

Supplemental  
Brief  
+  
Appendix

**SUPPLEMENTAL BRIEF AND APPENDIX  
FOR PLAINTIFF/CROSS-APPELLANT PALL CORPORATION**

IN THE  
**United States Court of Appeals**

FOR THE FEDERAL CIRCUIT

FILED

U.S. COURT OF APPEALS FOR

THE FIRST CIRCUIT

MAR 14 1994

Appeal Nos. 91-1393,-1394,-1409

PALL CORPORATION,

FRANCIS X. GINDHART

Plaintiff/Cross-Appellant,

v.

MICRON SEPARATIONS, INC.,

Defendant-Appellant.

Appeal From The United States District Court  
For The District Of Massachusetts  
Honorable William G. Young, District Judge

Appeal No. 92-1049

HERBERT MARKMAN AND POSITEK, INC.,

Plaintiff-Appellants,

v.

WESTVIEW INSTRUMENTS, INC.  
AND ALTHON ENTERPRISES, INC.,

Defendants-Appellees.

Appeal From The United States District Court  
For The Eastern District Of Pennsylvania  
Honorable Marvin Katz, District Judge

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## I. CERTIFICATE OF INTEREST

Counsel for plaintiff/cross-appellant, PALL CORPORATION, certifies the following:

1. The full name of every party or amicus represented by me is:

PALL CORPORATION

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

PALL CORPORATION

3. The parent companies, subsidiaries (except wholly-owned subsidiaries), and affiliates that have issued shares to the public, of the party or amicus curiae represented by me are:

None

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this Court are:

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## II. STATEMENT OF RELATED CASES

Also pending before this Court is *Cuno, Inc. v. Pall Corporation*, Appeal No. 93-1533. Plaintiff/cross-appellant Pall does not believe that that case "will directly affect or be directly affected by this Court's decision in the pending appeal." However, that case does involve contract interpretation and patent exhaustion issues relating to the same patent as to which infringement and claim interpretation issues have been raised in this appeal.

### III. STATEMENT OF ISSUES

On January 7, 1994, this Court issued an order permitting the parties to brief the following issues:

(1) Are disputes over the meaning of a term in a claim (a) issues of law to be decided on a documentary record, similar to questions of statutory construction, or (b) are there some claim construction disputes that can only be resolved by resort to extrinsic evidence which requires the taking of factual and expert testimony?

(2) If factual or expert testimony is proffered to resolve a particular dispute, what are the respective roles of the trial judge and jury?

(3) When a claim construction dispute is on appeal to this Court, what is the standard of review this Court should apply to the judgment below on the merits? With regard to permissible post-trial motions?

(4) When the meaning of a claim term must be decided in the course of deciding the question of infringement, what are the respective roles of trial judge and jury?

The specific claim interpretation issue in this appeal is:

(5) Was not the district court correct when, in holding that MSI's accused membrane infringed claims of the Pall patent, it applied the meaning of the term "skinless" in the sense of the Pall patent rather than in the colloquial sense MSI urges?



#### IV. STATEMENT OF THE CASE

##### A. PROCEDURAL HISTORY

On June 24, 1991, the United States District Court for the District of Massachusetts entered final judgment that Micron Separations, Inc. ("MSI") had infringed Pall's U.S. Patent No. 4,340,479 ("the Pall patent") relating to nylon microporous membranes, and that the Pall patent was not invalid or unenforceable.<sup>1</sup> MSI appealed and this Court heard oral argument on December 9, 1991.

On November 5, 1993, the Court advised the parties that it would reconsider *en banc* this case, along with *Herbert Markman et al. v. Westview Instruments et al.*, Appeal No. 92-1049. Thereafter, on January 7, 1994, the parties and *amici curiae* were invited to file additional briefs directed to certain claim construction issues set forth under items (1)-(4) in the Statement of Issues, *supra*.

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<sup>1</sup> The trial court rendered its decision from the bench on June 5 and June 20, 1991, specifically reserving the option to render a full written opinion at a later date (A 7). That opinion is dated April 24, 1992, and has been published at *Pall Corporation v. Micron Separations, Inc.*, 792 F.Supp. 1298 (D.Mass. 1992). A copy is attached hereto in the Supplemental Appendix ("SA") at SA 18-57. Pall has cited to the published opinion in this brief, as Judge Young clearly intended it to be his final word.

## B. NATURE OF THE CASE

The district court, sitting without a jury, determined, *inter alia*, that the word "skinless" in the claims of the Pall patent was "adequately defined in the patent" for those skilled in the microporous membrane art (SA 38). The district court found, as a matter of fact, that "the definition of skinlessness as used in the Pall patent is one which does not depend on visual inspection" (SA 40), but rather depends on whether a membrane has "pores which are substantially uniform in size and shape" and contain other "characteristics which allow the passage of water through the membrane in specific fashion." (*Id.*)

The district court properly applied this definition to MSI's accused membranes. It found, "as fact, that MSI's membranes are skinless within the meaning of the Pall patent and its claims" (*id.*), because, *inter alia*, "there is no evidence that persuades this court of any fluid blocking layer on MSI's membranes" (SA 38), and because MSI itself described "their product as skinless membrane" (SA 40, *see also* SA 36, 38). The district court specifically rejected MSI's argument that its membranes did not infringe because, in a dermatological sense and "under extreme magnification", they "looked" like they have a skin. (SA 38, 39). That, the district court ruled, was not the definition of skinless in the patent (SA 38).

In its original appeal brief, MSI unequivocally assured this Court that it "does not challenge here on appeal any of the district court's underlying findings of fact regarding infringement, ... [and that] it is unnecessary for this Court to set aside any probative fact found by the district court or to engage in any reweighing of the evidence in this case" to decide this



appeal. (MSI Op. Br. 25).<sup>2</sup> Now, however, MSI asks this Court to do just that: to reweigh the evidence heard in twenty-eight days of trial and received in hundreds of exhibits, and to set aside the underlying factual findings leading to the district court's conclusions of the meaning of the term "skinless" and hence MSI's infringement.

MSI never addresses the fact that the district court based its determination of the scope of the claims at issue and its findings that MSI's accused products infringe on a detailed consideration of a massive body of evidence which even MSI concedes is probative. Instead, MSI suggests that this Court must view the entire matter as one of law, and only of law, and that this Court is therefore required to retry the issue of claim construction *de novo*. MSI failed to identify even one rule of law relating to claim construction, however, which the district court supposedly violated.

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<sup>2</sup> MSI's opening brief filed in August 1991, is referenced as "MSI Op. Br." MSI's supplemental brief filed in February 1994, is referenced as "MSI S. Br."

## V. SUMMARY OF ARGUMENT

The overwhelming precedent of this Court teaches that the meaning of a claim is a conclusion of law based on the application of established rules of claim interpretation to underlying facts. This Court has consistently held that when there is a genuine dispute as to the meaning of claim language, resort should be had to a host of "extrinsic evidence" to ascertain the meaning of the claim to one skilled in the art. This Court has defined "extrinsic evidence" to include other claims of the patent at issue, its specification, and its prosecution history. This Court has also recognized another important type of "extrinsic evidence": the usage of the disputed word or phrase by those skilled in the art. Usage evidence includes the prior art, documentary evidence and oral testimony of the meaning of the claim language to the accused infringer and patentee, and expert testimony. Presently, findings related to "extrinsic evidence" are given deference by this Court on appeal.

This Court should not depart from this longstanding precedent, for to do so would be contrary to the requirements of the Federal Rules of Civil Procedure, contrary to the role of an appellate court, and contrary to public policy. No benefit results from a *de novo* review by this Court of extrinsic evidence. Consistency in claim interpretation is already addressed in the present review framework and will not be enhanced by *de novo* review. Moreover, *de novo* review of fact findings would only guarantee innumerable "second thought" appeals like that of MSI.

