

United States District Court,
S.D. Texas, Houston Division.

SOUTHERN CLAY PRODUCTS, INC,
Plaintiff.

v.

UNITED CATALYSTS, INC,
Defendant.

Feb. 2, 2001.

MEMORANDUM OPINION

HOYT, J.

I. INTRODUCTION

This is a patent infringement case brought by the plaintiff, Southern Clay Products, Inc., ("Southern Clay"), pursuant to 35 U.S.C. s. 101 *et. seq.*, against the defendant, United Catalysts, Inc., ("United"). In this suit, Southern Clay contends that United is violating and causing others to violate two (2) patents owned by Southern Clay, i.e., (U.S. Patent No. 4,664,842 (the "842 patent"); and U.S. Patent No. 5,110,501 (the "501 patent")). FN1 This dispute centers on the interpretation of the language of the patents' claims, thus, the Court is to construe the disputed language to facilitate a trial on other unresolved facts. (*See* Instrument # 241). *See* *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed.Cir.1995) (*in banc*), *aff'd* 517 U.S. 370 (1996).

FN1. Prior to trial, the parties entered into an agreement concerning U.S. Patent No. 4,473,675; thus, no issues remain concerning that patent.

The Court made *Markman* determinations and then proceeded to trial on Southern Clay's infringement claims and United's defenses and counterclaim. At the conclusion of Southern Clay's testimonial presentations, and following substantial factual testimony from United, the Court was persuaded that the '842 and the '501 patents were being, literally, infringed.FN2 The remaining disputes centered on the scientific evidence that United relied upon as invalidating the '842 and '501 patents and as supporting its counterclaim.

FN2. Southern Clay's witnesses included most if not all of United's fact witness. Therefore, with United's evidentiary proffer, the facts surrounding the dispute were before the Court.

In this Memorandum, the Court addresses: (1) the post trial issues raised by United and Southern Clay; (2) United's counterclaim; and (3) Southern Clay's oral motion for judgment as a matter of law concerning

United's defenses and counterclaim.

In summary, the Court considered the evidence, United's proffers, the jury verdict, the *Markman* determinations, the applicable law and the arguments of counsel and determines that judgment should be entered on behalf of Southern Clay and that United's counterclaim and defenses should be dismissed.

II. THE MARKMAN DETERMINATIONS FN3

FN3. Here the Court substantially restates the claim determinations that it entered prior to trial.

II-A. Description of Invention and its Function FN4

FN4. The science associated with the two (2) patents is not in dispute. Therefore, the Court relates the general science underlying the patents based on Southern Clay's proffered facts and the evidence.

Southern Clay's infringement suit seeks claim construction involving two (2) patents: the '842 patent and the '501 patent. These patents concern the manufacture of "organoclays." "Organoclays are industrial chemicals used as gelling agents or thixotropes designed to thicken and otherwise improve the performance of oil or organic solvent based greases, inks, paints, [and] coatings." FN5 The technology is such that organoclays may be used with petroleum-based products to make a thick grease or with polyester resin products to make fiberglass products. In both instances, the process requires submitting smectite-type clay to a chemical process that produces organoclay.

FN5. *See* Southern Clay's Brief on Claim Construction 1 (Inst. # 139).

The '842 and '501 patents require that smectite-type clay be prepared in slurry form, and passed through a Manton-Gaulin homogenizer at high pressure so that the slurry, as it passes through a narrow gap, undergoes a rapid increase in velocity with a corresponding decrease in pressure followed by cavitation as the velocity decreases beyond the gap. The end product is an organoclay product that enhances the gelling properties in oil and organic solvents.

United also manufactures organoclays. Thus, it is Southern Clay's assertion that United uses the Manton-Gaulin process to manufacture its organoclays, and therefore, infringes claims, 1, 2, 3, 4, 5 and 6 of the '842 patent and claims 1 and 2 of the '501 patent.

II-B. Standard of Proof/Burden of Proof

The Court's analysis under a summary judgment standard presumes that Southern Clay's patents are valid. *See* 35 U.S.C. s. 282 (2000). To overcome the presumption, United must prove invalidity by "clear and convincing" evidence. *See In re Mahurkar Double Lumen Hemodialysis Catheter Patent Litig.*, 71 F.3d 1573, 1576 (5th Cir.1995). Ordinarily, this standard of proof creates disputed fact issues requiring jury submissions. However, the failure on the part of the nonmoving party to offer proof concerning an essential element of its case necessarily renders all other facts immaterial and mandates a finding that no genuine issue of fact exists. *See Saunders v. Michelin Tire Corp.*, 942 F.2d 299, 301 (5th Cir.1991). With the patent

validity presumption established, the Court turns to the review standards that apply to this case.

II-B-1. Summary Judgment Standard

Rule 56(c) of the Federal Rules of Civil Procedure provides that summary judgment "shall be rendered forthwith 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 a judgment as a matter of law." *See* Fed.R.Civ.P. 56(c). The moving party bears the initial burden of informing the court of the basis for its motion, and identifying those portions of the record "which it believes demonstrate the absence of a genuine issue of material fact." *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). The court reviews the record by drawing all inferences most favorable to the party opposing the motion. *See* *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986) (citing *United States v. Diebold, Inc.*, 369 U.S. 654 (1962)).

However, once the moving party carries its burden, the adverse party "may not rest upon the mere allegations or denials of the adverse party's pleading[s], but the adverse party's response ... must set forth specific facts showing that there is a genuine issue for trial." Fed.R.Civ.P. 56(c). The adverse party must show more than "some metaphysical doubt as to the material facts." *Matsushita*, 475 U.S. at 586. If an adverse party completely fails to make an offer of proof concerning an essential element of that party's case, on which that party bears the burden of proof, then all other facts are necessarily rendered immaterial and the moving party is entitled to summary judgment. *See* *Celotex*, 477 U.S. at 322-323.

II-B-2. Directed Verdict Standard

Southern Clay presented a motion for judgment as a matter of law under Fed.R.Civ.P. 50 at the conclusion of its case. It sought judgment that its patents were valid, enforceable and were being willfully infringed by United in violation of federal law.

A trial court may grant a judgment as a matter of law when a party has been fully heard on an issue(s). *See* Fed.R.Civ.P. 50(a)(1) and 52(c)(2000). When such a motion is presented, a court may inform the non-movant of deficiencies in his case and permit an opportunity for the non-movant to correct the deficiency(s). *See* *Union Oil Co. v. Atlantic Richfield Co.*, 208 F.3d 1989 (Fed.Cir.2000). *See also* *Allied Colloids, Inc. v. American Cyanamid Co.*, 64 F.3d 1570 (Fed.Cir.1995). Having before it the movant's case and the non-movant's response, a court looks at the evidence favorable to the non-movant, draw reasonable inferences favorable to the non-movant, and determines credibility without substituting the court's judgment for that of the jury. *See* *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259 (Fed.Cir.1999). However, when the court determines that the non-movant position cannot be maintained when viewed in a favorable light, a verdict for the movant on that issue(s), as a matter of law is appropriate. *See* *C.R. Bard Inc. v. M3 Sys., Inc.*, 157 F.3d 1340 (Fed.Cir.1998).

