UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

AUTOFORM ENGINEERING GMBH,

PLAINTIFF,

v.

ENGINEERING TECHNOLOGY ASSOCIATES, INC.,

DEFENDANT.
_____/

CASE NO. 10-14141

ARTHUR J. TARNOW
SENIOR UNITED STATES DISTRICT JUDGE

R. STEVEN WHALEN
MAGISTRATE JUDGE

MEMORANDUM OPINION AND ORDER

I. Introduction

Before the Court are Plaintiff's Opening Claim Construction Brief [29] and Defendant's Markman Brief [30]. The parties have also submitted a Joint Claim Construction Statement [25], which identifies disputed words or phrases within the '939 and '929 patents now at issue. The Court held a hearing on these matters on January 19, 2012 and the briefs were taken under advisement.

The Court construes the disputed claim terms as set forth below.

II. Background

Plaintiff AutoForm, a Swiss corporation, possesses two patents now at issue. The '939 patent, titled "Method for Designing a Tool for Deep Drawing and Tool for Deep Drawing of Sheet Metal," was issued by the United States Patent and Trademark

Office (USPTO) on November 24, 2009. The second patent, the '929 patent, titled "Method for the Designing of Tools," was issued by the USPTO on February 22, 2011.

On October 15, 2010, Plaintiff filed its Complaint [1], alleging that Defendant Engineering Technology Associates (ETA) is infringing on the '939 patent by making, using, selling, and/or offering to sell certain software. On March 16, 2011, Plaintiff filed a Second Amended Complaint [21], adding an identical claim against Defendant ETA as to the '929 patent. These patents are related and share a common specification.[1]

The patents pertain to computer software that is used to create a tool, which is then used to form sheet metal into different objects, including automobile parts. The patents focus on the creation of the die portion of this tool. Generally, the die is custom made for each type of object, or automobile part, to be formed from the sheet metal. The die is composed of a component area, an addendum area, and a binder area. The patent claims now at issue revolve around the creation of this addendum area, including the use of sectional profiles to create the addendum area.

[1]While the patents are distinct in several ways, the language at issue in the instant briefings is identical in both patents, as are the claim construction disputes now before the Court. Therefore, while the parties and the Court refer to the '939 patent, the resolution of the claim construction disputes apply to both patents.

III. Analysis

Title 35 U.S.C. § 271(a) states: "whoever without authority makes, uses, sells, or offers to sell any patented invention, within the United States or imports into the United States any patented invention . . . , infringes the patent."

Adjudication of a patent infringement action requires a two-step analysis. First, the Court must interpret the claim in what is known as a *Markman* hearing. *See Markman v. Westview Instruments*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*., 517 U.S. 370 (1996). Claim interpretation is an issue of law reserved for the Court. *Id.* at 979*; see also Fromson v. Anitec Printing Plates, Inc.*, 132 F.3d 1437, 1441-42 (Fed. Cir. 1997), *cert. denied*, 525 U.S. 817 (1998). Once the claim has been interpreted, the second step is an infringement analysis, or determining whether the claims as interpreted encompass the accused device. *Mannesman Demag Corp. v. Engineered Metal Products*, 793 F.2d 1279, 1282 (Fed. Cir. 1986). Infringement is an issue of fact, which in this case has been reserved for a jury.

Within the first step of claim interpretation, it is a "bedrock principle of patent law that the 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 quotation marks and citations omitted). Disputed terms must be given the "ordinary and customary meaning" as understood by "persons of ordinary skill in the art." *Id.* at 1312-13 (citations omitted). In claim construction, the Court relies first

on intrinsic evidence, namely the patent claims themselves, the specification, and any prosecution history that is in evidence. *See Teleflex, Inc., v. Ficosa North Am. Corp.*, 299 F.3d 1313, 1324-25 (Fed. Cir. 2002). To the extent that extrinsic evidence, such as dictionaries, treatises, or expert testimony, is not inconsistent with the intrinsic record, the Court may further rely on extrinsic evidence to more fully understand the underlying subject matter of the patent. *See Phillips*, 415 F.3d at 1317-18; *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1300 (Fed. Cir. 2003).

