829 F.2d 1086, 1089 (Fed.Cir.1987); Chemical Engineering Corp. v. Esfef Industries, Inc., 795 F.2d 1565, 1571-73 (Fed.Cir.1986). The analysis of infringement is a two-step process. The first step is interpreting the claims to determine their scope. Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed.Cir.1995), *aff'd* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The second step is determining whether the properly interpreted claims encompass the accused product. Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 1269-70 (Fed.Cir.1986). Infringement exists if and only if every limitation of a patent claim is met by the accused product exactly or

by a substantial equivalent. *Lemelson v. U.S.*, 752 F.2d 1538, 1551 (Fed.Cir.1985).

The starting point of a claim interpretation analysis is the language of the claims themselves. *Intervet America, Inc. v. Kee-Vet Laboratories, Inc.*, 887 F.2d 1050, 1053-54 (Fed.Cir.1989). In *Markman v. Westview Instruments, Inc.*, 52 F.3d at 970-71, the Federal Circuit Court held that interpretation and construction of patent claims, which define the scope of the patentee's rights under the patent, is a matter of law exclusively for the Court. The Court has the power and obligation to construe as a matter of law the meaning of language used in the patent claim. *Id.* at 979. As such, "[a] patent covers the invention or inventions which the Court, in construing its provisions, decides that it describes and claims." *Id.* "To ascertain the meaning of claims, we consider three sources: The claims, the specification, and the prosecution history." *Id.* (quoting *Unique Concepts, Inc. v. Brown*, 939 F.2d 1558, 1561 (Fed.Cir.1991)). "Expert testimony, including evidence of how those skilled in the art would interpret the claims, may also be used." *Id.* (quoting *Fonar Corp. v. Johnson & Johnson*, 821 F.2d 627, 631 (Fed.Cir.1987)).

### *The Claim Language*

There are two claims at the core of the present motion for summary judgment, Claims 1 and 10. Claim 1 is directed to the system or apparatus, and reads as follows (the narrative format of the claim as it appears in the patent has been parsed for ease of comprehension):

1. In a system for treating a web of material:

- a rotating calender roll which presses against the web and varies in diameter with changes in temperature,
- an axially elongated cylindrical curved faceplate positioned coaxially of the roll with the front surface of the faceplate in close facing proximity [sic] to the outer surface of the roll,
- a plurality of discharge openings spaced axially along the faceplate,
- plenum means in fluid communication with the discharge openings, and including said faceplate as a portion thereof,
- blower means for delivering room temperature air under pressure to said plenum means,
- a sensor for monitoring the caliper of the web after it is pressed by the roll,
- and means responsive to the sensor for selectively controlling along a plurality of axial zones the temperature of the air passing through the discharge openings to selectively heat or cool portions of the roll to control the caliper of the web
- including a plurality of individually controlled electrical heating elements associated with respective zones positioned behind the faceplate for selectively heating the air passing through [sic] proximate discharge openings to provide air adjacent zones having a significant temperature differential.

Claim 10 is directed to the method and reads as follows:

10. In a method of treating a web of material with a rotating calender pressure roll which varies in diameter

with changes in temperature

-where such diameter is varied by directing air at said roll through a plurality of axially spaced openings, arranged along a plurality of zones in the axial direction in an axially elongated cylindrically curved face plate in close facing proximity to the surface of the roll

-and where electrical heating elements are positioned behind said faceplate in each of said zones the steps of:

providing from a single source at room temperature a continuous flow of air through said openings into the region between said faceplate and the roll; and

selectively heating a region proximate to said faceplate by activation of said heating elements said room temperature air before it exits through the proximate opening to provide air in adjacent zones preventing spreading to confine said heating air to one said zone.

Plaintiff's Appendix Of Exhibits, Ex. 1.

One of the key terms in the patent is "proximate" as used in Claims 1 and 10. The Court has not yet conducted a claims construction hearing regarding Claims 1 and 10, although the Court has had the benefit of the parties' tutorial regarding the technology at issue. For purposes of this motion only, the Court construes the term "proximate" consistent with both parties' interpretation to mean close or very near. ABB's Motion, p. 14; Impact's Opposition, p. 16.