II-B-3. Patent Review Standard

The dispute here, as with all patent disputes, concerns the claim language. When interpreting a patent claim, a court must construe the language in the manner of a person "skilled in the art to which [the patent] pertains." 35 U.S.C. s. 112 (2000). Initially, a court should consider the language of the patent itself. *See* *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed.Cir.1996); *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 619-20 (Fed.Cir.1995).

Following an examination of the patent language, a court may turn to the "specifications" FN6 and "prosecution history" FN7 of the patent in order to place the patent language in the appropriate context. *See Eastman Kodak Co. v. Goodyear Tire & Rubber Co.*, 114 F.3d 1547, 1552 (Fed.Cir.1997). Extrinsic evidence, such as expert testimony, inventor testimony, or treatises, may be used to clarify ambiguous patent language, but may not be used to vary or contradict the language of the patent itself. *Markman*, 52 F.3d at 980-81.

FN6. The specifications precede the claims. They describe the claims and provide examples of the invention.

FN7. The prosecution history represents the complete history of all proceedings and communications with the Patent Office regarding a patent.

II-C. The '842 Patent Claim Interpretation

II-C-1. Introduction

With regard to Southern Clay's claims of infringement associated with the '842 patent, the parties dispute the meaning of the phrase "substantial average particle size reduction" recited in Claims 1 through 6. Southern Clay contends that properly construed, the phrase means a reduction in average particle size sufficient to provide an "enhancement of the gelling properties" of organoclays. To understand Southern clay's patent position a review of the science and the claim language is appropriate.

II-C-2. The Science of the '842 Patent

The science of smectite clay teaches that clay is water-loving (hydrophilic) and, thus an oil-hating (oleophilic) organic substance. This characteristic makes it naturally impossible for oil based organic solvents to attach to the surface of the clay. However, hydrophilic organic substances, such as clay, may attach to oleophilic organic solvents through use of "quats." Quats are organic compounds with two ends, one hydrophilic and one oleophilic. This characteristic permits quats to link with clay on one end and an oil-based solvent on the other. Thus, when the clay's surface is sufficiently exposed, quats cover the entire surface and the clay becomes oleophilic, permitting attachment to oil-based solvents. With the science in focus, the Court moves to the claim language.

II-C-3. The Patent Language

Claim 1 of the '842 patent is the broadest of its six claims. Thus, an interpretation of the language in Claim 1 will impact the remaining claims. It reads in its entirety as follows:

1. In a process for manufacture or an organoclay by reacting a smectiti-type [sic] clay with a higher alkyl containing quaternary ammonium compound; the improvement enabling enhancement of the gelling properties of said clay comprising:

subjecting the clay as a pumpable slurry, to high speed fluid shear *and substantial average particle size reduction*, prior to the said reaction thereof with said ammonium compound, by passing said slurry through narrow gap across which a pressure differential is maintained *causing the slurry at high pressure entering the gap to undergo a rapid increase in velocity with a corresponding decrease in pressure, followed by*

cavitation as the velocity decreases beyond the gap.

'842 patent (Col. 8, lines 54-68).

II-C-4. United's Contentions

Relying upon the prosecution history and the language of the specifications, United contends that the phrase requires that the reduction in the particle size be in the range of 42-53% as opposed to an unspecified reduction as asserted by Southern Clay. The proof of this limitation, according to United, is established by the fact that the phrase was added to the claim language to overcome rejection by the United States Patent and Trademark Office ("PTO") because of prior art. United points out that the additional language is not found in the specifications. The relevant portion of the '842 patent specifications pertaining to Claim 1 that evinces the absence of the phrase reads:

Among other things, however, the effect of the Manton-Gaulin mill on particle size characteristics of the bentonite samples, has been evaluated independently of the processing of the present Examples. In one such instance, the feed particle average size was thus 0.756 microns. It was found that where the energy input to the Manton-Gaulin mill was 210 horsepower hours per ton of clay, the average particle size was reduced to 0.438 microns. In a second instance where the input particle size was the same, 0.756 microns, and the energy input 700 horsepower hours per ton of clay, the average particle size was reduced to 0.352 microns. This data indicates a very substantial average particle size reduction is one consequence of the passage through such mill.

'842 Patent (Col. 5, lines 48-62). Thus, United's argument is one of limitation. United argues that Claim 1's reach should not get beyond the language in the specifications because there is no other definition or interpretation of the phrase found in the patent.

II-C-5. Southern Clay's Contentions

Southern Clay asserts that United's production and sale of organclays infringes Claims 1 through 6 of the '842 patent. Southern Clay contends that the phrase "substantial average particle size reduction" simply means a reduction in average particle size sufficient to accomplish the objective of the patent: *i.e.*, enhancement of the gelling properties of the organoclay by the process as recited in Claim 1 of the '842 patent.

Southern Clay also asserts that the parties do not dispute that the term "reduction" means to diminish in size or that the phrase "average particle size" has a specific meaning that persons of ordinary skill in the art would agree upon. Thus, as to these terms and the term "substantial," Southern Clay would accord their ordinary meanings or a meaning that is understood by one of ordinary skill in the art. From this position, Southern Clay argues that taken together these words or the phrase should be interpreted in context with reference to the purpose or consequence intended by the process. Therefore, Claim 1 should not suffer a limitation simply because an identical phrase is not found in the specifications.

II-C-6. Discussion

To ascertain the meaning of a claim, the Court may consider the claim, the specifications, and the prosecution history associated with it. *Markman*, 52 F.3d at 967; *Graham v. John Deere Co.*, 383 U.S. 1., 33 (1966). In construing a claim, terms are given their ordinary and accustomed meaning unless examination of

the specifications, prosecution history, and other claims indicate that the inventor intended otherwise. *Nike, Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed.Cir.1994) (citing *Carroll Touch, Inc. v. Electro Mechanical Systems, Inc.*, 15 F.3d 1573, 1577 (Fed.Cir.1993)). Thus, where the meaning of the phrase is sufficiently clear in the patent specifications, that meaning must apply. *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1477, 1478 (Fed.Cir.1998).

Because the parties do not dispute the meaning of the separate terms, the Court focuses on the effect of combining the terms that result in a phrase to determine whether, when taken together and within the context of Claim 1, the phrase connotes a meaning that contradicts or is outside the specifications.

United suggests that the phrase permits Claim 1 to "swallow" the specifications. Thus, the phrase in the Claim 1 is greater in meaning than stated in the specifications. The Court disagrees with United's interpretation of the relationship between the Claim 1 and the specifications. Applying the ordinary meaning of the terms, and the ordinary and accustomed meaning of the phrase, no variance exists between phrase "substantial average particle size reduction" as used in Claim 1, and the specifications that describe, by example, two instances of particle size reduction.FN8

FN8. In one instance, the particle size of the smectite-type clay is reduced from 0.756 microns to 0.438 microns (a 42% decrease) and in another from 0.756 microns to 0.352 microns (a 52% decrease).