Some suggest that this Court treat claim interpretation as it would treat statutory construction. Such a change is inappropriate because, among other things, the fundamental nature of a patent is quite different from that of a statute, and the patent grant incorporates a standard reliant upon extrinsic science: the "person skilled in the art." This Court should hold to its precedent: where a trial court or a jury makes fact findings in resolving an issue of claim construction, this Court must review such findings under the "clearly erroneous" or "substantial evidence" standard.

Given the above framework for claim construction, the role of the trial court, either in a bench trial or a jury trial, is the same as it is with respect to obviousness, another issue of law having specific underlying fact inquiries. The trial court must first determine if there is a "real" dispute regarding claim construction, *i.e.*, whether there is a genuine issue of material fact in dispute. If not, there is no need for fact-finding on the issue of claim construction. If there is at least one genuine dispute of material fact, the trial court, or the jury, must consider all extrinsic evidence offered by any party on each such issue. Since patents are to be construed by those skilled in the art, it is improper to ignore usage of the disputed phrase by those skilled in the art, as shown through expert testimony, or through documentary or testimonial evidence relating to the usage of the word or phrase by the infringer or patentee. A failure to consider usage evidence, if proffered, is akin to a failure to consider secondary considerations in an obviousness inquiry and is, therefore, reversible error in and of itself.

In a jury trial, the jury may decide the ultimate issue of claim construction, under appropriate instruction from the trial court, and may do so via special interrogatories or a general

verdict. This Court cannot by judicial fiat remove the discretion given trial courts in Fed. R. Civ. P. 49 over the form of jury verdicts. The trial court judge, in considering a post-trial motion, should review the jury's claim construction under the substantial evidence standard.

Applying the above principles to the present case, affirmance is mandated. The district court employed the very two-step infringement analysis required by this Court's precedent. First, it properly applied the legal rules of claim construction to determine the meaning of the claims at issue. Then it applied the claims to MSI's accused products, finding infringement.

The district court's findings of fact underlying its conclusion as to the meaning of the claims, and those underlying its determination of infringement are fully supported in the record and are not clearly erroneous. However, even if this Court now decides to review the evidence *de novo*, it will be readily apparent that the district court correctly construed the term "skinless" and was fully justified in finding infringement.

## VI. ARGUMENT

### A. THIS COURT PRESENTLY CONSIDERS THE ISSUE OF CLAIM CONSTRUCTION TO BE A QUESTION OF LAW, WITH UNDERLYING FACTUAL INQUIRIES

From this Court's inception to the present, it has consistently held that the issue of claim construction is an issue of law, with underlying factual inquiries. *Minnesota Mining &*



*Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1565, 24 U.S.P.Q.2d 1321, 1327 (Fed. Cir. 1992); *Lemelson v. General Mills, Inc.*, 968 F.2d 1202, 1206, 23 U.S.P.Q.2d 1284, 1287-88 (Fed. Cir. 1992), *cert. denied*, 122 L.Ed.2d 131 (1993); *Howes v. Medical Components, Inc.*, 814 F.2d 638, 643, 2 U.S.P.Q.2d 1271, 1273 (Fed. Cir. 1987). These factual inquiries are based on "extrinsic evidence," including other claims of the patent at issue, its specification, and its prosecution history. *Miles Laboratories, Inc. v. Shandon, Inc.*, 997 F.2d 870, 876, 27 U.S.P.Q.2d 1123, 1127 (Fed. Cir. 1993), *cert. denied*, 127 L.Ed.2d 232 (1994); *Smithkline Diagnostics v. Helena Laboratories Corp.*, 859 F.2d 878, 882, 8 U.S.P.Q.2d 1468, 1471 (Fed. Cir. 1988); *Howes*, 814 F.2d at 643, 2 U.S.P.Q.2d at 1273; *Palumbo v. Don-Joy Co.*, 762 F.2d 969, 975, 226 U.S.P.Q. 5, 8 (Fed. Cir. 1985); *McGill, Inc. v. John Zink Co.*, 736 F.2d 666, 672-75, 221 U.S.P.Q. 944, 948-51 (Fed. Cir.), *cert. denied*, 469 U.S. 1037 (1984).

If there is an actual dispute as to the meaning of a word or phrase in a claim, the fact finder, be it district court or jury, must look at each of these areas; a failure to do so is reversible error in and of itself. *SSIH Equipment S.A. v. U.S. Intern. Trade Com'n.*, 718 F.2d 365, 376, 218 U.S.P.Q. 678, 688 (Fed. Cir. 1983); *see also, Moeller v. Ionetics, Inc.*, 794 F.2d 653, 656, 229 U.S.P.Q. 992, 994 (Fed. Cir. 1986).

It is axiomatic that claims are to be interpreted as they would be by those skilled in the art. *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1571, 219 U.S.P.Q. 1137, 1142 (Fed. Cir. 1983). Therefore, this Court has held that evidence of how those skilled in the art would construe a particular word or phrase is also probative to claim construc-

tion, and is, therefore, another factual inquiry. *Smithkline*, 859 F.2d at 882, 8 U.S.P.Q.2d at 1471; *Moeller*, 794 F.2d at 657, 229 U.S.P.Q. at 995; *McGill*, 736 F.2d at 675, 221 U.S.P.Q. at 950.

Evidence of the skilled artisan's understanding of the claimed invention can be obtained through, *inter alia*, (1) expert testimony, *see, e.g., Smithkline*, 859 F.2d at 882, 8 U.S.P.Q.2d at 1471, (2) the manner in which the accused infringer or the patentee used the word or phrase at issue, *see, e.g., Minnesota Min. and Mfg.*, 976 F.2d at 1575, 24 U.S.P.Q.2d at 1336; *Tol-O-Matic v. Proma Produkt-Und Marketing*, 945 F.2d 1546, 1550, 20 U.S.P.Q.2d 1332, 1336 (Fed. Cir. 1991); *Palumbo*, 762 F.2d at 976, 226 U.S.P.Q. at 9, or (3) review of the prior art. *Tillotson, Ltd. v. Walbro Corp.*, 831 F.2d 1033, 1039, 4 U.S.P.Q.2d 1450, 1454 (Fed. Cir. 1987). Since an inventor can be his own lexicographer, *Hormone Research Foundation v. Genentech, Inc.*, 904 F.2d 1558, 1563, 15 U.S.P.Q.2d 1039, 1043 (Fed. Cir. 1990), *cert. dismissed*, 499 U.S. 955 (1991), the inventor's belief as to the meaning of a particular word or phrase is also probative. *Palumbo*, 762 F.2d at 976, 226 U.S.P.Q. at 9; *Smithkline*, 859 F.2d at 883, 885, 8 U.S.P.Q.2d at 1472.

When a claim construction dispute reaches this Court, the Court must first ascertain whether the district court applied the correct legal principles of claim construction. *Hoganas AB v. Dresser Industries, Inc.*, 9 F.3d 948, 950, 28 U.S.P.Q.2d 1936, 1938 (Fed. Cir. 1993); *Palumbo*, 762 F.2d at 974, 226 U.S.P.Q. at 9. Pall does not dispute that such a review by this Court is *de novo*, as the ultimate conclusion of claim interpretation is a question of law. However, in its review, this Court must accept a district court's findings of fact upon

which the conclusion rests, unless those findings are clearly erroneous. *H.H. Robertson Co. v. United Steel Deck, Inc.*, 820 F.2d 384, 389, 2 U.S.P.Q.2d 1926 (Fed. Cir. 1987); see also, *Miles Laboratories*, 997 F.2d at 876, 27 U.S.P.Q.2d at 1127.