All of the terms now disputed by the parties appear within claims one, four, and five of the‘939 patent. These claims are listed below, with the disputed terms in bold italics:

> 1. A method for designing a tool for deep drawing of sheet metal to form a sheet metal component having a predefined component geometry, said tool comprising a die, a binder and a punch, whereby the binder is used to fix the sheet metal in an edge zone of the die, before the sheet metal is pressed in a drawing direction by the means of the punch into the die, said tool comprising at least one addendum zone ***surrounding*** the component, said addendum zone is generated by a method comprising the following steps:
>
> a. arranging along the component edge at a distance from one another ***several*** sectional profiles directing away from the component edge;
>
> b. whereby the sectional profiles are parameterized by the means of profile parameters, the profile parameters being scalar values;
>
> c. laterally interconnecting ***the sectional profiles*** **by *a***

> ***continuous surface*** to form the geometry of the addendum zone of the tool, whereby said addendum zone complements the component geometry in the edge zone and runs into the component ***and*** the binder with ***a continuous tangent***.

4. The method according to claim 1, wherein a change of the characteristic line in a controlled manner influences ***several*** adjacent sectional profiles.

5. The method according to claim 1, wherein ***the sectional profile*** is parameterized by profile parameters out of the ***group of*** the following elements: component run-off length, component run-off radius, flange length, flange angle, draw bar height, draw bar width, draw bar radius, step height, step radius, wall angle, die radius.

1. "Surrounding"

The parties first dispute the term "surrounding" as it is used in claim one. The term is not explicitly defined within the specification. Plaintiff's proposed construction of the term "surrounding" is: "one or more surfaces that **extend along** the component between the component and the binder." Defendant's proposed construction of the same term is: "one or more surfaces that **encircle** the component between the component and the binder." As indicated by the bolded phrases, the parties dispute whether the term "surrounding" means to "extend along" or to "encircle."

Defendant argues that intrinsic evidence in the form of the figures contained within the specification, the prosecution history, as well as the ordinary meaning of

the term "surrounding"– to extend on all sides of simultaneously; encircle– support its construction of the term. However, while the figures within the specification include an addendum on all sides of the component, the specification presents these figures as examples and should not be used to limit the patented material to only those examples. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1323(Fed. Cir. 2005)("[A]lthough the specification often describes very specific embodiments of the invention, it is improper to confine the claims to those examples.")

Defendant also points to the prosecution history, in which Plaintiff differentiated its claimed invention from prior art by explaining that the claimed invention involves a "continuous tangent" that creates a "complete or 'closed' addendum zone." However, this "complete" addendum zone refers to the absence of a gap between the component and addendum, not to an addendum that is closed around the component.

Finally, as Plaintiff notes, Defendant's construction does not allow for internal addendums, as described in the specification and shown in the figures. As such, Defendant's extrinsic evidence is inconsistent with the intrinsic record and cannot support Defendant's construction of the term "surrounding."

Alternatively, Plaintiff's construction of the term "surrounding" is consistent with the intrinsic evidence, does not limit the claim to the embodiments described in the specification, and allows for addendum zones that do in fact extend along all sides

of the component. Therefore, the Court construes the disputed term "surrounding" to mean "one or more surfaces that extend along the component between the component and the binder."

2. "Several"

Next, the parties dispute the construction of the term "several." The term is used in claims one and four of the '939 patent. Claim one, subsection (a) states:

> arranging along the component edge at a distance from one another ***several*** sectional profiles directing away from the component edge;

Claim four states:

> The method according to claim 1, wherein a change of the characteristic line in a controlled manner influences ***several*** adjacent sectional profiles.

Plaintiff argues that the term "several" should be read to mean "two or more." Defendant asserts that "several" must interpreted as "multiple; more than two."