This conclusion is appropriate because, contrary to United's position, the term "substantial" when used with the remainder of the phrase describes a "sufficiency." When the term substantial is understood as describing a state of sufficiency for the purpose or consequence intended by the patent, no confusion is engendered.

Recall that the object of the patent is to produce organoclays that improve the performance of oil or organic solvent-based greases, inks and paints by thickening them. In order to produce that result, smectite-type clay must be submitted to a chemical process that is sufficient to produce the reduced particle size necessary to accomplish the bonding process intended. Certainly, there are other processes that accomplish this objective. Therefore, it is not the results that is protected by the '842 patent-it is the process.

II-C-7. Conclusion

The Court concludes that there is nothing in the specifications, the prosecution history, or Claim 1 that does violence to the definition of the phrase as used by Southern Clay and as expressed, otherwise, in the '842 patent. Moreover, the prosecution history reveals that the essentials of the Claim 1 language were present before the amendment, and did not change with the amendment. Therefore, the presumption of validity obtains. *See* 35 U.S.C. s. 282 (2000).

Finally, Claims 2, 3, 4, 5 and 6 are dependent claims and rely upon the validity of Claim 1 for meaning. They are narrower in scope. The nature of a dependent claim is to feature the invention that, standing alone, would not constitute an invention. Therefore, if Claim 1 is valid, dependent claims 2 through 6 are valid. Specifically, Claims 2 and 3 state an invention in accordance with Claim 1, by "*... further including impacting the clay at a high velocity beyond said gap ... or one wherein the said pressure differential [a] is in the range ...*" Because Claim 1 and the specifications language are not at odds, the specifications language does not create a limitation for Claim 1 or the remaining claims. Thus, United has failed to overcome the presumption of validity by clear and convincing evidence. *See In re Mahurkar*, 71 F.3d at

II-D. The '501 Patent Interpretation

II-D-1. The Science of the '501 Patent

Organoclays are made primarily from smectite-type clay that naturally occurs in the environment. The principal ingredient used in organoclays appears in nature as individual platelets. These platelets usually aggregate into particles of various shapes and form agglomerates. Agglomerates appear in both individual clay platelets and in simple or complex clusters of platelet stacks. Breaking up clay agglomerates in a manner that exposes larger surfaces enhances the exchange capacity of clay. The exchange science described in the '842 patent applies to the '501 patent. Like the clay in the '842 patent, increasing the exchange capacity in the '501 patent also increases the clay particle's surface thereby permitting the entire surface of the clay particle to become oleophilic.

United disputes the meaning of the language in Southern Clay's '501 patent. As stated earlier herein, the '501 patent requires that smectite-type clay be submitted to a chemical process whereby the clay passes through a Manton-Gaulin homogenizer at high pressures undergoing a rapid increase in velocity while correspondingly experiencing a decrease in pressure. The end product is an organophilic clay gellant based on separating clay agglomerates. Claim 1 reads:

A process for preparing an organophilic clay gellant comprising:

- (a) subjecting a slurry of smectite-type clay having a cation exchange capacity of at least 75 milliequivalents per 100 grams of clay to high shear conditions achieved by passing the slurry at least one time through a Manton-Gaulin homogenizer whereby clay agglomerates are separated, said smectite-clay having been previously treated to remove non-clay impurities.
- (b) reacting the smectite-type clay with organic cation whereby at least some of the cation exchange sites of the smectite-type clay are substituted with organic cation thereby forming an organophilic clay gellant,
- (c) separating the organophilic clay gellant; and
- (d) drying the organophilic clay gellant.

'501 Patent (Col. 4, lines 28-44). The '501 patent is distinguished from the '842 patent in that it does not require "substantial average particle size reduction." Instead, the '501 patent claims to improve gelling efficiency in organic solvents by using the Manton-Gaulin homogenizer to separate clay agglomerates.

II-D-2. United's Contentions

United focuses its argument on the phrase "whereby clay agglomerates are separated." It argues that neither the '501 patent application nor the specifications contains the disputed phrase. Relating the file history of the '501 patent, United asserts, and it is undisputed, that the '501 patent was a result of continuing Application No. 219,831 that was based on Application No. 828,044 originally filed February 10, 1986.

United points out that the '831 application was involved in an "Interference." (Interference Cause No. 102,210). The fact that an Interference was declared, argues United, means that the PTO concluded that the

claimed invention was the same invention claimed in the opposing patent, patent 4,695,402 (NL/Rheox, '402 patent). Thus, United asserts that Southern Clay was required to amend its application adding the words, "clay agglomerates."

Concluding its review of the history of the application, United argues that the phrase "whereby clay agglomerates are separated" relates to the '831 application discussion about the reduction in the particle size of the clay particles. United directs the Court to the '831 application phrase, "reduction in average particle size" and the phrase in the '501 patent "whereby clay agglomerates are separated, noting that the term "agglomerates" is not found in the '831 application. Therefore, the '501 patent is not "patentably distinct" from Southern Clay's '842 patent, which also uses the "reduction in average particle size" language.

II-D-3. Southern Clay's Contentions

Southern Clay asserts that the '501 patent should not be limited because of the term "whereby." Southern Clay defines the phrase "whereby clay agglomerates are separated" as describing "an inherent result of the process step of passing the slurry at least one time through a Manton-Gaulin homogenizer, which involves the reduction of agglomerates to primary particle size." Thus, Southern Clay argues that no limitation in the claim should be determined. Moreover, it contends that if any limitation is assigned, the limitation should permit the phrase to mean that "some clusters of smectite-clay particles are disconnected or disassociated, broken or forced apart into two or more parts."

In summation, Southern Clay argues that Claim 1 of the '501 patent is distinguished from Claim 1 of the '842 patent in that "substantial" separation is not mandated by Claim 1 of the '501 patent. Regarding United's argument concerning the Interference, Southern Clay asserts that NL/Rheox's '402 patent refers to agglomerates in the alternative, whereas Southern Clay, by amending the '501 patent, is required to reduce the size of agglomerates.

II-D-4. Discussion

United's same invention challenge to Southern Clay's '501 patent raises an "enablement" argument. Section 112 requires an inventor to describe "the manner and process of using [the invention], in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains ... to make and use the same ." *See* 35 U.S.C. s. 112 (2000); *In re Vaeck*, 947 F.2d 488, 495 (Fed.Cir.1991). Failing to do so could result in the PTO not issuing a patent or, a court declaring the patent invalid.