Accordingly, this Court has refused to overturn findings underlying a district court's claim construction determination where there were two permissible views of the evidence. *Perini America, Inc. v. Paper Converting Mach. Co.*, 832 F.2d 581, 584-86, 4 U.S.P.Q.2d 1621, 1624-25 (Fed. Cir. 1987) (district court's finding on the meaning of terms in claim held not clearly erroneous); *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1556, 1560-62, 229 U.S.P.Q. 561, 564-65 (Fed. Cir.), cert. denied, 479 U.S. 850 (1986) ("Kodak has shown no reason why this court should choose its definition over that chosen by the district court," despite a contrary construction by Kodak's expert). This is true even when this Court has had reservations about the district court's conclusion regarding claim interpretation. *Ashland Oil, Inc. v. Delta Resins & Refractories*, 776 F.2d 281, 296 n.22, 227 U.S.P.Q. 657, 666-67 n.22 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986).

In a case tried to a jury, the proper standard of review applied to the verdict and to rulings on permissible post-trial motions is the "reasonable jury" standard. *Lemelson*, 968 F.2d at 1207, 23 U.S.P.Q.2d at 1288; *Tol-O-Matic*, 945 F.2d at 1549, 20 U.S.P.Q.2d at 1336. Under the "reasonable jury" standard, this Court must determine, in light of all the evidence of record and based on correct instructions of law, whether a reasonable jury could have reached the verdict that it did. *Lemelson*, 968 F.2d at 1207, 23 U.S.P.Q.2d at 1288; *Tol-O-Matic*, 945 F.2d at 1549, 20 U.S.P.Q.2d at 1336.

The evidence is reviewed only to determine whether substantial evidence exists to support the jury's verdict. *Tol-O-Matic*, 945 F.2d at 1549, 20 U.S.P.Q.2d at 1336; *McGill*, 736 F.2d at 672, 221 U.S.P.Q. at 948. To obtain reversal, an appellant must show either the absence of substantial evidence to support the jury's findings, or that the factual findings cannot support the legal conclusions necessarily drawn by the jury in reaching its verdict. *Lemelson*, 968 F.2d at 1207, 23 U.S.P.Q.2d at 1288; *Vieau v. Japax, Inc.*, 823 F.2d 1510, 1516, 3 U.S.P.Q.2d 1094, 1099 (Fed. Cir. 1987); *McGill*, 736 F.2d at 672, 221 U.S.P.Q. at 948.

This Court has, therefore, repeatedly refused to overturn a jury's fact findings regarding claim construction when they are supported by substantial evidence. *Arachnid, Inc. v. Medalist Marketing Corp.*, 972 F.2d 1300, 1302, 23 U.S.P.Q.2d 1946, 1948-49 (Fed. Cir. 1992); *Tol-O-Matic*, 945 F.2d at 1550-51, 20 U.S.P.Q.2d at 1337-38; *Snellman v. Ricoh Co., Ltd.*, 862 F.2d 283, 288, 8 U.S.P.Q.2d 1996, 1999-2000 (Fed. Cir. 1988), *cert. denied*, 491 U.S. 910 (1989).

#### **B. THIS COURT SHOULD NOT DEPART FROM ITS PRECEDENT**

There is no reason to depart from these well-established legal principles. Pall advocates this position not merely because it believes that under these principles it will prevail here on the merits; indeed, Pall believes that it should prevail regardless of this Court's decision on the standard of review for claim interpretation. However, the proposal by some to convert the issue of claim interpretation to one solely of law, to be retried by this Court, would lead only to greater



uncertainty and inconsistency, further protraction of litigation, and direct violation of Fed. R. Civ. P. 52(a) and other legal doctrine relating to the role of appellate courts. It is not the established jurisprudential principles of claim construction which are unclear, unsound, or ineffective, but at most an occasional questionable application thereof in a specific case. Sufficient systemic safeguards exist to remedy such problems. A radically new appellate standard is neither mandated nor appropriate.

Some would go so far as to propose a radical change in the allocation of judicial power in the area of claim construction. They would divide the above-noted factual inquiries into two types: those relating solely to documentary evidence, such as the inquiries relative to other claims, the specification and the prosecution history; and those relating to testimonial evidence, such as the testimony put forth at trial by expert witnesses. MSI, for example, contends that both types of evidence should be reviewed *de novo* by this Court. (MSI S. Br. at 25-27; AIPLA Br. 15-17). *Amicus* Acuson takes a slightly different approach, also contending that documentary evidence should be reviewed *de novo*, but avoiding expressing any opinion as to testimonial evidence (Acuson Br. at 12-15), which it labels as "*never necessary*" (*id.* at 14).

Neither position is even remotely supportable. The contention that factual inquiries about claim interpretation can be reviewed *de novo* runs afoul of the Federal Rules of Civil Procedure, as well as established law governing the role of an appellate court.

**1. Under Rule 52(a), An Appellate Court Cannot Review *De Novo* Findings Of Fact**

First, this Court cannot review *de novo* a finding of fact merely because the fact was gleaned from documentary evidence. Fed.R.Civ.P. 52(a), as amended in 1985, clearly specifies that findings of fact made by a district court judge are to be reviewed subject to the "clearly erroneous" standard, even if based solely on documentary evidence. *See also Anderson v. Bessemer City*, 470 U.S. 564, 574, 84 L.Ed.2d 518, 528 (1985). This language was added to Rule 52(a) because, prior to that time, some appellate courts did review these findings *de novo*. *See* Notes of Advisory Committee on Rules, 1985 Amendment of Fed.R.Civ.P. 52(a), and cases cited therein. The drafters of Fed.R.Civ.P. 52(a) believed that allowing a *de novo* appellate review of findings based solely on documentary evidence would undercut the public interest in judicial stability and economy. They stated:

To permit courts of appeals to share more actively in the fact-finding function would tend to undermine the legitimacy of the district courts in the eyes of the litigants, multiply appeals by encouraging appellate retrial of some factual issues, and needlessly reallocate judicial authority.

Notes of Advisory Committee on Rules, 1985 Amendment of Fed. R. Civ. P. 52(a).

Fed.R.Civ.P. 52(a) also delineates the standard of review for findings made from testimonial evidence. Again, *de novo* review is proscribed, and for good reason. The evaluation of testimonial evidence requires a balancing of credibility,

persuasiveness, and weight. This evaluation is to be made by the fact finder, and to be given deference by the appellate tribunal, because witness demeanor cannot be ascertained from a cold record. *Graver Tank Co. v. Linde Air Prod. Co.*, 339 U.S. 605, 609-10, 94 L.Ed. 1097, 1103 (1950). This is particularly true in patent cases, "where so much depends upon familiarity with specific scientific problems and principles not usually contained in the general storehouse of knowledge and experience." *Id.*, 339 U.S. at 610, 94 L.Ed. at 1103.

This Court agrees. Issues of credibility of witnesses are for the fact finder, and are not amenable to appellate review. *Brooktree Corp. v. Advanced Micro Devices, Inc.*, 977 F.2d 1555, 1569, 24 U.S.P.Q.2d 1401, 1410-11 (Fed. Cir. 1992). Therefore, if resort to other claims, the specification, prosecution history, the prior art and the usage of those skilled in the art are still considered factual inquiries, this Court cannot review *de novo* a fact finder's resolution of real disputes regarding those issues.

