United States District Court,
E.D. Missouri, Eastern Division.

LASER LIGHT TECHNOLOGIES, INC,
Plaintiff.
v.
BRICK MARKERS U.S.A., INC,
Defendant.

No. 4:00CV816-DJS

Dec. 7, 2001.

Assignee of patent for process of using laser to engrave ceramic material sued competitor for infringement. Construing claim language, the District Court, Stohr, J., held that three "stages" of progressive change, called for in patent, were three progressive physical effects that could be obtained in fewer than three laser passes.

Claim construed.

5,554,335. Construed.

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STOHR**, District Judge.**

ORDER

The parties are manufacturers and sellers of engraved ceramic goods. Plaintiff Laser Light Technologies is the assignee of U.S. Patent No. 5,554,335 (" '335 patent") granted to William C. Fields, Dan Fredrick, Steve Grannemann, Phyllis Hannan, and Igor Lukashevsky for a "Process for Engraving Ceramic Surfaces Using Local Laser Vitrification." Defendant Brick Markers manufacturers and sells goods that compete with plaintiff's, and plaintiff asserts that defendant is infringing on its patent. Defendant has filed a counterclaim seeking a declaratory judgment that its process does not infringe the '335 patent and that the '335 patent is invalid and unenforceable. In Markman v. Westview Instruments, Inc., 517 U.S. 370, 372, 116 S.Ct. 1384,

134 L.Ed.2d 577 (1996), the Supreme Court held that "the construction of a patent, including terms of art within its claim, is exclusively within the province of the court." The matter is now before the Court on the parties' joint motion seeking the Court's construction of claim 1 of the '335 patent.

As indicated in the "Background of the Invention" section of the patent, the laser engraving process is intended "for marking and engraving brick or other like ceramic material which can produce a distinctive, long lasting image in a manner that is efficient, safe, and environmentally sound." '335 Patent, Col. 1, ll. 29-32. Claim 1, an independent claim of the patent, sets out a description of the laser engraving process as a whole. The parties dispute the second section of claim 1, which articulates the three stages of the laser engraving process:

a first stage in which said laser removes a portion of said ceramic material to form said depth for said marking within and below said ceramic surface;

a second stage in which said laser continues to deliver energy to melt and vitrify said ceramic material whereby it is fused into surrounding unmelted ceramic material within said depth; and

a third stage in which said laser removes residue from said ceramic surface to effect said adherent, contrasting marking.

'335 Patent, Col. 4, ll. 25-34.

Plaintiff asserts the following construction of claim 1:

The term "stage" as used in claim 1 and the specification means a physical effect caused by the laser [and] should not be confused with the term "pass" which means a separate and distinct movement of the laser beam over the area to be marked.... The three stages are not required to take place in distinctive, separate laser passes, and can all occur in one pass of the laser.

Jt. Motion, p. 3. Defendant urges a construction that "[t]he term 'stage' refers to [discrete] elements of the process in Claim 1"; that "[e]ach stage is described in the patent as having a different result on the brick or substrate"; that the first two stages cannot "take place simultaneously, with one laser pass"; and that "[t]here is no disclosure to be found anywhere in the patent to indicate that the process can be accomplished in a single step, nor is there any disclosure that any two of the stages can be combined." Jt. Motion, pp. 2, 4, 14.

As a threshold matter, the Court finds that the parties do not dispute that the patented engraving process involves three ordered, progressive changes in the ceramic material. Plaintiff states that the patent "describes the three stages of claim 1 as comprising *progressive* physical effects arising during the laser engraving process in creating a vitrified mark in a brick." Jt. Motion, p. 6 (emphasis added). Defendant contends that the intrinsic evidence "conclusively establish[es] that each stage constitutes a discrete, *sequential* step in the process." Jt. Motion, p. 11 (emphasis added). *See* Jt. Motion, pp. 13-14 (defendant asserting that the changes to the ceramic material must occur in set order). The issue before the Court is whether, under claim 1's construction, the three stages comprised of progressive changes in the ceramic material can be achieved in fewer than three discrete passes of the laser.