Organoclays were manufactured before 1980. Thus, the '501 patent is not about manufacturing organoclays; rather, it pertains to the method. The Court rejects United's request to adopt the same meaning for the phrase, "whereby clay agglomerates are separated" as the phrase "substantial average particle size reduction." While it is possible that the size of the clay particles in the '501 patent process may fit the "substantial" definition found in the '842 patent, obtaining a "substantial average size particle" is not required. United's enablement argument is unavailing.

II-D-5. Conclusion

The Court holds that: (1) the specifications supported the amendment at the time of the Interference; (2) it is appropriate to rely upon the ordinary meaning of the terms or phrase in arriving at a meaning for the phrase; (3) one skilled in the art would understand the phrase and make an appropriate application; (4) the '501 patent claims, specifications, and history adequately describe a method for separating agglomerates that is

"patentably distinct" from the method described in the '842 patent for reducing the size of particles; and, (5) the '501 patent requires more than a minimum degree of separation of agglomerates.

Claims 2 and 3 of the '501 patent are dependent claims; therefore, they are substantiated by the Court's holding concerning Claim 1. The Court, therefore, concurs in Southern Clay's proffered definition of the phrase.

III. UNITED'S DEFENSES AND COUNTERCLAIM

III-A. United's Use of Manton-Gaulin Homogenizer Infringes

As stated more fully, heretofore, the '842 and '501 patents teach a process where smectite-type clay platelets are passed through a Manton-Gaulin homogenizer at high pressure. The end product is an organoclay product that enhances the gelling properties of clay in oil and other organic solvents. Relying upon the Court's previous rulings, the patents' claim language and conclusions gleaned from the trial evidence, the Court holds that United's use of the Manton-Gaulin homogenizer process in manufacturing organoclays *literally* infringes the '842 and '501 patents. Therefore, the remainder of this Memorandum addresses United's defenses and counterclaim as presented through the evidence and proffers.

III-B. Dr. Dean Harper's Particle Size Analysis Testimony

In disputing the Court's announcement that United's use of the Manton-Gaulin process constituted infringement and that Southern Clay was entitled to a judgment as a matter of law, United proffered Dr. Dean Harper's "mean percent volume" method for measuring particle size distribution of clay particles. This method uses statistical analysis to measure particle size reduction. He opined that his method debunks Southern Clay's assertion that there is a substantial average particle size reduction in the clay platelets or particles by the use of the Manton-Gaulin process. Thus, United argues that because average particle size reduction cannot be measured, no infringement is proved.

The Court rejects this conclusion because Dr. Harper's testimony does not satisfy the strictures of the law. *See* Daubert v. Merrell Dow Pharm. Inc. 509 U.S. 579 (1993). Case law and Rule 702 of the Federal Rules of Evidence permit the admission of expert testimony from one who has "knowledge, skill, experience, training or education" concerning the technology at issue. The trial judge has the responsibility to determine the qualification of an expert to give the testimony that he proffers. Daubert, 509 U.S. at 591.

The Court determines that, while Dr. Harper is eminently qualified in related technology, he demonstrates that he is unqualified to opine on laser light scattering technology. In fact, Dr. Harper admitted in his deposition that he was unfamiliar with laser light scattering technology prior to being employed by United. After familiarizing himself with the method, Dr. Harper set out to test the method through a statistical method (mean percent volume) that he created. It is undisputed that Dr. Harper's method for testing laser light scattering has not undergone peer-review and ignores the particle size data produced in this case. In fact, another statistical expert, Dr. Stanley M. Deming, declared Dr. Harper's method misleading, incorrect, and an inappropriate method for comparing particle size distribution data. *Id.*

III-C. Conclusion

The Court finds that Dr. Harper is unqualified by training or experience to render an opinion that contradicts the data evincing particle size reduction measured by laser light scattering technology. The methodology

chosen by Dr. Harper is not scientific and is unreliable or misleading. Therefore, Dr. Harper's statistical methodology is of no evidentiary value to the Court's analysis. *See* M3 Sys. Inc., 157 F.3d 1340.

As a further holding, the Court determines that the Manton-Gaulin process does separate clay agglomerate clusters to primary particle size ('501 patent) and further reduces the average particle size sufficiently to produce "enhancement of the gelling properties" of the organoclays ('842 patent). Because Dr. Harper's methodology fails to satisfy the strictures of the law, the evidence of particle size reduction offered by Southern Clay is undisputed. Equally significant though, average particle size reduction makes sense, both intellectually and as revealed in United's own testings and products. It is convicting that United's sedimentation tests confirm particle size reduction. Moreover, United's product performance and quality show improvement when the Manton-Gaulin process is used.

III-D. The Tixogel MP Series

United has developed a series of organoclays that it has designated as the "Tixogel MP" series.FN9 It is undisputed that the Manton-Gaulin process is used in the manufacture of the Tixogel MP organoclays. United also admits that it uses the Manton-Gaulin process in the manufacture of other United "maximum" performing organoclay products.

FN9. The entire series was not included in the charge to the Jury: Tixogel VP-HS, Tixogel VP-CGj, Tixogel VP-W; Tixogel VZ Export; and Tixogel VZ-MP. However, this omission is insubstantial because it is the manufacturing process that infringes.

However, United argues that it does not utilize the Manton-Gaulin process to manufacturing other organoclays, but uses the process only for quality control and to meet performance requirements. This argument is illogical. The sole purpose in using the process is to improve quality control and meet performance requirements. Thus, this argument is unavailing and disingenuous in light of United's substantial investment in Manton-Gaulin equipment.

An inspection of United's plant reveals that the Manton-Gaulin homogenizer is included in United's equipment inventory. Moreover, the equipment, as situated, is an integral part of the organoclay manufacturing process, whether used or not. In other words, no separate physical production plant for manufacturing, what United alleges are non-infringing products, exists.

Admittedly, United can produce organoclays without utilizing the Manton-Gaulin process. Thus, the burden rests on United to establish by clear and convincing evidence that the process that is in use in its plant, is not the Manton-Gaulin process. *See* In re Mahurkar, 71 F.3d at 1576. Notably, it is the process that is in use, and United's records fail to sufficiently delineate the Manton-Gaulin process use from other alleged processes. Significantly, the evidence presented by United fails to reach the necessary evidentiary threshold for a jury submission to quantify United's Manton-Gaulin process use. Its records are woefully incomplete and inaccurate.

There is no genuine issue of material fact that United utilizes the Manton-Gaulin process in the manner and for the uses described in the '501 and '842 patents, and that its use separates clay agglomerates resulting in a "substantial average particle size reduction" of smectite-type clay. No reasonable jury could find otherwise. *See* Union Oil Co. v. Atlantic Richfield Co., 208 F.3d 989 (Fed.Cir.2000); *see also* Fed. R. Civ.P. Rule

III-E. Inequitable Conduct Allegations

United also asserts that the inventors failed to disclose material information to the PTO with the intent to mislead. The prosecution history of the '842 patent reveals that the application was initially filed with the PTO on October 3, 1980. An application for the '501 patent was filed on or about February 10, 1986. Both patents eventually issued, but not before a "Notice of Allowance" was filed with the PTO. The Notice of Allowance arose when a search report was issued by the European Patent Office concerning another of Southern Clay's patent application, the '548 application. The report cited to a French and English patent. Nevertheless, the allowance was permitted and the prosecution ended.