### *Comparison of Claim To Accused Device*

ABB explains the operation of its accused product as follows:

In the SCP system, a number of individual modular nozzles are arranged in series along the axial length of a calender roll, each for directing air to a particular narrow axial strip or zone of the roll surface. Reed Aff., para. 5. Each nozzle has a housing which receives at one end, remote from the roll, air from a plenum particularly associated with that housing. As the received air passes through the housing towards the roll, it contacts a dedicated heater element which is responsive to downstream sheet measurements. The heated or unheated air then exits the end of the housing from a downwardly directed opening therein, arranged above the roll. The amount and speed of discharged air from the modular nozzle is controlled by a heat-responsive, bimetallic strip throttle valve mechanism located within the housing, between the dedicated heating element and the nozzle exit opening, to more particularly localize heating of the roll and so more carefully control the nip thickness. Reed Aff., para. 6. The downwardly directed air passing out of the modular nozzle showers the area formed between the surface of the calender roll in the zone serviced by the nozzle, and the inner surface of a removable curved insulated scoop strip extending down toward the roll from the nozzle end, and generally conforming to the curve of the roll surface in the particular strip or zone. Reed Aff., para. 7.

Defendant's Motion, p. 5-6.

ABB capsulizes the key differences between its SCP and the claimed invention of the Sharma patent as follows. ABB asserts that in the Sharma patent, the source air delivered to the system via the plenum is

accessible to all the heating elements arranged along the axial length, and thus, the heated air is capable of commingling with air at a variety of axial zones, resulting in loss of precision in controllably delivering air of a particular temperature to specific roll surface zones. ABB further asserts that in order for the claimed invention to attain as much localized heat control as possible, the inventors placed the heaters just behind the air discharge openings of the faceplate. In contrast, ABB's SCP system is allegedly designed and configured so that each modular nozzle has its own associated plenum for receiving air, and once that air is introduced into the housing, it is confined and constrained to a dedicated heating element, isolated from all other heating elements. According to ABB, the heated air in the SCP system is then further confined and constrained to exit only the discharge opening associated with that nozzle, and thus enabling extremely precise localized temperature treatment.

ABB asserts that neither Claim 1 nor Claim 10 is infringed, by exact or substantial equivalents, for a number of reasons. First, ABB asserts that the SCP product contains no air discharge openings in any structure that might be argued as constituting or resembling a faceplate. ABB also draws a distinction between the function of the discharge openings as set forth in the Sharma patent, and the purpose of the discharge openings in the SCP product. The Sharma patent states that the arrangement of the discharge openings in the faceplate is for the function of achieving heating of the calender rolls by direct impingement of air on the roll surfaces, whereby the air bounces repeatedly back and forth between the surfaces of the faceplate and the roll. In contrast, ABB asserts that in the SCP product, the discharge opening at the end of each of the modular nozzles is oriented to discharge air in the area between the roll surface and the inner facing surface of the "scoop strip," creating a shower of air in the area.

Second, ABB argues that Claim 1 of the Sharma patent is not literally infringed for the additional reason that the SCP product does not include a "plenum means" that includes a "faceplate." Further, ABB asserts that in light of the prosecution history, Impact is estopped from urging that any product in which the faceplate is not a portion of the plenum could infringe Claim 1 of the Sharma patent.

Third, ABB contends that SCP product does not have "electrical heating elements" that are "positioned behind" the faceplate. According to ABB, the SCP product has heating elements positioned above, not behind, the removable scoop strip.

Fourth, ABB contends that the SCP does not have "electrical heating elements" that are "proximate" the discharge openings. ABB urges the Court to define "proximate" to mean "on the order of but a fraction of an inch." ABB's Reply at 6:30. According to ABB, the SCP product's heating elements are contained in housings that are positioned above "scoop strips," and "remote" from the discharge opening.

Impact, however, has presented sufficient evidence to raise a genuine issue of material fact as to whether the SCP product infringes Claims 1 and 10. More specifically, in response to ABB's first argument, Impact has presented evidence suggesting that the combination of the scoop strip and the nozzle shield in the SCP is a faceplate within the meaning of Claims 1 and 10, with discharge openings located in the faceplate, about one inch below the top of the nozzle shield. Waller Decl., para. 32, Exs. 51, 52, 53, 54, 58, 59. In response to ABB's third and fourth argument, Impact has presented evidence upon which the trier of fact could find that the heaters for the SCP product are "proximate" to the discharge openings and behind the faceplate. According to engineer Gordon Reed, the heaters are at most five inches behind the nozzle openings of the SCP. Reed Depo., 10:23-11:4; 106:10-107:1. ABB contends that the "proximate" requirement cannot be met by a five inch separation. Reply, p. 5. However, the Court cannot say at this stage in the litigation and without the benefit of a claims construction hearing, that five inches is too great a distance to satisfy the

"proximate" requirement of the Sharma patent, especially when one considers the following factors: (1) the entire SCP machine, as a whole, varies from seven to thirty feet long by approximately three to five feet wide, or more (Reed Depo., 79:13-23, 119:2-15, 174:10-22); (2) the distance between the faceplate and discharge openings in the '402 patent is estimated to be between one to five inches (Waller Decl., para. 35c); and (3) the dimensions of the SCP and the '402 patent are different from those of the prior art, which contained heater elements that were literally feet away from the faceplate, rather than inches (Waller Decl., para. 11-15, 35d).

