United States District Court,
E.D. Michigan, Southern Division.

OAKWOOD ENERGY MANAGEMENT, INC,
Plaintiff.
v.
Tony LE, d/b/a Le ProPlast, and ProPlast, Inc,
Defendants.

Nov. 6, 2003.

Seth E. Rodack, William G. Abbatt, Brooks Kushman, Southfield, MI, for Plaintiff.

Gregory D. Degrazia, Thomas H. Walters, Howard & Howard, Bloomfield Hills, MI, for Defendants.

CLAIM CONSTRUCTION OPINION AND ORDER

OMEARA**, J.**

This matter came before the court on the parties' July 2, 2003 claim constructions. The parties filed responses on July 30, 2003. A *Markman* hearing was held on October 10, 2003.

BACKGROUND FACTS

This is a patent infringement case concerning energy absorbing assemblies. Plaintiff Oakwood Energy Management, Inc. ("Oakwood") designs, manufactures, and sells energy absorbers which are used in a variety of applications, including those meant to reduce injury to automobile occupants during collisions. Defendant Tony Le worked as a process engineer from 1994 to 2001 for Oakwood Custom Coating, an affiliate of Oakwood. Plaintiff contends that Le was once involved in the development of Oakwood's patented energy absorbing technology. On July 6, 2001, Le resigned and, according to Plaintiff, began to compete with Oakwood with respect to its sale of energy absorbers through a newly formed corporation, ProPlast, Inc. ("ProPlast"). Specifically, Oakwood learned that Le was manufacturing and selling an energy absorbing product similar to one of its products called SafetyPlastic(R).

On April 6, 2003, Oakwood moved for a preliminary injunction to enjoin ProPlast from infringing upon U.S. Patent Nos. 6,199,942 ("the "2 patent") and 6,247,745 ("the '745 patent")(collectively "the patents-in-suit"). The court denied Oakwood's motion without prejudice based in part on a dispute between the parties regarding the meaning of certain claim terms in the patents-in-suit. FN1 The court held that Oakwood could renew its request for a preliminary injunction after the court decided the meaning of disputed terms.

I. PATENTS-IN-SUIT

A. THE "2 PATENT

At the October 10, 2003 *Markman* hearing, the parties stipulated that Claim 12 is representative of the "2 patent. Claim 12 of the "2 patent reads (with reference letters and emphasis added) as follows:

A modular energy absorbing assembly for decelerating an object that impacts the assembly, the assembly comprising:

A: base; and

B: at least one energy absorbing module associated with the base for accommodating deformation of the assembly,

C: the at least one energy absorbing module comprising a structure having a plurality of separated adjacent, cup-shaped recesses formed integrally within the base, each having a floor and a wall defined within the base, wherein the structure is oriented such that the floor of each recess is substantially orthogonal to the impacting force and its wall is substantially parallel to the impacting force in order to maximize energy absorption by the wall over a given distance, the wall at least partially collapsing and at least some of the recesses becoming at least partially compressed during energy absorption,

D: so that the structure affords a user-determinable resistance of the assembly to impact by a suitable selection of recess geometry.

B. THE '745 PATENT

The parties stipulated that Claim 1 of the '745 patent is representative of the '745 patent. The '745 patent is a continuation of the application that led to the "2 patent. Claim 1 of the '745 patent (with reference letters and emphasis added) calls for:

A modular energy absorbing assembly comprising:

A: a base; and

B: at least one energy absorbing module associated with the base for accommodating deformation of the assembly,

C: at least some of the at least one energy absorbing modules having

D: a plurality of separated recesses defined within the base, each of the plurality of recesses having

E: a floor, and

F: at least one curvilinear wall extending from the floor to the base,

G: wherein at least some of the plurality of recesses are oriented such that their floors are substantially orthogonal to a major incident component of the impacting force and their walls are inclined at an angle alpha to the major incident component of the impacting force, where alpha lies between 0 and 45 degrees, the wall at least partially collapsing and at least some of the recesses becoming at least partially compressed during energy absorption,

H: the assembly serving to decelerate an object that impacts thereupon with an incident force in order to maximize energy absorption over a given distance.

LAW AND ANALYSIS

I. CLAIM CONSTRUCTION GENERALLY

Under *Markman,* the infringement analysis is divided into two parts. The first part of the analysis is the construction of the disputed claims. The second part is a comparison of the construed claims with the accused device. Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed.Cir.1995) *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). The *Markman* hearing focuses on the first part, claim construction.

When construing patent claims, courts may consider two types of evidence-extrinsic and intrinsic. Intrinsic evidence includes: (a) the language of the claim itself, (b) the specification, and (c) the prosecution file history of the patent. Intrinsic evidence is the most significant source for determining the meaning of claim language. Vitronics Corps. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996). Extrinsic evidence consists of anything else, including expert testimony. Courts can resort to extrinsic evidence only after consideration of the intrinsic evidence fails to resolve any ambiguity in a disputed claim term. Id. at 1584-85.

Furthermore, the words of the claim are to be given their ordinary and accustomed meaning unless it appears that the inventor used them otherwise. Johnson Worldwide Assocs., Inc. v. Zebco Corp. ., 175 F.3d 985, 989 (Fed.Cir.1999). When determining the ordinary and accustomed meaning, courts often turn to the dictionary definition of a term. Vitronics Corp., 90 F.3d at 1584.