Concerning the LaPorte '828 patent, the testimonial evidence shows that Dr. Knudson did not receive it until October 16, 1986, after the '842 patent issued. Moreover, Southern Clay contends that at the time that the LaPorte patent was cited in its '548 application, the LaPorte patent was expressed in much broader, generic terms than the language used in the '842 patent. Therefore the LaPorte patent was immaterial to the prosecution of the '842 patent. In addition, Southern Clay argues that the LaPorte patent does not teach or suggest the use of the Manton-Gaulin homogenizer.

Assuming that citation to the LaPorte patent was intentionally withheld by Southern Clay during the prosecution of the '842 application, United has the burden of establishing its materiality. United has presented no evidence during trial or in its proffer that establishes by clear and convincing evidence the materiality of the LaPorte patent.

United also points to the invalidation of NL/Rheox's '402 patent as a basis for invalidation of the '842 patent. United argues that the technique disclosed in the NL/Rheox patent for "breaking the bonds" in the clay particle aggregates is similar or identical to the technique taught in the LaPorte patent. Because the '842 patent technique is the same as the NL/Rheox '402 patent, United asserts that it, too, is invalid.

The Court notes that the operative language in both the LaPorte and the NL/Rheox patents is "shear or high shear and abrasion." However, neither patent refers to the Manton-Gaulin homogenizer. The evidence is undisputed that when the LaPorte and NL/Rheox patents were issued, the Waring Blender and the Cowles dissolver were generally used to effect the "high shear" process. There is no evidence that the Manton-Gaulin homogenizer was the desired equipment. Any doubt in the Court's mind on this point is resolved by the prosecution history of the '501 patent that disclosed the LaPorte patent.

During the prosecution of the '501 patent, the patent examiner queried whether the Wright '974 patent, which teaches "high speed fluid shear," obviated the '501 patent. Concluding that one skilled in the art would substitute the Manton-Gaulin homogenizer for the Waring Blender, the examiner found that the claims of the '501 patent were patentable. A comparison of the Wright with the LaPorte patents shows that the Wright patent is more revealing and specific than the LaPorte patent. Thus, the Court concludes that the claims of the Wright patent were more material to the prosecution of the '842 and '501 patents than the claims of the LaPorte patent.

In addition to the "high shear" disclosure, the Wright patent reveals the specific equipment that accomplishes the high shear process and the expected results. Notably, the Wright patent is revealed in both the '842 and '501 patents. Thus, the Court concludes, as a matter of law, that the claims of the LaPorte

patent were relevant but immaterial to the prosecution history of the '842 patent because, unlike the LaPorte patent, the '842 patent describes the use of a specific and single piece of equipment to accomplish its claimed high shear process. The Court also concludes that a decision by a different court concerning the validity of NL/Rheox patent is not controlling or material to this Court's duty to review the '842 and '501 patents.

United also asserts inequitable conduct by Southern Clay in failing to disclose an article; *Simon, et. al. Effects of Processing on the Rheology of Thixotropic Suspensions*, 50 Pharm. Science 830 (1961). (the "Simon article"). United admits that Southern Clay did not learn of the Simon article until Southern Clay was faced with the Interference and knowledge of the current litigation between United and NL/Rheox.

Southern Clay could not have intentionally failed to disclose the Simon article because it was unaware of it at the relevant time. Moreover, the materiality of the article must also be proved by clear and convincing evidence. *Applied Materials, Inc. v. Advanced Semi Conductor Material, Inc.*, 98 F.3d 1563, 1569 (Fed.Cir.1996). United has failed in both respects, as a matter of law.FN10 *See Hebert v. Isle Corp.*, 99 F.3d 1109, 1115.

FN10. The evidence reveals that the Perry and Chilton book may have been more relevant to the prosecution history of the '842 and '501 patents than the Simon article. *See Perry and Chilton, Chemical Engineers' Handbook* (McGraw-Hill 5th Ed.) (Dx-423).

III-F. Patent Validity Presumption

A challenge to the validity of a patent must overcome the presumption of validity by clear and convincing evidence. *See 35 U.S.C. s. 282* (2000). After considering the evidence presented by United, including its proffer, the presumption remains unabated. There is no evidence that the disclosures made by Southern Clay were insufficient for the PTO to exercise its discretion. Moreover, there is insufficient evidence that the allegedly undisclosed materials were more material to the PTO's decision than those disclosed. Therefore, the Court holds that the presumption of validity remains.

III-G. Are The '842 and '501 Patents Anticipated?

United argues that the '842 and '501 patents were anticipated by the Clocker '878 patent and, the Cohn ('778, '790, '791, and RE 25, 965) patents. In order to prevail on this claim, United is required to establish, by clear and convincing evidence, that every element in '842 and/or '501 patents is present in, and arranged as in, the opposed patent(s). *See C.R. Bard, Inc. v. M3 System, Inc.*, 157 F .3d 1340, 1349 (Fed.Cir.1998). Generally speaking, anticipation is limited to the reference. Thus, reading beyond the reference to prove anticipation is seeking to prove anticipation beyond what is required by statute. *See 35 U.S.C. s. 102* (2000). The evidence presented and proffered by United is insubstantial and fails to prove by clear and convincing evidence that the '842 and '501 patents were anticipated by either of the opposed patents. Laying each of the referenced patents side-by-side with the '842 and/or '501 patents reveals that the claims of the '842 and '501 patents are not arranged similar to the Clocker or Cohn patents.

United's "incorporation by reference" contention also fails. Here, United asserts that the Clocker patent incorporates the Cohn patents by reference. Therefore, by collective reference the Clocker patent anticipates the claims of the '842 and/or '501 patents. This argument, however, is contrary to case law. *See Advanced*

Display Systems, Inc. v. Kent State Univ., 212 F.3d 1272, 1282 (Fed.Cir.2000). Therefore, the Court rejects this argument. *See* 127 F.3d 1065 (Fed.Cir.1997).

III-H. Are The '842 and '501 Patents Obvious?

United next asserts that Southern Clay's '842 and '501 patents are obvious under 35 U.S.C. s. 103 (2000). United's method for determining obviousness combines the Clocker and Cohn patents, the LaPorte patent, and the Simon article. However, United admits that the prior art does not suggest that a person of ordinary skill in the art should combine the Clocker, LaPorte and Cohn patents, and the Simon article to determine what the prior art teaches. Therefore, this contention fails under s. 103(a).

United does not suggest that the Simon article teaches such a practice. In fact, United proffered the testimony of Dr. Constantine D. Armeniades who admitted that he was unaware of any teaching that would combine patents and articles as the standard for determining obviousness. Thus, the argument fails as a matter of law. Similarly, the facts and the inferences to be drawn from the facts, would not lead a reasonable juror to conclude that combining patents and articles is appropriate.

