

Texas Intellectual Property Law Journal
Winter 2001

Articles

**THE SCOPE OF CLAIM AMENDMENTS, PROSECUTION HISTORY ESTOPPEL, AND THE DOCTRINE OF
EQUIVALENTS AFTER FESTO VI**

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Table of Contents

I.	Summary	160
II.	The History of Festo	161
III.	Precedent Before Festo	163
IV.	After Festo	166
	A. Unless Otherwise Unambiguously Explained in the Written Record, any Amendment Affecting the Issuance of a Patent Must Be Presumed to Be for a “Substantial Reason Related to Patentability”	166
	1. Amendments Made for Ambiguous Reasons, or No Express Reason, as Evidenced by the Prosecution History, Should Be Construed Against the Patentee to the Benefit of the Public	167
	2. The Limitation of Prosecution History Estoppel to Amendments that Overcome Prior Art Under 35 U.S.C. §§ 102 or 103 Permits Patentees to Avoid Estoppel by Adding “Art-Avoiding” Limitations Under the Guise of 35 U.S.C. § 112 “Clarifications” or for Other “Non-Prior Art” Reasons	168
	3. The Patent System Should Provide an Incentive to Design Around a Competitor’s Claims	170
	B. Voluntary Amendments Create Prosecution History Estoppel Unless Unambiguously Explained by the Prosecution History	171
	C. The Range of Equivalents Remaining Following an Amendment that Creates Prosecution History Estoppel Should Turn on the Nature of the Amendment and Be Determined Case-by-Case	173
	1. Supreme Court Cases Prior to Warner-Jenkinson	173
	2. Excluding from a Claim More Subject Matter than Necessary to Overcome Prior Art Does Not Eliminate Entire Excluded Subject Matter from the Claim Under the Doctrine of Equivalents	175
	3. Federal Circuit Cases prior to Festo VI	176

a. A Range of Equivalents Should Remain Following an Amendment	176
b. Prosecution History Estoppel Should only Apply to Amended Limitations	176
c. The Range of Equivalents Should Be Determined from the Viewpoint of a Reasonable Competitor	177
d. All Equivalents to an Amended Claim Limitation Are Surrendered When the Warner-Jenkinson Presumption Is Triggered	178
E. Prosecution History Estoppel Precludes an Analysis of the Doctrine of Equivalents and the All Elements Rule for the Carroll Patent but Not for the Sealing Rings of the Stoll Patent	179
1. The Stoll Patent	179
a. The Magnetizable Sleeve Element	179
b. The Sealing Rings	180
2. The Carroll Patent	183
V. Conclusion	184

***160 I. Summary**

The doctrine of prosecution history estoppel precludes a patentee from resurrecting subject matter in litigation that necessarily was surrendered during prosecution to obtain allowance.¹ Where prosecution history estoppel applies, the scope of the estoppel should be ascertained to determine whether application of the doctrine of equivalents is barred under the particular facts of the case.² In general, determining whether a claim amendment creates prosecution history estoppel ***161** should depend on the reason for the amendment. Established Federal Circuit case law and Supreme Court decisions prior to Festo VI expressly rejected the view that all equivalents are lost following a claim amendment.³ Determining the scope of the estoppel should require an objectively based, case-specific, factual inquiry into the nature of the amendment, the prior art, and other factors that prompted the amendment.⁴ Moreover, the proposed methodology to determine the scope of an estoppel is useless for unexplained amendments,⁵ and the application of the doctrine of equivalents to these types of amendments should be barred.⁶

II. The History of Festo

In 1988, Festo Corporation (“Festo”) filed suit against Shoketsu Kinzoku Kogyo Kabushiki Co. and SMC Pneumatics, Inc. (collectively “SMC”) in the United States District Court for the District of Massachusetts, for infringement of two patents relating to magnetically coupled rodless cylinders.⁷

Prior to a jury trial, the district court appointed a special master who conducted an eleven-day evidentiary hearing.⁸ Various motions followed the report prepared by the master, and the district court granted Festo’s motion for summary judgment that U.S. Patent No. 3,779,401 (the “Carroll patent”), reissued Oct. 25, 1988, was infringed under the doctrine of equivalents.⁹ The court also granted SMC’s motion for judgment of noninfringement of certain SMC models, and all issues related to U.S. Patent No. 4,354,125 (the “Stoll patent”), issued Oct. 12, 1982, were to be decided by a jury.¹⁰