In support of its construction, Plaintiff argues that the term "several" is used in contrast to the term "individual," and therefore simply means "two or more." Plaintiff basis this argument on a portion of the specification that states: "[s]ince a change of a characteristic line in a controlled manner influences several adjacent sectional profiles, such a change is significantly easier to implement than by means of the (manual) changing of individual sectional profiles." Plaintiff also relies on a Merriam-Webster Collegiate Dictionary defining "several" as "more than one."

Defendant instead relies on the American Heritage Dictionary, which defines "several" as "multiple; more than two." Defendant asserts that this construction is consistent with the ordinary meaning of the term "several." Defendant also argues that this "common parlance" definition of "several" is consistent with the finding of the court in *Laboratoires Perouse, S.A.S. v. W.L. Gore & Assoc.*, 528 F. Supp. 2d 362, 390 (S.D.N.Y. 2007). The only intrinsic evidence presented by Defendant is a sentence within the prosecution history in which Plaintiff differentiated the claimed invention from prior art stating, "the indication of a few sectional profiles is sufficient to be able to then interpolate the sectional profiles from it." Given that this sentence does not include the term "several," it is unclear how it supports Defendant's construction.

Like the court in *Laboratoires Perouse*, the parties' dictionary definitions are ambiguous, as the Merriam-Webster Dictionary provides definitions for "several" as both "more than one" and "more than two but fewer than many." However, Plaintiff is correct in that the specification draws a distinction between "several" sectional profiles and an "individual" sectional profile. Therefore, the Court construes the term "several" to mean "two or more."

3. "Continuous"

Third, the parties dispute the meaning of the term "continuous" within the first portion of claim one, subsection (c). This portion of the claim states, "laterally

interconnecting the sectional profiles by ***a continuous surface*** to form the geometry of the addendum zone of the tool."

Plaintiff's proposed construction of the term "continuous" is "generating **an uninterrupted** surface that laterally interconnects between two or more sectional profiles to form the geometry of the addendum zone of the tool." Defendant's proposed construction is "generating **a single uninterrupted** surface that laterally interconnects between multiple; more than two sectional profiles to form the geometry of the addendum zone of the tool." Because the construction of "several" has already been decided by the Court above, the dispute here focuses on the inclusion or exclusion of the term "single." *See supra* at 7-9.

In general, "an indefinite article 'a' or 'an' in patent parlance carries the meaning of 'one or more' in open-ended claims containing the transitional phrase 'comprising.'" *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000). Moreover, "[u]nless the claim is specific as to the number of elements, the article 'a' receives a singular interpretation only in rare circumstances when the patentee evinces a clear intent to so limit the article." *Id.* Defendant argues that a clear intent to limit the article "a" to a single surface is shown through the figures contained within the specification, which depict a single surface. Defendant also argues that the prosecution history and specification support the inclusion of the term "single" because Plaintiff differentiated the claim invention from prior art, which used multiple

surfaces.

Defendant's arguments here fail because the claims should not be limited to the examples provided in the specification and because the distinction drawn between the prior art and the claimed invention does not show a "clear intent" to limit the claim to a single surface. *See Phillips*, 415 F.3d at 1323. Moreover, as Plaintiff argues, Defendant has agreed that the phrase "at least one addendum zone" refers to "one or more surfaces." The inclusion of the term "single" could run counter to this construction. Therefore, the Court construes the disputed term "continuos" to mean "[g]enerating an uninterrupted surface that laterally interconnects between two or more sectional profiles to form the geometry of the addendum zone of the tool."

4. "Continuous Tangent"

The parties fourth claim dispute concerns the second portion of claim one, subsection (c). This portion of the claim states, "whereby said addendum zone complements the component geometry in the edge zone and runs into the component ***and*** the binder with ***a continuous tangent***."

> Plaintiff's proposed construction of this portion of the claim is:
> The addendum zone meets the component along a common boundary line and, for any point on this line, the slope of the addendum zone and the slope of the component are the same. The addendum zone also meets the binder along the common boundary line and, for any point on this line, the slope of the addendum zone and the slope of the binder are the same.