A number of general principles of claim construction have been enunciated in the case law, many of which are helpfully articulated by the Federal Circuit Court of Appeals in Vitronics Corp. v. Conceptronic, Inc., 90

F.3d 1576 (Fed.Cir.1996). The scope of potential consideration includes intrinsic evidence, namely "the patent itself,including the claims, the specification and, if in evidence, the prosecution history," and extrinsic evidence, such as technical treatises, dictionaries, and prior art. Id. at 1582. "It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record," which "is the most significant source of the legally operative meaning of disputed claim language." *Id*. The claim language itself is examined, and "words in a claim are generally given their ordinary and customary meaning." *Id*. Exegesis of the specification is said usually to be "dispositive," as "it is the single best guide to the meaning of a disputed term." *Id*.

[1] The Court thus begins its analysis with an examination of the plain language of claim 1. Claim 1 does not reference how many laser passes are necessary to achieve the sought after effects. In fact, the term "pass" does not appear in claim 1. Moreover, while three stages are referenced, claim 1 does not define the term "stage." Claim 1 does describe "a second stage in which said laser *continues* to deliver energy...." '335 Patent, Col. 4, ll. 28-29 (emphasis added). Defendant asserts that "the specification ... shows that the laser is operated robotically using computer software" and "the word 'continues' merely expresses a timing sequence." Jt. Motion, p. 15. The Court finds that "continues" is ambiguous regarding whether in the second stage the laser operator continues the same laser pass or continues with a new pass of the laser.

[2] There is nothing inherent in the language of claim 1 that necessitates three separate laser passes, which militates in favor of plaintiff's position. Examination of the other claims further bolsters plaintiff's position. *See* Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1274 (Fed.Cir.2001)("It is true that limitations stated in dependent claims are normally not to be read into the independent claim from which they depend.") (citation omitted). The Court notes that while the term "pass" is not used at all in independent claim 1, "pass" is used throughout dependent claim 2:

The process of claim 1 in which said laser hatches over said engraving area, said laser being programmed to direct light beams in hatching *passes* of parallel orientation, each subsequent adjacent beam *pass* overlapping a prior *pass* by one half of a diameter of said beam, whereby a heating efficiency is enhanced.

'335 Patent, Col. 4, ll. 35-40 (emphases added). The multiple uses of "pass" in claim 2 and the term's total omission in the description of the stages in claim 1 appear to be purposeful. Consideration of the particular language conveys this, as well as the general common sense principle of claim differentiation, which is the presumption that the use of different words or phrases in separate claims conveys a difference in meaning and scope. Comark Communications, Inc. v. Harris Corp., 156 F.3d 1182, 1187 (Fed.Cir.1998).

Furthermore, dependent claims 5-8 set out the three different beam frequencies and writing speeds comprising the three passes of the laser that match those of the preferred embodiment, which is described in the patent specification. Plaintiff makes a persuasive argument that claim 1 does not encompass the preferred embodiment because the parameters for the preferred embodiment are set out separately in claims 5-8:

Claims 5-8 cite as limitations the specific parameters described in each pass covered in the respective stages of the preferred embodiment. In those claims, each stage encompasses a distinct pass of the laser and a different set of laser parameters for achieving the physical effect of that stage. If the three stages of claim 1 were to be construed as being limited to comprising three different passes of the laser with the laser parameters of the preferred embodiment, claims 5-8 would be rendered superfluous.

Jt. Motion, p. 9. Under the doctrine of claim differentiation, broader construction is given to the independent claim to avoid rendering the dependent claim redundant. Dow Chemical Co. v. United States, 226 F.3d 1334, 1341-42 (Fed.Cir.2000). The construction of claim 1 compared to the other claims strongly supports a determination that claim 1's construction is not limited to three laser passes.

Looking beyond the claims, the specification does not expressly define or modify "stage." FN1 The term "pass" is used in the specification only for the preferred embodiment, which specifically utilizes three passes of the laser. The "Use" section of the specification states that the "preferred mode of carrying out the inventive process" involves "[a] red clay paving brick having a relatively smooth surface" and "[a]n appropriate lens" with "[l]aser peak power ... sufficient to vaporize and melt the brick material. " '335 Patent, Col. 3, ll. 35-42. This preferred mode involves three passes of the laser using three different laser beam frequencies and writing speeds. After describing the preferred embodiment, the specification states, "Various changes and modifications may be made within this invention as will be apparent to those skilled in the art. Such changes and modifications are within the scope and teaching of this invention as defined in the claims appended hereto. " '335 Patent, Col. 4, ll. 9-13.