## **2. *De Novo* Review Of Documentary Evidence Is Improper**

For this Court to undertake *de novo* review of the matters contained in other claims, the specification and the prosecution history, this Court must turn its back on its own precedent and decide in the present appeal either: (1) that facts from other claims, the specification and the prosecution history of the patent at issue, having been derived from documents, cannot be disputed, interpreted, or explained; or (2) that inquiries about other claims, the specification, the prosecution history, the prior art and usage by skilled artisans are henceforth deemed to be solely questions of law. There is no justification

for either course of action, and this Court would be acting contrary to the interests of the public if it chose to implement either one.

MSI, Acuson and AIPLA argue that *de novo* review of the documentary record will promote consistency in claim interpretation, and increase certainty and predictability in the patent system. This argument is misguided. Consistency is already provided by the present system. Moreover, *de novo* review by this Court of the documentary record will actually decrease both judicial efficiency and predictability.

MSI argues that issues of fact cannot arise from disputes over a documentary record. (MSI S. Br. 25-29). It reasons that, since the documentary record must be undisputed, all determinations resting thereon should be reviewed *de novo*. MSI is wrong. Issues of fact may and do arise from a documentary record, as this Court has held on numerous occasions. MSI simply ignores these cases, seizing instead upon language from cases in which either the parties did not dispute the documentary evidence, or the "dispute" was not genuine, *i.e.*, was amenable to summary judgment.

An objective review of this Court's precedent reveals plain recognition that issues of fact can and do, arise from review of a documentary record. In *Palumbo*, 762 F.2d at 976, 226 U.S.P.Q. at 10, this Court held that ambiguities surrounding the prosecution history can give rise to a question of fact. In *Howes*, 814 F.2d at 643-46, 2 U.S.P.Q.2d at 1275-76, this Court reversed a grant of summary judgment of noninfringement, because there were genuine issues of material fact surrounding the prosecution history of the patent at issue.



MSI attempts to avoid the impact of *Howes* by arguing that remand occurred because the documentary record was incomplete. (MSI S. Br. at 29). This argument springs from a blatant misreading of *Howes* and should be rejected. Remand was made in *Howes* because the factual record from the prosecution history which the district court needed to resolve the disputed facts was incomplete, and definitely not because this Court did not have a complete prosecution history. This Court, in fact, had access to the entire prosecution history at the time of the appeal because it was part of the record. By indicating that the record was incomplete, the court in *Howes* was instructing the district court to receive additional evidence relating to the prosecution history, such as expert testimony. *Id.*; see *Tillotson*, 831 F.2d at 1039, 4 U.S.P.Q.2d at 1454.

Numerous other cases hold that issues of fact can arise from documentary evidence. In *Tol-O-Matic*, 945 F.2d at 1550, 20 U.S.P.Q.2d at 1336, this Court held that issues of fact arose from the description of the claimed invention in the specification. And, in *Smithkline*, 859 F.2d at 882-85, 8 U.S.P.Q.2d at 1472-74, the district court's findings regarding the prosecution history of the patent at issue were reviewed under the "clearly erroneous" standard, the standard applicable to fact findings. There, Judge Nies specifically stated:

[Claim] interpretation may depend, as here, however, on evidentiary material which requires resolution of factual issues, such as what occurred during the prosecution history.

*Smithkline*, 859 F.2d at 882, 8 U.S.P.Q.2d at 1471-72. See also *Specialty Composites v. Cabot Corp.*, 845 F.2d 981, 988, 6 U.S.P.Q.2d 1601, 1606 (Fed. Cir. 1988) (district court

finding that the prosecution history showed the patent in suit related only to external plasticization held *clearly erroneous*); *Arachnid*, 972 F.2d at 1302, 23 U.S.P.Q.2d at 1948 (holding that what happened in prosecution history is a factual issue).

Thus, issues of fact do arise from a purely documentary record. This is in accord with other areas of law. *Ginsa Products, Inc. v. Dart Industries, Inc.*, 786 F.2d 260, 262-64 (7th Cir. 1986) ("clearly erroneous" standard of review applied where district court relied on documentary evidence and undisputed facts). If no disputes could ever arise from a document, then there would be no need, for example, for the extensive body of law concerning contract interpretation. See *RCI Northeast Services Div. v. Boston Edison Co.*, 822 F.2d 199 (1st Cir. 1987).

That fact issues can arise, however, does not mean that they always do. If the parties do not disagree as to the import of a document, the facts in that document are undisputed, and no issue of fact arises. Even if the parties disagree as to the import of a document, an issue of fact does not arise where that disagreement is not "genuine," *i.e.*, can be resolved via summary judgment. The cases cited by MSI in support of its argument that issues of fact cannot arise from documentary evidence (MSI S.Br. 27) fall into one or both of these categories, and are, therefore, irrelevant. See, *e.g.*, *Johnston v. IVAC Corp.*, 885 F.2d 1574, 12 U.S.P.Q.2d 1382 (Fed. Cir. 1989) (no genuine issue of material fact).

Other cases cited by MSI as evidencing *de novo* review of fact issues have been similarly misread. For example, in *Whittaker Corp. v. UNR Industries, Inc.*, 911 F.2d 709, 711-13, 15 U.S.P.Q.2d 1742, 1744-45 (Fed. Cir. 1990), *de novo*

review was made of the district court's application of the canons of claim construction, not its fact findings.

Quite simply, there is no case to date in which this Court has stated that documentary evidence is always undisputed, and thus always reviewable *de novo*. It should decline to make that leap here.

**3. Issues Arising From Documentary Evidence  
Should Not Be Treated As Questions Of Law**

**a. Treating Issues Arising From Documentary  
Evidence As Questions Of Law Will Not  
Promote Consistency Or Certainty In Patent  
Law**

Some argue that categorizing the resolution of disputes arising solely from documentary evidence as a question of law will increase certainty and predictability in patent matters, and will further the constitutional objectives of the patent system. This is so, *amicus* Acuson says, because once claim construction is treated as a pure question of law, anyone interpreting a claim can rely on case precedent, as well as the principles of claim construction. (Acuson Br. 10-12). MSI, at pages 17-

18 of its brief, makes the same argument.<sup>3</sup> This argument, however, is misplaced.

Acuson is correct that established and stable case law and canons of construction do provide a measure of certainty and consistency to claim interpretation. Under the present state of the law, however, the application of case precedent relating to claim construction, as well as application of the canons of construction, are already reviewed *de novo* by this Court. *Palumbo*, 762 F.2d at 974, 226 U.S.P.Q. at 9; *Hoganas*, 9 F.3d at 950, 28 U.S.P.Q.2d at 1938. Thus, consistency in the law of claim interpretation is inherent in the present review process.

Acuson also argues that this Court's decisions relating to specific claim terms in specific cases are in some way predictive of how the same or a similar term used in a different patent will be interpreted. This argument makes no sense. Disputed words or phrases in a patent claim are interpreted as they would be by one skilled in the art to which the patent

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<sup>3</sup> *Amicus* The American Intellectual Property Law Association urges that "all patent claim construction questions" be treated as questions of law, although acknowledging that such a "preferred policy-driven" approach may conflict with Constitutional and U.S. Supreme Court authority. (AIPLA Br. 9-12). None of this Court's ample relevant precedent reviewed here by Pall is cited or analyzed more than incidentally by AIPLA, except that *Tol-O-Matic* is acknowledged to stand for the "usual standard of review" that this Court examines jury fact determinations under the "substantial evidence" standard. (AIPLA Br. 11, n. 2).



pertains, upon review of the specification, and prosecution history of that specific patent, along with the usage by those skilled in that art. See section VI.A., *supra*. A decision as to the interpretation of a specific term in one patent has no relevance to the interpretation of that term in another patent relating to perhaps an entirely different area of technology. The inventions are different, the specifications are different, the prosecution histories are different, and the art may well be different.