Following a full jury trial on liability, the unanimous ten-member jury found infringement of the Stoll patent under the doctrine of equivalents and sustained the ***162** validity of both the Stoll and Carroll patents.¹¹ On appeal of the issues of infringement of the Stoll and Carroll patents, a unanimous panel of the Federal Circuit affirmed the judgments of the district court, including those holdings related to the all elements rule,¹² the doctrine of equivalents,¹³ and prosecution history

estoppel.¹⁴ SMC petitioned for a panel rehearing and rehearing en banc; both requests were denied.¹⁵ SMC then petitioned for a writ of certiorari on two questions, one of which was directed to the doctrine of equivalents, and the other related to procedures involving a special master.¹⁶ The Supreme Court granted SMC's petition, vacated the Federal Circuit's decision, and remanded the case for further consideration¹⁷ in view of its decision in Warner-Jenkinson.¹⁸

On remand to the Federal Circuit,¹⁹ the court affirmed the district court's judgment with respect to infringement of the Carroll patent, and vacated and remanded for further proceedings on the Stoll patent.²⁰ The Federal Circuit considered (1) the all elements rule,²¹ (2) equivalency in fact,²² and (3) prosecution history estoppel²³ with respect to each of the patents-in-suit.

The Federal Circuit granted SMC's petition to rehear the appeal en banc and vacated the its prior decision.²⁴ The court requested briefing on the following five questions:

1. For the purposes of determining whether an amendment to a claim creates prosecution history estoppel, is 'a substantial reason related to patentability,'²⁵ limited to those amendments made to overcome prior art under § 102 and § 103, or does 'patentability' mean any reason affecting the issuance of a patent?

2. Under Warner-Jenkinson, should a 'voluntary' claim amendment--one not required by the examiner or made in response to a rejection by an examiner for a stated reason--create prosecution history estoppel?

*163 3. If a claim amendment creates prosecution history estoppel, under Warner-Jenkinson what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

4. When 'no explanation [for a claim amendment] is established,'²⁶ thus invoking the presumption of prosecution history estoppel under Warner-Jenkinson, what range of equivalents, if any, is available under the doctrine of equivalents for the claim element so amended?

5. Would a judgment of infringement in this case violate Warner-Jenkinson's requirement that the application of the doctrine of equivalents 'is not allowed such broad play as to eliminate [an] element in its entirety.'²⁷ In other words, would such a judgment of infringement, after Warner-Jenkinson, violate the 'all elements' rule?²⁸

The court's answers to these questions are discussed and analyzed infra in light of Federal Circuit and Supreme Court precedent.

III. Precedent Before Festo

The doctrine of equivalents allows a patent holder to enforce a patent's exclusionary rights beyond its literal claim language.²⁹ Although contrary to the general principle that the claims measure the scope of the invention, the doctrine is intended to prevent frauds on patents and to assure a fair scope of protection for patent holders.³⁰

"[T]he doctrine of equivalents, when applied broadly, conflicts with the definitional and public-notice functions of the statutory claiming requirement."³¹ Claims must "particularly" and "distinctly" identify the patented invention,³² so that the public has fair notice of what constitute the metes and bounds of the claimed invention.³³ Such notice permits other parties, including competitors, to avoid actions that infringe the patent and allows them to "design around" the *164 patent.³⁴ Indeed, the ability of competitors to design an improvement over and around the prior art has long been recognized as beneficial.³⁵

In Warner-Jenkinson, the Supreme Court effectively adopted the "all elements rule."³⁶ Under this rule, the doctrine of equivalents must be applied to individual elements of the claim, yet as to each individual element, the doctrine must not be applied so broadly as to "effectively eliminate that element in its entirety."³⁷

The doctrine of equivalents is limited by the doctrine of "prosecution history estoppel" which precludes the patent holder from recapturing subject matter surrendered during prosecution.³⁸ This estoppel typically acts as a disclaimer of certain subject matter and applies when an applicant amends or cancels claims rejected by an examiner as unpatentable in light of the prior art to obtain allowance of the claims.³⁹ Perhaps more importantly, claim amendments can inform the public and other competitors of limits on the scope of the protection that has been agreed to by the patent applicant.⁴⁰

Prior to its November 29, 2000 decision in *Festo VI*,⁴¹ the Federal Circuit took a flexible approach to determining the scope of prosecution history estoppel that *165 depended on both the scope of the amendment, and the reason for the amendment. As stated by the court in *Hughes Aviation*: “Depending on the nature and purpose of an amendment, it may have a limiting effect within a spectrum ranging from great to small to zero. The effect may or may not be fatal to application of a range of equivalents broad enough to encompass a particular accused product.”⁴²