II. CLAIM 12 OF THE "2 PATENT

A. "BASE"

One of the disputed claim terms is "base." The term "base" appears in both Claim 12 of the "2 patent and Claim 1 of the '745 patent. The disclosure of the "2 patent states that at least one energy absorbing module is "associated with the base." Plaintiff seeks a construction of the term "base" that includes the circular peripheries, *i.e.,* the circular ends of the conically shaped projections. Defendant contends that the "base" does not include the circular peripheries. Instead, Defendant argues that the "base" is only the "sheet of material" and the recesses are formed in it. Accordingly, Defendant seeks an interpretation establishing that the base is a separate claim element from the recesses; and thus, the base cannot be construed as merely the ends of the recesses.

The term "base," according to one dictionary, means "[T]he bottom of something, considered as its support." WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY, p. 180 (1986). There is nothing in either the specification or prosecution history which conflicts with this construction. The court interprets "base," as used in the both patents, as meaning the bottom, or the support, or the foundation. Accordingly, the "base" includes the circular peripheries of the conically shaped projections.

B. "THERMOFORMING"

Thermoforming occurs by heating a plastic sheet to its thermoforming temperature and bringing the hot plastic into contact with a thermoforming tool. A vacuum is then used to force the plastic to conform to the shape of the tool. Defendant contends that the patents-in-suit should be limited to thermoformed energy absorbers. Plaintiff, on the other hand, seeks a construction establishing that there is no requirement that the energy absorbers be thermoformed.

The PTO Examiner's February 10, 2000 Office Action stated,

The claimed product in [Claim 14 as filed-Claim 12 as issued] does not require forming the base and structure (B) integrally nor forming structure (B) by thermoplastic molding to form cup-shaped recesses within the base.

Plaintiff's July 2, 2003 Claim Construction Brief, exhibit C, p. 125.

The court finds that the claimed invention is not limited to thermoformed energy absorbers.

C. "MODULE"

Claim 12 states that a "module" is "associated with" the "base." Defendant contends that Claim 12 must be interpreted to require a "base" separate from the "module." Plaintiff argues that although the terms "base" and "module" appear in different subparagraphs of Claim 12, they should not be construed as distinct structures.

Using the ordinary meaning of the plain words, the term "associated with" embraces various forms of attachment or connection between the base and energy absorbing module. The court finds that the structural connection between the "module" and the "base" is not limited to a specific physical configuration. Therefore, the claim does not require the "base" to be a separate structure from the "module."

D. "CUP-SHAPED RECESSES"

Claim 12 states that the module is comprised of "a plurality of separated adjacent cup-shaped recesses formed integrally within the base." Defendant seeks an interpretation that the "base" and the "recesses" are separate structures. Plaintiff argues that the "base" is part of the "recess."

The Court of Appeals for the Federal Circuit affirmed a claim construction that the term "integrally formed in" implies that the word "integral" mean "complete" or "entire." Hazani v. U.S. Int'l Trade Comm'n, 126 F.3d 1473, 1480 (Fed.Cir.1997). Furthermore, in Tate Access Floors, Inc. v. Maxess Techs., Inc., 222 F.3d 958, 967 (Fed.Cir.2000), the Federal Circuit cited with approval a district court's holding that "integral" is consistent with its ordinary meaning (defining "integral" as "made up of parts forming the whole"). In the instant case, the court does not interpret the "recesses" and the "base" as separate structures. Accordingly, the "base" is defined as the lower circular peripheries of the recesses.

E. "ORTHOGONAL"

The parties are also seeking a construction of the term "orthogonal." Defendant argues that the recess walls must be perpendicular to the floor. Plaintiff claims that Defendant ignores the qualifier "substantially." Plaintiff contends that the purpose of qualifying "orthogonal" and "parallel" with the term "substantially" was to permit deviations from a strictly perpendicular or a strictly parallel orientation of the floor or the wall

in relation to the impacting force. The court interprets the term "substantially orthogonal" to allow some deviation from perpendicular.

II. CLAIM 1 OF THE '745 PATENT

A. "BASE"

The '745 patent is a continuation of the application that led to the "2 patent. The court finds that the term "base" means the same thing in each of the patents-in-suit. Therefore, the court interprets "base," as meaning the bottom, or the support, or the foundation. Accordingly, the "base" includes the circular peripheries of the conically shaped projections.

B. "CURVILINEAR"

The term "curvilinear" from Claim 1 of the '745 patent is also a disputed claim term. The patent states that the assembly is comprised of recesses that contain at least one curvilinear wall extending from the floor to the base. The court interprets the term "curvilinear" as meaning consisting of, or bounded by, curved lines.

These claim constructions are based on the plain language of the claims themselves, the written description, the prosecution history, and arguments proffered at the *Markman* hearing. Moreover, since the terminology in the "2 patent and the '745 patent are substantially similar, the construed claims are applicable to both patents-in-suit.

SO ORDERED.

FN1. In its July 3, 2003 Opinion and Order, the court stated, "[w]e, nonetheless, are uncomfortable granting the extraordinary relief of a preliminary injunction without first undertaking a *Markman* hearing.... This preliminary assessment might very well change after the benefit of a *Markman* hearing."

E.D.Mich.,2003.
Oakwood Energy Management, Inc. v. Le

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