In this regard, interpretation of a word or phrase in a patent claim is entirely different from interpretation of a word or phrase in a statute. Patents are directed not to the general public, but to those of ordinary skill in the art to which the invention pertains. Moreover, the patentee is allowed to be his own lexicographer and thus is afforded a further opportunity to define and explain his invention to others skilled in the art in his own words. Claim interpretation thus involves the application of a well-established set of rules to determine what the patentee identified as his claimed invention as understood by one skilled in the art. This procedure, in effect determining the intent of the patentee, is historically a fact inquiry. *Pullman-Standard v. Swint*, 456 U.S. 273, 288, 72 L.Ed.2d 66, 79-80 (1982); *Greisen v. U.S.*, 831 F.2d 916, 917 (9th Cir. 1987).

In contrast, interpretation of a statute involves the task of determining the legislative intent in enacting the statute. For that reason alone, statutory interpretation is legal in nature. *Greisen*, 831 F.2d at 917-18. *De novo* review of the legislative history of the statute and of the statute itself is also justified because a disputed word or phrase in a statute will likely be the subject of various and sundry lawsuits by different

individuals. An example is the issue of whether a person is a "seaman" under the Jones Act. The definition of "seaman" does not change from lawsuit to lawsuit; it is the application of the facts to that definition which changes. To the extent that *de novo* review of statutory interpretation brings added certainty to litigations involving that statute, such review is justified.

In patent cases, no such certainty is possible. Absent issue preclusion (see *Del Mar Avionics, Inc. v. Quinton Instrument Co.*, 836 F.2d 1320, 1323-24, 5 U.S.P.Q.2d 1255, 1257-58 (Fed. Cir. 1987)), patentees may construe their claims differently in later litigation. See *Jackson Jordon, Inc. v. Plasser American Corp.*, 747 F.2d 1567, 1577-78, 224 U.S.P.Q. 1, 8-9 (Fed. Cir. 1984) (no estoppel against patentee where it prevailed on a claim construction narrower than necessary). This flexibility will not be restricted whether a deferential or a *de novo* review standard is applied in this Court.

In short, none of those urging this Court to change its claim interpretation review standard in order to promote consistency or certainty in patent law has explained how the one step would lead to the other. The analogy to statutory construction is flawed, and the imagined advantages from a new standard are illusory.

**b. *De Novo* Review Of Documentary Evidence  
Is Against Public Policy**

Not only would *de novo* review of disputes relating to other claims, the specification, or the prosecution history fail to provide consistency or certainty in claim interpretation, in fact, *de novo* review of these disputes would actually increase

uncertainty. The degree of certainty now obtained from a trial court judgment would be eliminated.

*De novo* review would encourage a flood of appeals. With no deference given to trial court findings regarding claim construction, counsel whose clients lost in the trial court would be remiss if they failed to pursue a "second trial" in this Court. Since claim construction permeates both infringement and validity determinations, all district court determinations resting in any way on claim interpretation would be, in effect, fair game for a *de novo* retrial in this Court. Thus, *de novo* review of these disputes by this Court would undermine litigants' confidence in district courts, and would convert those courts into mere "way stations" on the road to the Federal Circuit.

The designation of a certain issue as a question of law as opposed to a finding of fact is really an allocation of judicial power. *An Interview With Circuit Judge S. Jay Plager, The Journal of Proprietary Rights*, Vol. 5, No. 12 at 9 (1993) ("The whole jury trial issue is a question of power -- who's going to get the final decision?"). By designating an issue as a question of law, the issue may be taken away from a jury at trial, or be decided by an appellate court *de novo*, without deference to the lower court's determination of that issue. Appellate courts should be very cautious before declaring an issue to be a question of law because the trial at the district court level is intended to be "the main event ... rather than a tryout on the road." *Anderson*, 470 U.S. at 575, 84 L.Ed.2d at 529.

Those advocating *de novo* review of all aspects of claim construction advance the argument that such review would

result in the "truth" being ascertained more frequently. Whether this is so can be disputed. In *Anderson*, the U.S. Supreme Court clearly disagreed. "Duplication of the trial judge's efforts in the court of appeals would very likely contribute only negligibly to the accuracy of fact determination at a huge cost in diversion of judicial resources." *Anderson*, 470 U.S. at 574-75, 84 L.Ed. 2d at 529. What cannot be disputed is the cost to the system for achieving this additional "truth." That cost, which takes the form of increased appeals and diminution of the importance of district courts, is overwhelming. See Wright, *The Doubtful Omniscience of Appellate Courts*, 41 Minn. L.Rev. 751, 781 (1957).

Appellate court time is a scarce resource. It can be used more efficiently if this Court focuses on developing uniform, principled doctrine, rather than attempting to retry the facts in every case before it. See Lee, *Principled Decision Making and the Proper Role of Federal Appellate Courts: The Mixed Questions Conflict*, 64 S. Cal. L.Rev. 235, 250 (1991). This is especially true since this Court's determination *de novo* of the meaning of particular claim language in a given patent will provide no precedential authority with respect to the meaning of claims in other patents. *Id.* at 255.

In these very real respects, the consistency and certainty so desirable in this Court's jurisprudence would be undermined, not advanced, by adoption of a *de novo* review standard for all aspects of claim interpretation. Public policy, precedent and practicality militate against such a change.



**C. EVIDENCE OF USAGE OF A DISPUTED WORD OR PHRASE BY THE SKILLED ARTISAN MUST BE CONSIDERED BY THE FACT FINDER**

Evidence as to how one skilled in the art on the claimed invention uses or interprets a disputed word or phrase in a claim can be obtained from numerous sources, including: (a) usage by the patentee and/or inventor, (b) usage by the accused infringer, and (c) expert testimony.

This Court has already stated that evidence of usage of the disputed claim language by those skilled in the art through expert testimony is encouraged, although it need not always be allowed by the district court. *Moeller*, 794 F.2d at 657, 229 U.S.P.Q. at 995 (exclusion of expert testimony held abuse of discretion). This Court should rule that evidence of usage of a disputed term by those skilled in the art, received through expert testimony or the other avenues mentioned above, must be considered in resolving claim construction disputes. Such a holding would be consistent with precedent of this Court which recognizes the value of this type of evidence, *Smithkline*, 859 F.2d at 882, 8 U.S.P.Q.2d at 1471; *McGill*, 736 F.2d at 675, 221 U.S.P.Q. at 950; and is in accord with Fed. R. Evid. 701, 702 and 704.

Claim language is interpreted with reference to a person of ordinary skill in the art to which the patent pertains because patent claims are written with a skilled artisan in mind, as the law has recognized. See, e.g., 35 U.S.C. § 112, ¶1. Thus, a word or phrase in a patent claim having an established meaning to a lay person, or even to a judge, may have a totally different meaning to those working in the art. As the Supreme Court has stated:

But the specifications of patents for inventions are documents of a peculiar kind. They profess to describe [inventions], which have their existence *in pais*, outside of the documents themselves; and which are commonly described by terms of the art or mystery to which they respectively belong; and these descriptions and terms of art often require peculiar knowledge and education to understand them aright; and slight verbal variations, scarcely noticeable to a common reader, would be detected by an expert in the art, as indicating an important variation in the invention.

*Bischoff v. Wethered*, 76 U.S. 812, 815, 19 L.Ed. 829, 831 (1870).

The Supreme Court has clearly recognized the probative value of evidence relating to the meaning given a disputed word or phrase by those skilled in the art. So has this Court. It has specifically approved admission of evidence of the usage given a disputed word or phrase by the patentee or the accused infringer because of the probative value of that evidence. *See, e.g., Minnesota Min. and Mfg.*, 976 F.2d at 1575, 24 U.S.P.Q.2d at 1336; *Tol-O-Matic*, 945 F.2d at 1550, 20 U.S.P.Q.2d at 1336; *Smithkline*, 859 F.2d at 882, 8 U.S.P.Q.2d at 1472-73; *Palumbo*, 762 F.2d at 976, 226 U.S.P.Q. at 9.