Defendant's construction of this portion of claim one, subsection (c) is identical, but

adds the sentence, "[t]he two addendum zone slopes at corresponding points on the common boundary lines define a single, uninterrupted line."

Given Defendant's inclusion of the phrase "single, uninterrupted line," it may appear that the parties again dispute the term "continuous" within this second portion of claim one, subsection (c). However, given large portion of the construction agreed upon by the parties, the dispute focuses on whether the term "and" is to mean that the addendum zone runs into the component with a continuous tangent and also runs into the binder with a continuous tangent, or that the addendum zone runs into both the component and binder with the same continuous tangent. It is in making the latter argument that Defendant's construction includes the additional sentence.

However, as Plaintiff argues, none of the embodiments provided as examples within the specification include this additional limitation. In addition, the agreed upon construction takes the term "continuous" as well as the term "and" into account by describing a continuous tangent between the addendum zone and the component, and a continuous tangent between the addendum zone and the binder. Defendant argues that Plaintiff's construction would provide for two opposing definitions of the term "continuous." However, the constructions do not contradict, and instead define the terms similarly. Moreover, Defendant's additional sentence goes beyond construing "continuous" to having an identical definition, it also interprets "and" in such a way that is inconsistent with the portion of the construction agreed upon my both parties.

Therefore, the Court construes the second portion of claim one, subsection (c) to follow the construction agreed upon by both parties, and without the additional sentence proposed by Defendant.

5. "Group Of"

Lastly, the parties dispute the terms "sectional profile" and "group of" in claim five of the '939 patent. Claim five states:

> The method according to claim 1, wherein ***the sectional profile*** is parameterized by profile parameters out of the ***group of*** the following elements: component run-off length, component run-off radius, flange length, flange angle, draw bar height, draw bar width, draw bar radius, step height, step radius, wall angle, die radius.

Plaintiff's proposed construction for the phrase "group of" is "two or more profile parameters selected from the following group of elements." In contrast, Defendant's construction defines the term "sectional profile" and the phrase "group of," proposing the following construction: "multiple; more than two sectional profiles containing all of the following parameter elements: component run-off length, component run-off radius, flange length, flange angle, draw bar height, draw bar width, draw bar radius, step height, step radius, wall angle, die radius."

Defendant argues that the phrase "multiple; more than two" should be included in the construction because it is the definition Defendant proposed for the term "several," a term which was used to modify the term "sectional profiles" in claims one

and four. However, the term "several" is not included in the wording of claim five. Therefore, it is unnecessary to include its definition within the construction of claim five. Defendant then argues that the term "group of" is readily understood to contain all of the elements listed within claim five. Defendant relies on case law holding that "group of" "does not place any limits...on the elements following this broad designation." *Gillette Co. V. Energizer Holdings, Inc.*, 405 F.3d 1367, 1372 (Fed. Cir. 2005). In making this argument, Defendant asserts that Plaintiff's construction of "two or more" impermissibly narrows the scope of the claim. However, not only does the claim include the plural of "profile parameters," but Defendant's construction "all of the following" also limits or narrows the claim language

In supporting their constructions, both parties rely on a portion of the specification that states, "[t]hese sectional profiles are parameterized by forming technology scalar values...such as, for example component run-off length, flange length, flange angle, draw bar height, draw bar width, draw bar radius, step height, wall angle, die radius, etc." Here, the language "such as, for example" supports Plaintiff's construction of "selected from the following group of elements," as it suggests that the elements are not all mandatory. Moreover, as Plaintiff argues, the dictionary definition of the phrase "out of," which modifies "group of," is "used as a function word to indicate choice or selection from a group." This definition is consistent with the intrinsic evidence as well as the ordinary meaning of the phrase.

Therefore, the Court construes the disputed portions of claim five to mean "two or more profile parameters selected from the following group of elements."

IV. Conclusion

The Court construes the disputed claim terms as set forth above.

SO ORDERED.

s/Arthur J. Tarnow
ARTHUR J. TARNOW
SENIOR UNITED STATES DISTRICT JUDGE

Dated: October 30, 2013