Thus, the standard for determining whether particular subject matter was relinquished was an objective one that asked whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter through the amendment.⁴³ But in examining this standard, the Supreme Court found that the reasons for claim amendments were relevant to the application of prosecution history estoppel,⁴⁴ and introduced a rebuttable presumption of estoppel when the patent holder failed to establish any explanation for an amendment.⁴⁵ In those circumstances, the court must presume that, unless the patentee presents evidence to the contrary, the reason for the amendment is related to patentability.⁴⁶ In the absence of such evidence, prosecution history estoppel bars the application of the doctrine of equivalents as to the amended claim element to preserve the balance between fairness to inventors and certainty to competitors.⁴⁷

With this background and understanding of prosecution history estoppel, the Federal Circuit’s answers⁴⁸ to the questions presented in its August 20, 1999, Order⁴⁹ are addressed below.

***166 IV. After Festo**

A. Unless Otherwise Unambiguously Explained in the Written Record, any Amendment Affecting the Issuance of a Patent Must Be Presumed to Be for a “Substantial Reason Related to Patentability”

The Federal Circuit answered En Banc Question 1 as follows:

For the purposes of determining whether an amendment gives rise to prosecution history estoppel, a ‘substantial reason related to patentability’ is not limited to overcoming or avoiding prior art, but instead includes any reason which relates to the statutory requirements for a patent. Therefore, a narrowing amendment made for any reason related to the statutory requirements for a patent will give rise to prosecution history estoppel with respect to the amended claim element.⁵⁰

With this answer, the court affirmed the principle that the claims of a patent serve a notice function to the public, as the public has a right to rely on the written record made by the patentee.⁵¹ The written record, created in an *ex parte* transaction before the USPTO, is all the public can look to in determining the metes and bounds of the patent grant.⁵²

This principle was recognized by the Supreme Court as early as 1886, when the Court stated that limitations “imposed by the inventor . . . [that] were introduced into an application after it had been persistently rejected, must be strictly construed against the inventor and in favor of the public.”⁵³ This rationale allows the public to rely on a patent’s explicit claims and specification, including the reasons for claim amendments, when entering the market place.⁵⁴

The reason a claim is amended should be clear from the written record. The public should not be asked to make infringement determinations based on conjecture of the reasons for a patentee’s claim amendments.⁵⁵ While there may be circumstances where an amendment is made for reasons wholly unrelated to patentability, such reasons, if not self evident, should be unambiguously explained *167 by the patentee in the prosecution history.⁵⁶ Otherwise, such amendments should be presumed to have been made for reasons related to patentability.⁵⁷

1. Amendments Made for Ambiguous Reasons, or No Express Reason, as Evidenced by the Prosecution History, Should Be Construed Against the Patentee to the Benefit of the Public

In its holding, the Federal Circuit relied upon its “nearly twenty years of experience in performing [its] role as the sole court of appeals for patent matters”⁵⁸ supported by a framework of legal analysis that adds certainty to any infringement determination undertaken.⁵⁹ Certainty can be fostered best when the burden is placed on the patentee to produce an unambiguous record on which the public can rely.⁶⁰ Claim limitations introduced by amendment for reasons absent or ambiguous from the written record should be construed strictly against the patentee who could have explained the reason for

the amendment.⁶¹ This strict interpretation of unexplained amendments should be applied regardless of whether in hindsight they appear to have been made to avoid the prior art.⁶² If the amendment is clearly introduced for non-prior art reasons, and those reasons are clearly stated in the prosecution record, it should not create prosecution history estoppel.⁶³

***168 2. The Limitation of Prosecution History Estoppel to Amendments that Overcome Prior Art Under 35 U.S.C. §§ 102 or 103 Permits Patentees to Avoid Estoppel by Adding “Art-Avoiding” Limitations Under the Guise of 35 U.S.C. § 112 “Clarifications” or for Other “Non-Prior Art” Reasons**

Claim limitations that are added to avoid the prior art must be grounds for prosecution history estoppel, regardless of the alleged reason given by the patentee for such an amendment.⁶⁴ Indeed, the Federal Circuit extended this principle with its answer to en banc Question 1: “[A] narrowing amendment made for any reason related to the statutory requirements for a patent will give rise to prosecution history estoppel with respect to the amended claim element.”⁶⁵ Any other holding would reduce infringement analysis to an inquiry that elevates form over substance.⁶⁶