The probative value of expert testimony has also repeatedly been recognized. *Laitram Corp. v. NEC Corp.*, 952 F.2d 1357, 1363, 21 U.S.P.Q.2d 1276, 1281 (Fed. Cir. 1991); *Smithkline*, 859 F.2d at 882, 8 U.S.P.Q.2d at 1471; *Moeller*, 794 F.2d at 657, 229 U.S.P.Q. at 995; *Palumbo*, 762 F.2d at

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976, 226 U.S.P.Q. at 8-9; *McGill*, 736 F.2d at 675, 221 U.S.P.Q. at 950.

Given the accepted relevance of evidence relating to the usage of a disputed term by those skilled in the art, such evidence must always be considered by the trier of fact if it is presented. See *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538, 218 U.S.P.Q. 871, 879 (Fed. Cir. 1983).

In *Stratoflex*, this Court addressed the issue of whether "secondary considerations," when present, had to be considered in determining obviousness. It held that indeed they must:

It is jurisprudentially inappropriate to disregard any relevant evidence on any issue in any case, patent cases included.

*Stratoflex*, 713 F.2d at 1538, 218 U.S.P.Q. at 879.

The rationale of *Stratoflex* is equally applicable in the arena of claim construction. It is also consistent with Fed. R. Evid. 401 and 402, which require admission of all relevant evidence, except under the narrow exceptions enumerated in Fed. R. Evid. 403.

Neither MSI nor *amicus* Acuson discusses evidence relating to the usage of a disputed term by the patentee and the accused infringer. They confine their scorn to reception of expert testimony. Neither MSI nor Acuson, however, has set forth any viable reason why expert testimony should not always be admissible and considered, if there is a true dispute over claim language. Apparently, both MSI and Acuson fear



that a charismatic expert may have an undue effect on the jury. The complete answer to this argument is that judicial safeguards are already in place to deal with such a situation — namely Rule 50 of the Federal Rules of Civil Procedure. The district court can enter judgment as a matter of law on the issue of claim construction at any time if there is not sufficient evidence to support a reasonable jury finding on a proposed claim construction, or it can enter judgment as a matter of law if the jury's verdict is not supported by substantial evidence. Or the district court may refuse to hear the testimony if there is no "real dispute" over claim construction sufficient to withstand a summary judgment motion.

It makes little sense to require that certain types of probative extrinsic evidence, such as the specification and prosecution history, always be considered, while not so requiring with respect to other types of probative extrinsic evidence, such as expert testimony. In fact, such a rule is in conflict with *Stratoflex*. If the evidence sought to be presented is probative, it should be considered regardless of its source.

#### **D. THERE IS NO REASON TO TAMPER WITH THE PRESENT ROLES OF JUDGE AND JURY IN INTERPRETING CLAIMS**

If this Court holds to its precedent that claim construction is a question of law with underlying factual inquiries, there is no reason to tamper with the present roles of the district court judge and jury. These roles would be analogous to those in the obviousness inquiry, another question of law with underlying fact issues. See, e.g. *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1546-48, 220 U.S.P.Q. 193, 197-98 (Fed. Cir. 1983); see also *Panduit Corp. v. Dennison Mfg.*

*Co.*, 810 F.2d 1561, 1566, 1 U.S.P.Q.2d 1593, 1597-98 (Fed. Cir.), *cert. denied*, 481 U.S. 1052 (1987).

Thus, if the action is tried to a judge without a jury, the trial judge will consider the patent and file history and hear factual and expert testimony on the meaning of the disputed claim language to see how those skilled in the art interpret the claims. *Tillotson*, 831 F.2d at 1039, 4 U.S.P.Q.2d at 1454; *Moeller*, 794 F.2d at 657, 229 U.S.P.Q. at 995. The trial judge will resolve the factual issue at trial and interpret the claims in light of all probative evidence, including expert testimony, *Tillotson*, 831 F.2d at 1039, 4 U.S.P.Q.2d at 1454; *Moeller*, 794 F.2d at 657, 229 U.S.P.Q. at 995. The court will then issue findings of fact resolving the underlying factual disputes and an ultimate conclusion of law as to the meaning of the claim language in accordance with Fed. R. Civ. P. 52(a). *See also Anderson*, 470 U.S. at 574, 84 L.Ed.2d at 528.

In cases tried to a jury, the jury, with proper instruction on the applicable law of claim construction, will weigh the evidence as to the meaning of the disputed claim language, will resolve evidentiary conflicts, and will find the meaning of the disputed claim language to one of ordinary skill in the art. Fed. R. Civ. P. 49. *Tol-O-Matic*, 945 F.2d at 1550, 20 U.S.P.Q. at 1336; *Palumbo*, 762 F.2d at 974, 226 U.S.P.Q. at 9; *Envirotech Corp. v. Al George, Inc.*, 730 F.2d 753, 758, 221 U.S.P.Q. 473, 477-78 (Fed. Cir. 1984).

As with the question of obviousness which may be submitted to the jury, the district court may submit the claim interpretation issue to the jury, even though it is a mixed question of fact and law. The submission will include instruc-

tions to the jury as to the principles of law to be applied, to guide the jury in its application of the law to the facts. The jury then interprets the claim "en route" to deciding the issue of infringement. *Lemelson*, 968 F.2d at 1206, 23 U.S.P.Q.2d at 1288; *Tol-O-Matic*, 945 F.2d at 1550, 20 U.S.P.Q. 2d at 1336.

Throughout the jury trial process, there are safeguards to insure "the parties and the system against an improper outcome that might result from a partial remedy or 'rogue elephant' jury." *Connell*, 722 F.2d at 1546, 220 U.S.P.Q. at 197.

To that end, Fed. R. Civ. P. 51 provides for instructions to the jury on the law to guide its conclusions on legal questions. See also *Lemelson*, 968 F.2d at 1206, 23 U.S.P.Q.2d at 1288; *Tol-O-Matic*, 945 F.2d at 1550, 20 U.S.P.Q.2d at 1336. Fed. R. Civ. P. 50(a) provides for judgment as a matter of law after a party has been fully heard on an issue, if there is no legally sufficient basis for a reasonable jury to find for the party on that issue. Fed. R. Civ. P. 50(b) allows for judgment as a matter of law after the close of evidence. Fed. R. Civ. P. 49(a) provides for special verdicts in which the jury makes special written findings on each issue of fact. Fed. R. Civ. P. 49(b) provides for a general verdict with written interrogatories upon one or more issues of fact necessary to the verdict. Fed. R. Civ. P. 59(a) provides for a new trial on various grounds, "including a determination that a jury reached its verdict as a result of passion and prejudice." *Connell*, 722 F.2d at 1546, 220 U.S.P.Q. at 197.

The above list is not all-inclusive. In addition, for example, the Federal Rules of Evidence and the relevant case

law provide numerous standards for restricting and controlling the fact finder's inquiry. Although specialized, patent cases are not unique. The procedural framework for the role of the fact finder is in place and, properly applied, amply accommodates determinations of claim construction.

**E. UNDER EITHER STANDARD OF REVIEW  
ADOPTED BY THIS COURT, THE DISTRICT  
COURT'S JUDGMENT OF INFRINGEMENT  
MUST BE AFFIRMED**

Whether this Court applies the *de novo* or "clearly erroneous" standard of review in this action, the district court's judgment of infringement must be affirmed. The trial court's determinations (1) that "skinless" means having uniform microporosity without any fluid blocking layer, and (2) that the meaning of "skinless" does not depend on cosmetic visual appearance, are perfectly consistent with accepted principles of claim construction and are not clear error. Finally, the district court's determination that MSI's membranes indeed meet all of the elements of the claims in suit are factual findings which cannot be demonstrated to be clearly erroneous.