The evidence does not reach the threshold legal level required by law for jury submission. Thus, the Court concludes that the Clocker, Cohn and LaPorte patents when joined with the Simon article do not disclose all the claimed elements of the '842 and '501 patents. On the contrary, the evidence of non-obviousness is sufficiently compelling.

III-I. Are '842 And '501 Patents Invalid Due To Prior Invention?

Next, United asserts that the '842 and '501 patents are invalid because of the research done by Dr. John Jordan while working at NL/Rheox. It is noteworthy that the Interference referred to earlier was filed by NL/Rheox during the prosecution of the '501 patent. It was resolved between NL/Rheox and Southern Clay whereby NL/Rheox conceded that the Manton-Gaulin process was invented by Southern Clay. This concession is based in part on the fact that NL/Rheox has no laboratory records to substantiate Dr. Jordan's research claim. FN11

FN11. The undisputed evidence shows that Dr. Jordan's Manton-Gaulin experiments occurred in 1969 and were abandoned in 1976.

The Court is obligated to treat United's prior invention argument in the same manner that NL/Rheox treated Dr. Jordan's data; it was of little or no consequence and was considered a secret.FN12 In its best light, the evidence fails to meet the minimum requirement necessary to constitute a prior invention. Section 102(g) requires that evidence of a prior invention exclude abandonment, suppression or concealment by the inventor. *See* 35 U.S.C. s. 102(g) (2000). The evidence proffered, including Dr. Jordan's testimony, leads to the conclusion that NL/Rheox suppressed, concealed or abandoned data evidencing use of the Manton-Gaulin process. Thus, as a matter of law, Dr. Jordan's prior work, if any, cannot be characterized as a prior invention.

FN12. Dr. Knudson also worked for NL but was unfamiliar with Dr. Jordan's work concerning clay slurry shearing utilizing the Manton-Gaulin process. United has proffered no evidence to contradict Dr. Knudson's testimony.

III-J. Does N/L Rheox's Prior Commercialization Invalidate The '842 and '501 Patents?

United seeks to invalidate the '842 and '501 patents on the basis that NL/Rheox commercially manufactured organoclays using the Manton-Gaulin process before the '842 and '501 patents were invented. United relies upon the proffered testimony of Dr. Jordan, Henry Stuchell and Paul Matejowsky. Interestingly, no one testified that the Manton-Gaulin process was used to produce the organoclays that N/L Rheox commercially sold. Moreover, there are no records establishing the use of the process, experimental or otherwise. The witnesses admitted that they were not privy to an N/L Rheox's manufacturing process that resulted in commercial sales of organoclays.

The Court concludes that the absence of laboratory data to confirm use of the Manton-Gaulin process conclusively establishes that any use was not for commercial sales. However, assuming that organoclays manufactured by the process were sold, any sales were either test sales or sales that were indistinguishable from other non-Manton-Gaulin process sales. In sum, the Court concludes that no prior commercial sales were proved by clear and convincing evidence. *See D.L. Auld Co. v. Chroma Graphics, Corp.* 714 F.2d 1144, 1147-48 (Fed.Cir.1983).

III-K. Are The '842 and '501 Patents Derivatives?

It is also United's position that the '842 and '501 patents are derivatives of NL/Rheox's '402 patent. United argues that Dr. Knudson, while employed by NL/Rheox, learned the subject matter of the '842 and '501 patents from another employee of NL/Rheox. The extent of this claim is defined by United's proffer. United's proffer includes the assertion by Dr. Jordan that he assigned the "repeat and refine" task associated with the NL/Rheox patent to one of his assistants, with whom Dr. Knudson worked in the late 1960's. However, Dr. Knudson denies any such collaboration.

The Court is of the opinion that United's reliance on Dr. Jordan's testimony is unavailing. First, Dr. Jordan has yet to produce documentation to substantiate his claim that he did any laboratory work. Second, Dr. Jordan's testimony came during the Interference between NL/Rheox and Southern Clay while the prosecution history of the '501 patent was being developed. The Interference was settled favorably to Southern Clay.

Finally, United's claim of derivation overlooks United's own evidence that NL/Rheox admitted that the earliest date that NL/Rheox used the Manton-Gaulin process was between 1983 and 1984. *See* (Dx 325). To conclude otherwise is to give undue weight to the unsupported testimony of Dr. Jordan when the law requires otherwise.

As asserted by Southern Clay, derivation requires proof by clear and convincing evidence that a prior conception existed and that a communication of that concept occurred. *See Woodland Trust v. Flowertree Nursery, Inc.*, 148 F.3d 1368, 1373 (Fed.Cir.1998). Establishing that a concept existed requires proof beyond the testimony of the inventor. *Id.* To date, no clear and convincing evidence of a concept and a communication have been produced. Therefore, the Court concludes that, to the extent that a concept was fashioned in the mind of Dr. Jordan, it was not corroborated by laboratory data and was not communicated to anyone.

III-L. Is There Invalidity Due To A Violation of s. 135(c)?

After discovery was concluded and the case was positioned for trial, United sought to amend its pleadings to assert an affirmative defense that the full settlement agreement between Southern Clay and N/L Rheox concerning the Interference was not on file with the PTO as required by 35 U.S.C. s. 135(c) (2000). Section 135(c) requires that:

Any agreement or understanding between parties to an interference, including any collateral agreements referred to therein, made in connection with or in contemplation of the termination of the interference, shall be in writing and a true copy thereof filed in the Patent and Trademark Office before the termination of the interference as between the said parties to the agreement or understanding ... Failure to file the copy of such agreement or understanding shall render permanently unenforceable such agreement or understanding and any patent of such parties involved in the interference or any patent subsequently issued on any application of such parties so involved.

The record shows that the PTO issued a receipt, acknowledging that a copy of the settlement agreement had been filed on May 14, 1991. Thus, an evidentiary presumption arises. The PTO would not have issued such a receipt save an appropriate settlement agreement had been filed, pursuant to section 135(c). To overcome this presumption, something more than the absence of portions of the settlement agreement in the PTO's archives is required. United has presented nothing more. Therefore, even if the Court had permitted United to amend its pleadings, the evidence proffered would not meet the threshold requirement to rebut the presumption.

In light of the record, the Court concludes that the amended pleading was properly denied. Alternatively, the evidence favored the finding and conclusion that a section 135(c), violation did not occur.

III-M. Is There Invalidity Due To Judicial Estoppel?

During the Interference litigation between Southern Clay and NL/Rheox, the issue of the validity of both NL/Rheox's '402 patent and Southern Clay's '842 patent arose, in light of the Clocker '850 patent. Because of pleadings filed by Southern Clay during the Interference litigation, United argues that Southern Clay should be judicially estopped from denying admissions made in that litigation. The text of the pleadings relied upon by United states:

Defendants' previously filed motion for a temporary stay (sic). For example, NL claims the common matter of the interfering patents to be anticipated by a patent issued to Clocker, *et. al.* in 1976. This allegation, if true, would invalidate NL's patent under 35 U.S .C. s. 102(b), as well as ECCA's patent.