The Federal Circuit also had the opportunity to address this issue in *Litton Systems, Inc. v. Honeywell, Inc.*,⁶⁷ which was remanded from the Supreme Court for further consideration in light of *Warner-Jenkinson*.⁶⁸ In *Litton*, the patentee argued that a limiting amendment was a response to a rejection under 35 U.S.C. § 112, paragraph 2, because the “applicants were not claiming what they regarded as their invention” and, therefore, estoppel should not be presumed.⁶⁹ The Federal Circuit correctly held that, although amendments made in response to section 112 are generally not made “in response to the prior art,” the amendment at issue “was related to patentability.”⁷⁰ According to the court, the particular ‘regards as his invention’ rejection followed a series of obviousness rejections. In effect, the examiner threatened to reject again for obviousness unless the applicant restated its claim to match the scope of its narrow arguments for patentability. In this context, the section 112 rejection carried the same message as the prior obviousness rejection. An obviousness rejection is of course made in response to prior art.⁷¹ Consequently, the court determined that *Litton* made its amendment for “reasons related to patentability.”⁷²

*169 The Federal Circuit denied *Litton* a combined petition for rehearing and suggestion for rehearing in banc despite the Supreme Court’s charge to the Federal Circuit to “refine the formulation of the test for equivalence.”⁷³ The reasons proffered by the court for not rehearing the case were that the case “is rather convoluted and the technology is obscure to the uninitiated [, it] is not the best one in which to address the issue of prosecution history estoppel[.]”⁷⁴ and it is “a fruit not yet ripe to pluck.”⁷⁵

Likewise, in *Loral Fairchild Corp. v. Sony Corp.*,⁷⁶ the patentee attempted to avoid file history estoppel by asserting that amendments were made solely in response to a 35 U.S.C. § 112 rejection, i.e., not for purposes of patentability, but only to clarify the alignment of the various components formed in the process.⁷⁷ The Federal Circuit found otherwise, stating “[a]n applicant may not avoid the conclusion that an amendment was made in response to prior art by discussing the amendment under the rubric of a clarification due to a § 112 indefiniteness rejection.”⁷⁸

In *Kinzenbaw v. Deere & Co.*,⁷⁹ similar situation occurred. The claimed invention was “[a]n apparatus for forming seed planting furrows,”⁸⁰ and the claim element at issue related to “a pair of depth gauge compacting wheels” that controlled the depth of the furrow created by the planter.⁸¹ During prosecution, in order to overcome the examiner’s rejection and to obtain his patent, the inventor narrowed his claims by specifying, among other things, that the gauge wheels needed a radius less than that of the radius of the blades, or “discs,” of the planter.⁸² On the accused device, the gauge wheels had a radius greater than that of *170 the discs.⁸³ Consequently, the accused device could not literally infringe, and, as a result, the patentee sought to prove infringement under the doctrine of equivalents.⁸⁴ The Federal Circuit denied equivalents protection to a limitation that the patentee claimed “was unnecessary to distinguish the prior art,” because the court “decline[d] to undertake the speculative inquiry whether, if [the patentee] had made only that narrowing limitation in his claim, the examiner nevertheless would have allowed it.”⁸⁵ The *Kinzenbaw* court justified its holding by reiterating the public notice function of the patent and its prosecution history file.⁸⁶ Like the Federal Circuit, a competitor should not be required to undertake a “speculative inquiry” to determine the scope of the claim.⁸⁷

3. The Patent System Should Provide an Incentive to Design Around a Competitor’s Claims

The ability of the public to successfully design around, i.e., to use the patent disclosure to design a product or process that does not infringe, and is an improvement over the prior art, is one of the important public benefits that justify awarding the patentee exclusive rights to his or her invention.⁸⁸ Successful “design around” requires that the limits of the patentee’s grant be determined with certainty.⁸⁹ Certainty requires that the public be able to determine the limits of exclusivity by carefully examining the written record created during prosecution of the patent claims.⁹⁰

***171 B. Voluntary Amendments Create Prosecution History Estoppel Unless Unambiguously Explained by the Prosecution History**

The Federal Circuit answered En Banc Question 2 as follows: “Voluntary claim amendments are treated the same as other amendments. Therefore, a voluntary amendment that narrows the scope of a claim for a reason related to the statutory requirements for a patent will give rise to prosecution history estoppel as to the amended claim element.”⁹¹ With this answer, the Federal Circuit provides a “workable” rule to be applied to voluntary amendments.