FN1. Defendant attaches as exhibits certain dictionary definitions of "stage" and "engrave." "Judges ... may ... rely on dictionary definitions when construing claim terms, so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents." Vitronics, 90 F.3d at 1584 n. 6. The Court does not rely upon either definition, finding that either party's position could be supported by the definitions.

The Federal Circuit Court of Appeals "consistently declines to construe claim terms according to the preferred embodiment." Northern Telecom Limited v. Samsung Electronics Co., 215 F.3d 1281, 1293 (Fed.Cir.2000) (citations omitted). "[A]lthough the specification[ ] may well indicate that certain embodiments are preferred, particular embodiments appearing in a specification will not be read into the claims when the claim language is broader than such embodiments." Electro Medical Systems v. Cooper Life Sciences, Inc., 34 F.3d 1048, 1054 (Fed.Cir.1994) (citation omitted). *See also* Texas Instruments, Inc. v. United States Int'l Trade Comm'n, 805 F.2d 1558, 1563 (Fed.Cir.1986)("This court has cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.") (citation omitted).

Plaintiff contends that the preferred embodiment cannot limit claim 1, stating that claim 1 includes both thermal ablation, which does not require laser setting reconfiguration for each stage, as well as mechanical ablation, which requires laser setting reconfiguration for each stage and which is used for the preferred embodiment. *See* Jt. Motion, pp. 6-9. Plaintiff also explains that:

[t]he specification does not limit the laser settings in carrying out the three stages, and need not, because a person having skill in the art would know the capabilities of the laser in bringing about the specific effects.... Because the three stages represent progressive physical effects that occur through continual application of the laser beam to the brick surface, the laser settings may be the same for each stage. Alternatively, the laser settings may be different for each stage to emphasize the effect of that respective stage.

Jt. Motion, p. 7. Defendant does not specifically address the issue of whether claim 1 includes both thermal and mechanical ablation.

While defendant states on page 15 of the joint motion that it "does not seek to read into the claim term the preferred embodiment provided in the patent," it relies on the preferred embodiment when arguing its position. On pages 19-20 of the motion, defendant cites specifically to the description of the "preferred mode" laser settings in order to support its argument that the stages in claim 1 cannot occur in one pass.

Defendant also cites to the figure descriptions found in the specification. *See, e.g.,* Jt. Motion, pp. 18-19. Defendant asserts that the figures of the patent demonstrate that the three stages of claim 1 require three passes of the laser, stating, "FIGS. 1-3 of the patent[ ] show the same starting location, on the brick, for the laser beam depicted in each figure, for each stage. The figures, therefore, show that the laser returns to the start point after each stage is finished in order to begin the next stage." Jt. Motion, p. 4.

[3] However, while the Court does not disagree that the figures represent three passes of the laser, it notes that the patent specification states, "For purpose of illustration of this invention a *preferred embodiment* is shown and described hereinbelow in the accompanying drawing [sic]. It is to be understood that *this is for the purpose of example only and that the invention is not limited thereto*." '335 Patent, Col. 1, l. 65-Col. 2, l. 2 (emphases added). Furthermore, even a consistent feature of the patent's drawings cannot, without more, be construed as a limitation on a claim which contains no language indicating incorporation of that feature. *See* Advanced Cardiovascular Systems, Inc. v. Scimed Life Systems, Inc., 261 F.3d 1329, 1339 (Fed.Cir.2001)(citing Johnson Worldwide Associates, Inc. v. Zebco Corp., 175 F.3d 985, 992 (Fed.Cir.1999)).

[4] Other than the parts of the specification relating to the preferred embodiment, the term "pass" (or any variation thereof) is not used in the specification. The patent holder is not obligated to include all embodiments in the specification. *See, e.g.,* Smith v. Snow, 294 U.S. 1, 11, 55 S.Ct. 279, 79 L.Ed. 721 (1935)("[I]t is not necessary to embrace in the claims or describe in the specification[ ] all possible forms in which the claimed principle may be reduced to practice."). *See also* SRI Int'l v. Matsushita Electric Corp., 775 F.2d 1107, 1121-22 (Fed.Cir.1985). The Court finds unpersuasive defendant's arguments that would import to claim 1 the limitation of the preferred embodiment described in the specification.