**1. The District Court Properly Applied the Rules of  
Claim Construction**

The district court violated no principle of claim construction in reaching its interpretation of the meaning of the term "skinless." It properly permitted Dr. Pall to be his own lexicographer (SA 26); properly reviewed the patent specification (SA 27, 39-40) and file history (SA 28-31) to determine how the term "skinless" was used and whether it was used in a manner consistent with 35 U.S.C. § 112 (SA 37); properly



accepted testimony regarding the meaning of the term to persons of ordinary skill in the art (SA 22-23, 32, 34); and last but not least, properly considered how MSI's own membranologists used the term (SA 38, 40). Only then did it interpret the term "skinless."

The essence of MSI's argument now is that this Court should repeat Judge Young's careful analysis and come to a different conclusion. It contends that what it calls the district court's "beliefs" (e.g., that "skinless" means having uniform microporosity with no fluid blocking layer) are incorrect (*see*, e.g., MSI S. Br. 14). These "beliefs" are, of course, nothing other than findings of fact which MSI assured this Court earlier it did not dispute (MSI Op. Br. 25). By operation of Fed.R.Civ.P. 52(a) alone, this Court cannot review these findings *de novo*, but can set them aside only if they are "clearly erroneous." Under that standard, if the district court's view of the evidence is plausible, this Court cannot reverse even if it disagrees with that view. *Anderson*, 470 U.S. at 574, 84 L.Ed.2d at 528.

The district court's resort to the patent and its interpretation of "skinless" as the term would be construed by a membranologist (rather than as a dermatologist would understand it, as MSI proposes) were perfectly in keeping with this Court's precedent and were amply based in the evidence. MSI has shown no cause for reversal here.

MSI also argues that the district court erred in considering "performance" data, in addition to all of the other physical characteristics, in reaching its interpretation of "skinless." MSI seems to confuse interpretation and infringement issues. There is no question that both sides urged the court to consider



performance data in connection with MSI's argument that its membrane had a skin, *i.e.*, a non-uniform microporous structure with a fluid-flow blocking barrier layer. Performance data found in the patent and for MSI's membrane were, of course, relevant to that issue. The court carefully considered MSI's argument, finding in the end that there was no evidence of skinning in the sense of the Pall patent (SA 38, 40), and that the membrane only "looks different under extreme magnification" (SA 39).

The Pall patent contains a great deal of information on the performance characteristics that further define skinless membranes, *see, e.g.*, Figs. 3, 4 (SA 2); col. 1, ll. 54-55 and 61-62 (SA 3); col. 9, ll. 51-52 (SA 5); col. 26, ll. 24-44 (SA 8); col. 32, ll. 50-60 (SA 9); Table IV, Examples 3-4 (SA 10); Table V, Example 10-13 (SA 11); Table VI, Examples 15-17 (SA 11); Table VIII, Example 47 (SA 11); Table IX, Example 51-53 (SA 12); Table XI, Examples 60-62 and 64 (SA 11); Table XII, Examples 65-66 and 68 (SA 12), and on skinned membranes, *see e.g.*, Table IX, Examples 55-57 (SA 12). There is no authority for the proposition that the description of flow and filtration characteristics cannot be used to ascertain the meaning of terms in the claims. Surely even MSI does not dispute that claims are read in light of the specification. *E.I. du Pont de Nemours & Co. v. Phillips Petroleum Co.*, 849 F.2d 1430, 1438, 7 U.S.P.Q.2d 1129, 1131 (Fed. Cir.), *cert. denied*, 488 U.S. 986 (1988); *SRI International v. Matsushita Electric Corporation of America*, 775 F.2d 1107, 1121, 227 U.S.P.Q. 577, 585 (Fed. Cir. 1985).

2. The Overwhelming Weight Of The Evidence Supports the District Court's Determination of What "Skinless" Means

a. MSI Has Stipulated That All Findings of Fact Are Supported

MSI itself assured this Court in its very first brief that it did not dispute any of the findings of fact:

MSI does not challenge here on appeal any of the district court's underlying findings of fact regarding infringement. Therefore, as in *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1547, 220 U.S.P.Q. 303, 308 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984), it is unnecessary for this Court to set aside any probative finding of fact found by the district court or to engage in any reweighing of the evidence in this case.

(MSI Op. Br. 25).

MSI has in effect stipulated that all of the factual findings on infringement are correct, no matter what standard of review is utilized. Pall certainly agrees, and that should end MSI's appeal.

Regrettably however, in its supplemental brief MSI attempts to retreat from its earlier position. It now contends that "[t]he district court's conclusion as to what 'skinless' meant is subject to legal [*i.e.*, *de novo*] review because the district court reached its definition only from reading the patent." (MSI S. Br. 40).

That proposition is not well-taken for at least two reasons. First, as was pointed out above, Judge Young's opinion clearly indicates that the district court carefully considered the specification, the file history, the prior art and usage of the term by those skilled in the art, and MSI's own usage of the contested terminology, and that all of these elements contributed to the district court's ultimate decision. And second, under the law set forth earlier, even if the district court had considered only the patent, the factual findings underlying the ultimate determination of what "skinless" means would still be subject to review by the "clearly erroneous" standard, and not de novo.

**b. The Pall Patent Fully Supports The District Court's Definition of "Skinlessness"**

Both the Patent Office and the district court have now examined the Pall patent for compliance with the requirement of 35 U.S.C. § 112, and both have determined that Pall's specification and claims passed muster. Citing *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385, 231 U.S.P.Q. 81 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987), Judge Young ruled that:

[C]laims are sufficiently definite if, when read in light of the specifications, they reasonably apprise those skilled in the art both of the utilization and scope of the invention and are as precise as the subject matter permits.

\* \* \*

With respect to the challenges raised in this case, the use of the terms 'about', 'hydrophilic', and 'skinless' do not impart invalidity to the claims of the patent,

but the meaning of those terms is to be considered in determining infringement.

(SA 37).

Then, in its determination of what "skinless" means, the district court considered various evidence, starting with the Pall patent. The specification contains numerous references to skinless and skinned membranes. (Copies of the pages of the Pall patent containing the most salient references to skinless and skinned membranes, which have been highlighted, are attached hereto at SA 1-SA 13). The district court's opinion specifically refers to the following passages in that patent:

*Column 2, lines 10-24:* "[T]he skin to avoid is an 'exceedingly thin but relatively dense barrier layer of 'skin' from about 0.1 to 5.0 microns thickness of a microporous polymer in which an average pore diameter is in the millimicron range, for example, from 1.0 to 100 millimicrons, i.e. about one-tenth to one-hundredth the thickness of the skin.'"

(SA 40);

*Column 1, lines 49-53:* "Skinned membranes, as defined in the Pall patent in Column 1 at Lines 49 through 53, have 'smaller surface pores'".

(*Id.*);

*Column 2, lines 32-34:* "abrupt transition from skin to support layer."



(*Id.*);

*Column 2, lines 34-52:* "The conditions under which the polyamide resin is precipitated determine the skinless nature of the membrane, as well as its physical characteristics, i.e., the size, length and shape of the through pores of the membrane. Under certain conditions a membrane is formed which has through pores extending from surface to surface that are substantially uniform in shape and size....