See (Dx 12 at 17, United's Motion for Summary Judgment).

There are at least two foundational problems with United's analysis that undermine its judicial estoppel argument. First, United is reading the pleading out of context. Earlier in the pleadings, Southern Clay argues that the validity of the '842 patent was based on distinctions in the details between the NL/Rheox '402 and its '842 patents. The Court agrees and finds that there is no concession by Southern Clay in these statements.

The second of United's foundational problems is that the pleadings are stated in conditional terms and do not embrace as true the proposition for which they are being offered. The statements relied upon by United expresses nothing more than an opinion based on facts not yet established *i.e.*, that Southern Clay's '842 patent may be invalid. Opinion statements based on assumptions will not support a finding of a judicial

admission. *See In re Coastal Plains, Inc.*, 179 F.3d 197, 206 (5th Cir.1999). Thus, United's judicial admission defense is unavailing.

IV. UNITED'S ANTITRUST COUNTERCLAIM

IV-A. United's Antitrust Allegations FN13

FN13. The following summary, more or less, is found in United's response to Southern Clay's motion for partial summary judgment, which motion challenged United's Antitrust Counterclaim.

United asserts three bases for its antitrust counterclaim against Southern Clay. First, United asserts that Southern Clay knowingly attempted to enforce fraudulently obtained patents as prohibited under *Walker Process Equip., Inc. v. Ford Machine and Chemical Corp.*, 382 U.S. 172 (1965). United contends that this claim finds validity in its inequitable and fraudulent conduct arguments concerning Southern Clay's conduct before the PTO.

The second basis for United's antitrust counterclaim arises from allegations of bad faith litigation by Southern Clay in pursuing this case knowing of both, the invalidity and unenforceability of the two patents involved. In this respect, United cites to opinions involving identical parties that substantiates its bad faith litigation claim. *See Handgards, Inc. v. Ethicon, Inc.*, 601 F.2d 986 (9th Cir.1979) *cert. denied*, 444 U.S. 1025 (1980) and 743 F.2d 1282 (9th Cir.1984) *cert. denied*, 469 U.S. 1190 (1985).

The third basis for United's antitrust counterclaim alleges patent pooling between Southern Clay and NL/Rheox when they settled the Interference proceeding and cross-licensed NL/Rheox's '402 and Southern Clay's 842 patents. United argues that this cross-licensing arrangement, constitutes pooling of patents that together constitute a single invention. According to United, Southern Clay licensed NL/Rheox in exchange for NL/Rheox dismissing its suit against Southern Clay. As a result, United argues, the marketplace is closed to competitor such as United. The totality of this conduct, argues United, violates the Sherman Act.

IV-B. Analysis and Discussion

The heart of United's antitrust counterclaim is its assertion that Southern Clay and NL/Rheox, knowing the invalidity of their patents, set out to perpetuate a fraud on the PTO and competitors by a cross-licensing agreement. This assertion is validated in United's mind because a federal district court in New Jersey held NL/Rheox's '402 patent invalid. *See Rheox v. UCI*, 1995 WL 526542 at 7 (D.N.J. Apr. 25, 1995). However, this Court is of the opinion that United's assertions and arguments are factually unfounded. The fact that Southern Clay and NL/Rheox entered into a settlement that included cross-licensing does not, *ipso facto*, constitute an antitrust violation. *See Standard Oil Co. (Indiana) v. United States*, 283 U.S. 163 (1931). Moreover, a patent, whether held by Southern Clay alone or conjoined with NL/Rheox leaves United in the same market position. This conduct does not evidence a conspiracy.

Specifically, the cross-licensing agreement appears to be based on the reasoned evaluations of wise men. The parties evaluated their respective positions and reached an accommodation based on business judgments. Neither United's pleadings nor its proffers support the view that the cross-licensing agreement blocked or threatened technology, or created a false market. On the contrary, the market appears to be thriving.

Following United's invalidity arguments to their end overlooks the fact that United would likely be entangled in litigation with N/L Rheox or the owners of the Clocker and LaPorte patents. Thus, litigation or license would be United's future in either circumstances. The Court concludes that Southern Clay's conduct does not establish a competitive injury and, furthermore, United has no identifiable injury.

Summary judgment is appropriate where there is an absence of a genuine issue of material fact and the movant is entitled to judgment as a matter of law. Fed.R.Civ.P. 56(c) (2000); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242 (1986). The Court holds, based on its rulings heretofore set out in this Memorandum that there is no genuine issue of material fact and the evidence is insubstantial, failing to support United's antitrust claim. Moreover, there is a complete absence of proof of damages. Therefore, the Court grants summary judgment against United's federal and state antitrust claim.

V. THE JURY VERDICT AND OTHER PENDING MOTIONS

V-A. *The Jury Verdict*

After the Court granted Southern Clay motion for judgment on the issue of infringement and dismissed United's defenses and counterclaim, United proffered the testimony of several additional witnesses. United claimed that this testimonial proffer contradicted Southern Clay's case and would compel the Court to withdraw its rulings. However, United's own admissions concerning use of the Manton-Gaulin process compels the submission of the remaining issues to a jury. The interrogatories submitted to the jury and the answers returned are:

Interrogatory No. 1

What sum of money do you find by a preponderance of the evidence represents damages adequate to compensate Southern Clay for UCI's infringement of Southern Clay's '842 and '501 patents for damages through March 31, 2000?

Answer in dollars and cents, if any.

\$ 20.9 million

Interrogatory No. 2

Has Southern Clay proven by clear and convincing evidence that United Catalysts' infringement of the following claims of the '842 patent was willful?

Answer "Yes" or "No"

Answer	Yes	No
Claim	X	___
1	___	___
" 2	X	___
" 3	X	___
" 4	X	___
" 5	X	___
" 6	X	___

Interrogatory No. 3

Has Southern Clay proven by clear and convincing evidence that United Catalysts's infringement of the following claims of '501 patent was willful?

Answer "Yes" or "No"

Answer	Yes	No
Claim 1	X	___
" 2	X	___

The Court received the jury's findings and incorporates them into the Court's Memorandum as its findings and conclusions.

V-B. Southern Clay's Motion For Enhanced Damages

Southern Clay seeks an enhanced award of damages due to United's willful infringement. The jury determined that United's conduct was willful. It is the Court's opinion that the jury's fact findings on willfulness are based on a legally sufficient foundation. Specifically, the evidence overwhelmingly shows that around 1990, United realized that it had been "left behind" in organoclay technology. Testimony from United's technical staff revealed that the prospect of maintaining a market presence depended upon United developing high performance organoclays. Although United could have produced high performance organoclays without use of the Manton-Gaulin process, the production methods were wasteful, costly and lacked the uniformity and production levels necessary to remain competitive. Therefore, United invested substantially in Manton-Gaulin homogenizer equipment.