ABB's remaining argument relates to the requirement in Claim 1 that the "plenum means" includes a "faceplate." In the embodiment of the patent-in-suit, the plenum is one large chamber containing the heater elements, in which one wall, and thus a portion of the plenum, is the faceplate. Waller Decl., para. 42. Impact concedes that this limitation is not literally present in the SCP, that is, that the faceplate in the SCP does not form a wall of the plenum. Nevertheless, Impact asserts that this element of Claim 1 is present under the doctrine of equivalents.

"An accused product that does not literally infringe a claim may infringe under the doctrine of equivalents if 'it performs substantially the same function in substantially the same way to obtain the same result.' " Southwall Technologies Inc. v. Cardinal IG Co., 54 F.3d 1570, 1579 (Fed.Cir.1995). The doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. Warner-Jenkinson Company, Inc. v. Hilton Davis Chemical Co., --- U.S. ----, 117 S.Ct. 1040, 1049, 137 L.Ed.2d 146 (1997). "It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety." *Id.*

According to Impact, the SCP has a plenum chamber that includes a component of the SCP known as the "beam" through which air flows past a valve, over a ceramic ramp plate and down the ceramic and finally exiting at the discharge openings in the faceplate. Reed Depo., 20:4-22:2. Thus, the SCP faceplate is at the "endpoint" of an elongated plenum. Impact, p. 17. Impact's expert opines that the SCP performs substantially the same function in substantially the same way to achieve substantially the same result as the actual claim element. Waller Decl., para. 44. Impact explains that the SCP plenum still operates as a source of room temperature air, delivered to a calender roll at high velocity, which provides air of different temperatures at different axial positions along the width of the roll. The Court finds that this evidence is sufficient to raise a triable issue as to whether the SCP plenum includes a faceplate.

ABB argues, however, that Impact is estopped from relying upon the doctrine of equivalents as to Claim 1 in light of the prosecution history of the patent-in-suit. According to ABB, the requirement that the plenum include a faceplate was expressly incorporated into Claim 1 in order to overcome rejection over the prior art.

Prosecution history estoppel limits the range of equivalents by preventing the patentee from recapturing subject matter voluntarily surrendered through claim amendments made in order to overcome a rejection by the PTO. *See e.g.* Southwall, 54 F.3d at 1579-1584. "When a court applies the doctrine of prosecution history estoppel to limit the scope of equivalents, 'a close examination must be made as to, not only what was surrendered, but also the reason for such a surrender.' " *Id.* at 1580, *citing* Hi-Life Prods., Inc. v. American Nat'l Water-Mattress Corp., 842 F.2d 323, 325 (Fed.Cir.1988).

The Court has reviewed the prosecution history and finds no basis for applying estoppel. The PTO rejected Claim 1 as being unpatentable over prior art including U.S. Patent No. 3, 190, 212 to Moore. The examiner stated, "[i]t would be an obvious modification to anyone having ordinary skill in the art to provide Moore

with individually controlled heating elements in view of either Grassman or Smith, Jr. and to further provide Moore with a sensor in view of the sensor (8) of Walker. Aff. of William Speranza, Ex. 4, p. 50. The applicant responded:

Claim 1, as amended, specifies the foregoing by stating that plenum means are provided which include the faceplate as a portion thereof, which receives the room temperature air. And then there are electrical heating elements associated with axial zones and positioned behind the faceplate for selectively heating the air passing through proximate discharge openings. The claim lastly specifies that this provides air in adjacent zones having a significant temperature differential as has been explained above.

Claim 1 was rejected as being unpatentable over Moore in view of Smith, Jr. Moore, of course, shows the prior art type of calender device where a remote heater heats air passing into a plenum which then has valves to control the flow of air....

Specifically, Claim 1 now specifies electrical heating elements positioned behind the faceplate which heat the room temperature air which has been delivered by the lower means.

Aff. of William Speranza, Ex. 4, p. 61. Thus, Impact was distinguishing the claimed invention from prior art that used remote heat sources. Further, the prosecution history bears out Impact's assertion that the requirement that the plenum include the faceplate "as a portion thereof," was merely one of several changes made to emphasize that in the claimed invention, the heater and plenum are both located close to the faceplate and discharge openings. Under these circumstances, the Court finds that prosecution history estoppel does not apply.

## **V. CONCLUSION**

For the reasons set forth above, Defendant's motion for summary judgment is DENIED.

N.D.Cal.,1997.

Impact Systems, Inc. v. ABB Industrial Systems, Inc.

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