The prosecution history of the patent may provide information relevant to claim interpretation, such as "any express representations made by the applicant regarding the scope of the claims." Vitronics, 90 F.3d at 1582. There exists a potential overlap with the extrinsic evidence, in that "[i]ncluded within an analysis of the file history may be an examination of the prior art cited therein." Id. at 1583. Plaintiff asserts that the prosecution file history is not helpful, while defendant contends that "[t]he examiner clearly understood the applicant's invention as a sequential three step process for laser engraving, and allowed claim 2, as amended, for that reason." Jt. Motion, p. 18. Upon an examination of the file history, the Court does not find it instructive on the instant issue.

The original claim 1, which comprises the first paragraph of the '335 patent's claim 1 with minor modification, was rejected in the patent examiner's office action dated January 20, 1996. The patent examiner rejected the original claim 1 pursuant to 35 U.S.C. s. 102(b):

[The claim is rejected] as being anticipated by either of Noda et al or the article to Vol'ter and Sviridov. Either applied reference teaches the instant process for engraving ceramic surfaces using a laser involving a removal step and a melting and solidifying step in which melted material is fused into a surrounding, apparently unmelted area (ie, the unmelted bearing base of Noda et al and the walls of the grooves in Vol'ter et al). It is submitted inherent that an adherent, contrasting marking occurs in the process of each applied

reference.

Exh. A4 of Jt. Motion, p. 3, para. 3. The original claim 2, which comprises the remaining portion of the '335 patent's claim 1 with minor modification, was initially rejected because of indefiniteness. However, the patent examiner stated that the original claim 2, and original claims 3-9 rejected on the same grounds, "would be allowable if rewritten to overcome the rejection under 35 U.S.C. s. 112 and to include all of the limitations of the base claim and any intervening claims." Exh. A4 of Jt. Motion, p. 3, para. 4. The applicants filed a claim amendment in March 1996 in response to the rejections, merging the original claims 1 and 2 and changing, *inter alia,* "melting and fusing" in the original claim 2 to "engraving," calling the amended version "claim 1." The amended claim 1 was allowed in May 1996. Exh. A6 of Jt. Motion.

According to defendant, "Stage one ... establishes the patentably distinct subject matter allowed by the examiner...." Jt. Motion, p. 13. Defendant states the following:

The prosecution history clearly demonstrates that the examiner thus allowed original claim 2, as amended, to claim an *engraving process taking place in three stages,* and that the first stage " *does not involve any melting or fusing, but ... evaporation*." Stage one of the amended claim (present claim 1) is critical because it applied a new digging, or depth formation, step to distinguish it over the prior art. Because the applicant amended then claim 2 *exactly* as suggested by the examiner, without any argument whatsoever, it is clear that the applicant acquiesced in the examiner's view of the invention.

Jt. Motion, p. 17. Defendant continues that "[b]ecause the Defendant's accused process for laser marking bricks reads only on the Plaintiff's *original* claim 1 ... [plaintiff] attempts to now broaden the permissible scope of present claim 1," resulting in "a broad construction [that] defies the clear prosecution history." Jt. Motion, p. 18. Defendant's argument and the file history do not reflect on the number of laser passes used in the laser engraving process of the '335 patent. Whether the first stage is the critical component of claim 1 necessary to distinguish the invention from the prior art is not a question for determination at this time.

[5] Consideration of extrinsic evidence is resorted to "[o]nly if there [is] still some genuine ambiguity in the claims, after consideration of all available intrinsic evidence." Vitronics, 90 F.3d at 1584. Opinion testimony from an expert or an inventor is not properly relied upon if inconsistent with the specification and file history, and may not be considered unless "the patent documents, taken as a whole, are insufficient to enable the court to construe disputed claim terms"-an instance which "will rarely, if ever, occur." Id. at 1585. The patent documents themselves are sufficient to determine the claim construction at issue here, and the Court does not rely on extrinsic evidence in making its decision.

Based on the rationale set forth above, the Court concludes that claim 1 is properly construed as describing three progressive physical effects that may be obtained in fewer than three laser passes.

Accordingly,

IT IS HEREBY ORDERED that the parties' joint motion for claim construction by the Court [Doc. # 58] is granted as follows.

IT IS FURTHER ORDERED that the three stages of claim 1 of U.S. Patent No. 5,554,335 are progressive physical effects that may be effected in fewer than three passes of a laser.

E.D.Mo.,2001.
Laser Light Technologies, Inc. v. Brick Markers, U.S.A., Inc.