United's fear of market loss share is also evidenced in an internal memo that records a December 19, 1990, meeting of United's technical staff. The meeting topic, "Patent Situation in Connection with the Manton-Gaulin Homogenizer," focused on the effects of Southern Clay's '842, the European EPS 220, 346, and NL/Rheox's '402 patents on United's market presence. The memo reveals that, were Southern Clay's '842 patent to be held valid, United's ability to manufacture the Tixogel MP-series without infringing would be impossible. On the other hand, if NL/Rheox's '402 patent prevailed, United *might* be able to produce Tixogel MP if produced above 50 (deg.)C, reading the NL/Rheox's '402 patent as limited by the drying temperature of the organoclays. In addition, United concluded that the NL/Rheox '402 patent prevent United from offering Tixogel MP in its polyester resins because the patent did not teach a temperature limitation on polysterenes.

The internal memo, thus, revealed United's alternatives; either obtain a license or violate its competitors' patent(s). United chose the latter course, setting out on a course of dishonesty and deception that also complicated the discovery process. United overlaid its dishonesty and deception in this litigation by raising frivolous defenses and a counterclaim. Revealing also is the fact that United's trial position is contrary to what United knew as truth. United never disputed using the Manton-Gaulin process or that improved products were manufactured through the process. Rather, United relied on Southern Clay's inability to discover its conduct and prove infringement.

The Court has considered the financial condition of United and determines that United will not be financially destroyed by the award of enhanced damages. Moreover, the egregiousness of United's conduct

dictates strong medicine. Therefore, the Court holds that because United's conduct was willful, enhanced damages are appropriate. The Court holds that the jury award of \$20,900,000 in damage award should be tripled, resulting in total damages of \$62,700,000.

V-C. Attorney's Fee Request

The Court determines that this case is exceptional for all the reasons stated heretofore. However, the facts reveal that this case should not have been as complex as it turned out to be. United's deliberate conduct and its failure to disclose the true facts to its own patent attorney further complicated the case. Even now United's patent attorney's statement, that he did not "know [United was] using the Manton-Gaulin in the claim[ed] process," remains unexplained. The effect of United's failing is to have no credible patent attorney opinion. Thus, the Court finds and holds that this is an exceptional case and that a reasonable attorney's fee should be awarded based on the submissions of the parties which the Court finds are undisputed. Therefore, the Court awards \$2,917,550 in attorney's fees.

V-D. Pre-judgment and Post-judgment Interest

Southern Clay's motion for prejudgment interest on the damage award is well founded and is, therefore, granted under 35 U.S.C. s. 284. The Court adopts the calculations proffered by Southern Clay in its motion for prejudgment interest. *See* (Instrument No. 313). Through June 30, 2000, the Court awards interest in the amount of \$8,279,414. From July 1, 2000, through January 31, 2001, interest is assessed at 10% per annum on the total judgment for additional accrued interest of \$ 4,140,466. Post-judgment interest shall accrue at the rate of 6.052% per annum on damages and attorneys fees from the date of this judgment.

V-E. Motion For Permanent Injunction

Also before the Court is Southern Clay's motion for a permanent injunction and United's response. In its response, United claims that an injunction should not issue because: (a) no final judgment has been entered; (b) Southern Clay will not be substantially injured in the interim; (c) the patents-in-suit are invalid; (d) United will be irreparably injured; (e) the public interest dictates against an injunction; (f) the scope of the injunction sought is too broad; and (g) United is likely to succeed on appeal.

The Court has previously addressed each of the concerns in its discussions. These concerns are invalid in light of United's admitted egregious conduct. Based on the Court's findings and conclusions already stated, the Court finds and holds that failure to issue an injunction would be contrary to the express and implied rights that appertain to ownership of the '842 and '501 patents. Therefore, the Court holds that the following injunction shall issue:

United together with its officers, agents, servants, employees, assigns, attorneys, and each and every person in active concert or participation with them, are hereby permanently enjoined as follows:

1. From infringing or contributing to the infringement of U.S. Patent Nos. 4,664,842 and 5,110,501 within the United States until May 12, 2004; and
2. From the manufacture, use, offer for sale, or sale of any organoclay made through the use of the Manton-Gaulin process, including but not limited to the following products:

Tixogel MP, Tixogel MP 50, Tixogel MP 100, Tixogel MP 150, Tixogel W 200, Tixogel MP 250, Tixogel

MP 275, Tixogel NT 300, Tixogel MP 350, Tixogel MPG, Tixogel MPR, Tixogel DS, Tixogel DS-MP, Tixogel TE-MP, Tixogel DS-USPI, Tixogel EPA, Tixogel EZ AQUALON, Tixogel EZ100, Tixogel EZ-100 Export, Tixogel EZ-100 INK, Tixogel EZ-200, Tixogel LG, Tixogel OP1194, Tixogel PLA, Tixogel PLS, Tixogel TE, Tixogel TP, Tixogel TP-2, Tixogel TP-100, Tixogel VP, Tixogel VP-BRK, Tixogel VP-CG, Tixogel VP EXPORT, Tixogel VP-GS, Tixogel VP-GS-DB, Tixogel VP-HS, Tixogel VP-LS, Tixogel VP-LS INK, Tixogel VP-USPI, Tixogel VP-W, Tixogel VP-ZB, Tixogel VZ, Tixogel VZ Export, Tixogel VZ-MP, Britone A, Britone B, LUBAD, Viscogel B4, Viscogel B7, Viscogel B8 and Viscogel GM;

3. United shall discontinue manufacturing organclays until it has removed any and all of its Manton-Gaulin homogenizer equipment from its plant;

4. United shall provide Southern Clay with quarterly verified written assurances (affidavits) executed by the Chief Operations Officer until May 12, 2004, stating that (1) United has taken the necessary steps to comply with this order; and (2) United is not infringing and has not infringed any of the claims of the '842 or '501 patents;

5. Southern Clay shall have the right to designate a third-party to enter United's premises during business hours upon four (4) hours notice, to verify compliance with this order;

6. The Permanent Injunction includes without limitation the prohibitions set out in 35 U.S.C. s. 271(f)(1) and (2).

7. This Court retains jurisdiction to interpret and enforce the provisions of this Permanent Injunction, including any future question of its violation or of infringement by United.

V-F. Other Motions

The Court has reviewed Southern Clay's motion for the appointment of a fraud examiner based on allegations of continuing fraud on the part of United. While the Court recognizes the frustration experienced, the Court determines that such an appointment would not be productive. Therefore, the motion is denied without prejudice.

All other pending motions not addressed in this Memorandum are Denied.

IT IS SO ORDERED.

S.D.Tex.,2001.

Southern Clay Products, Inc. v. United Catalysts, Inc.

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