Under conditions outside the scope of the invention, still another form of the membrane is obtained, having a dense skin penetrated by pores of smaller diameter than the pores in the remainder of the sheet. This skin is normally on one side of the membrane sheet, but it can be on both sides of the membrane sheet. Such skinned membranes are conventional in the art, exhibit relatively higher pressure drop and other poor filtration characteristics, and are undesirable."

(SA 27);

*Column 26, lines 33 et seq.:* Description of skinned and skinless membranes by differences in their air flow-pressure drop relationship (the KL curve of Fig. 3 of the patent) and their ability or lack thereof to produce sterile filtrates.

(*Id.*);



*Figure 8 showing a scanning electron photomicrographs of "skinned membrane which is outside the claims of the patent."*

*(Id.)*

The patent specification also contains scanning electron photomicrographs of particular skinless membranes made by Pall's process (Figs. 5-7) (A4405-06). In addition, numerous examples are presented in the specification on how to produce skinless membranes (*see* Examples 3, 4 in Table IV (SA 10); 10-13 in Table V (SA 11); 15-17 in Table VI (SA 11); 47 in Table VIII (SA 11); 51-53 in Table IX (SA 12); 60-62 and 64 in Table XI (SA 12); and 65-66 and 68 in Table XII (SA 13)). Other examples produce skinned material (*see* Examples 56-57 in Table IX (SA 12)).

The district court's examination was, of course, not limited to the specification. It also examined the patent file history at some length (SA 28-31), and considered the testimony not just of Dr. Pall, the inventor, but also of other membranologists concerning their understanding of "skinless." (SA 22-23, 32, 34).

Finally, and just as importantly, the district court considered evidence of MSI's own usage and understanding of the concept of skinlessness (SA 36, 38, 40). Attached at SA 14-17 are copies of just two examples in a voluminous record of the use by MSI's membranologists of the term "skin." In a laboratory notebook record, an MSI scientist described a membrane as "all skin, no flow time" (SA 15). And in another such record, an MSI scientist contemplates the

use of nucleation sites to form a porous structure  
rather [than] a skinned one.

(SA 17, emphasis added).

He further cautioned that certain process conditions

would cause more skinning instead of more uniform  
pore structures.

(*Id.*, emphasis added).

The court considered and referenced these very MSI descriptions. They are remarkably and completely consistent with the descriptions in the Pall patent. For example, in column 18, lines 20-23 of the Pall patent (SA 7), Dr. Pall indicates that if

the casting resin solution is properly nucleated as described herein, the resulting membrane will be uniform in pore structure.

The district court specifically found that MSI made "extraordinarily extensive use" of the Pall patent in developing its membrane (SA 51). MSI should not now be heard to argue that it does not understand the terminology employed therein.

After review of the totality of the information presented, the district court further concluded that:

Skinlessness is never specifically defined in the Pa patent, but clearly it is a significant parameter and is discussed at some length.

(SA 27).

Although scanning electron microscope examples of a Pall membrane are included in the Pall patent, the definition of skinlessness as used in the Pall patent is one which does not depend on visual inspection. Whether a membrane is skinless depends in part on whether the membrane has pores which are substantially uniform in size and shape. Whether the membrane is skinless further depends on whether it has the characteristics which allow the passage of water through the membrane in specific fashion, as measured by the KL curve, all, in this Court's judgment, adequately defined in the patent.

(SA 38).

It is suggested that the skin to avoid is an "exceedingly thin but relatively dense barrier layers or 'skin'..."

(SA 40).

This "definition" of the concept of skinlessness is not just plainly supported in the body of evidence considered by the district court, but is required by the record.

MSI crops the quote from the district court's statement down to "is never specifically defined," (MSI S. Br. 1, 11), and then argues quite incongruously that a "definition" found in the specification, namely the precise visual appearance of the scanning electron photomicrographs of samples of Pall's embodiment of the invention, should be engrafted onto all of

the claims. (MSI S. Br. 40). Alternatively, it wishes to have this Court restrict the claims so that they would not cover membranes with perfectly uniform pore structure and no flow barrier just because "under extreme magnification" they cosmetically appear to have a "skin" in some other sense of the word. These attempts to choke the life from the patent in suit run afoul not only of the district court's specific findings that the definition does not depend solely on "visual inspection", but also of decisions by this Court refusing to read limitations into claims which simply are not there. *See, e.g., E.I. DuPont*, 849 F.2d at 1433, 7 U.S.P.Q.2d at 1131 32.

The district court's determination that "skinless" means having a uniformly porous microstructure with no fluid blocking barrier layer was well supported by the evidence and derived through application of the correct rules of law. The court did not err in its claim interpretation. Regardless of the standard of review adopted by this Court, its ruling must be affirmed.

### **3. The District Court Properly Found that MSI's Membrane Infringed**

After interpreting the claims, the district court determined that they had indeed been infringed. It found no evidence of any skin on MSI's membrane:

There is no evidence that persuades this Court of any fluid blocking layer on MSI's membranes.

(SA 38).



[T]he Court does not find that it [the skin alleged to exist by MSI] is relatively dense, but rather that it is permeated by millions of tiny pores roughly the same size as the pores in the rest of the membrane,

(SA 40).

[T]here are pores on the MSI membrane that are substantially the same size as the interior support layer and act as pores which go from one side of the membrane to the other.

(*Id.*)

Noting that even MSI described its product as a skinless membrane (SA 36, 38, 40), the district court determined, "as fact, that MSI's membranes are skinless within the meaning of the Pall patent and its claims." (*Id.*) These findings were made only after carefully considering the properties, structure, and function of the accused MSI membranes and applying the information to the individual limitations of the Pall patent claims. (SA 37 *et. seq.*)

The district court meticulously analysed and ruled on the evidence before it. It specifically found that the MSI membranes have uniform pore structure (SA 38, 40), that they have no fluid blocking barrier layer (*id.*), and that they do not have pinholes or other defects characteristic of skinned membranes (SA 38). It also relied upon MSI's own admissions, in its laboratory records and advertisements to the trade, that its membranes were skinless (SA 36, 38, 40). And it specifically disposed of MSI's argument that its membranes looked different by pointing out that that occurred only "under



extreme magnification" (SA 39), and that the definition of skinless did not hinge on visual appearance in any event (SA 38). Finally, the court reviewed the performance characteristics for MSI's membranes and found that they corroborated the finding of skinlessness. (SA 38-40). The court's approach and analysis were exemplary in every respect.

MSI wishes to have this Court make different findings and come to different conclusions. It has not shown, however, how any of the district court's findings are clearly erroneous or that the district court violated any rule of claim construction or application. The overwhelming weight of the evidence, properly adduced and applied by the district court, establishes firmly that MSI infringed the Pall patent. The district court's judgment to that effect must be affirmed.

## VII. CONCLUSION

This court should continue to follow its precedent that the issue of claim construction is a question of law, with underlying factual issues. Extrinsic evidence probative to the resolution of disputed claim terms should be considered by the fact finder. This procedure is in accordance with public policy and Fed. R. Civ. P. 52(a). The district court, in the light of all the evidence and in accordance with the legal principles of claim construction properly interpreted the claims at issue. The district court then properly applied those claims to MSI's accused products in finding infringement. Its judgment should be affirmed.

Respectfully submitted,



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### CERTIFICATE OF SERVICE

I hereby certify that two copies of the foregoing SUPPLEMENTAL BRIEF FOR PLAINTIFF/CROSS-APPELLANT PALL CORPORATION were served upon counsel for Defendant/Appellant Micron Separations, Inc., by courier service, to :

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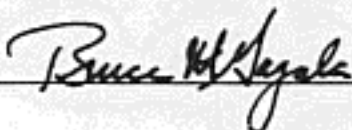
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This 14th day of March, 1994.

  
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