A “voluntary” amendment, i.e., one not required by the examiner or made in response to a rejection by an examiner for a stated reason, may be made for a variety of reasons. For instance, an applicant may become aware of prior art that may make the pending claims unpatentable, thereby forcing the applicant to amend the claims. Alternatively, the applicant may merely wish to clarify the language of the claim with no specific regard to the patentability of the clarification. In the former case, the amendment creates prosecution history estoppel,⁹² while in the latter case, the amendment should not because whether a voluntary amendment creates prosecution history estoppel should depend on the reason for the amendment.⁹³

If the reason for a voluntary amendment can be discerned from the file history, that reason, generally, should control the decision as to whether the amendment creates estoppel.⁹⁴ For example, if the file history clearly indicates that a preliminary amendment was made to overcome prior art, prosecution history estoppel should apply and limit the available range of equivalents under the doctrine of equivalents.⁹⁵ Prosecution history estoppel should not apply, however, if the file history indicates that the amendment was made for reasons that would not cause estoppel, e.g., amendments made simply to clarify the claim language and not made for reasons of patentability. As long as the explanatory remarks accompanying an amendment do not conflict with the file history, such remarks are highly informative to determine whether prosecution history estoppel applies.⁹⁶

***172** The more difficult question is whether a voluntary amendment creates prosecution history estoppel when no explanation accompanies the amendment, and the reason for the amendment cannot otherwise be discerned from the file history. Warner-Jenkinson provides guidance in answering this question.

In Warner-Jenkinson, the claim at issue was rejected over prior art that had a pH greater than 9.0.⁹⁷ Hilton Davis amended the claim to overcome the prior art by limiting the pH to be between 6.0 and 9.0.⁹⁸ The upper limit of 9.0 clearly was put in place to overcome the prior art in response to the Patent Office’s rejection.⁹⁹ There was no prior art of record, however, with a pH below 6.0, nor was there any stated reason in the file history for limiting the minimum pH to 6.0.¹⁰⁰ Thus, the amendment putting a lower limit on the claimed range could be considered “voluntary.” In this context the Supreme Court held that: “[w]here no explanation is established . . . the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”¹⁰¹ Accordingly, Warner-Jenkinson stands for the proposition that prosecution history estoppel may apply to a claim limitation that was added “voluntarily.”

The Supreme Court also discussed the presumption regarding amendments in the context of “required” amendments. The Court stated, “we think the better rule is to place the burden on the patent holder to establish the reason for the amendment required during patent prosecution”¹⁰² The claim amendment at issue in Warner-Jenkinson, however, was not “required” by the prior art rejection. The Federal Circuit in its answer to En Banc Question 2 highlighted this fact by stating: “Accordingly, the amendment at issue in Warner-Jenkinson appears to have been voluntary with respect to the lower pH limit. Nevertheless, the Supreme Court held that the amendment adding the lower pH limit could give rise to prosecution history estoppel.”¹⁰³ The Federal Circuit extended the Warner-Jenkinson presumption in *Festo VI* as to the degree the presumption applies to unexplained amendments, suggesting that the presumption should extend to all ***173** inexplicable amendments regardless of whether a rejection had been issued.¹⁰⁴ This extension by the Federal Circuit promotes policy concerns that favor protecting the public, especially because the patentee is the only entity that could limit the effect of an estoppel by explaining the amendment.¹⁰⁵

C. The Range of Equivalents Remaining Following an Amendment that Creates Prosecution History Estoppel Should Turn on the Nature of the Amendment and Be Determined Case-by-Case

The Federal Circuit answered En Banc Question 3 as follows: “When a claim amendment creates prosecution history estoppel with regard to a claim element, there is no range of equivalents available for the amended claim element. Application of the doctrine of equivalents to the claim element is completely barred (a ‘complete bar’).”¹⁰⁶ With this answer, the Federal Circuit abrogates most of its own case law with regard to the doctrine of equivalents and conflicts with Supreme Court precedent.¹⁰⁷

1. Supreme Court Cases Prior to Warner-Jenkinson

Some Supreme Court decisions suggest that limited ranges of equivalents are available following an amendment to a claim. In *Hurlbut v. Schillinger*,¹⁰⁸ the Court ruled that a patentee, who had disclaimed a portion of his invention, and who had been found in prior litigation to be precluded from asserting his claims against one accused device in light of that disclaimer, nonetheless remained entitled to a *174 judgment of infringement by a different device that was more closely equivalent to his claimed invention.¹⁰⁹

Other Supreme Court decisions suggest that while the patent owner is estopped from claiming a range of equivalents that would encompass the original claim, the amended claim may still be accorded some range of equivalents. For example, in *Knapp v. Morss*,¹¹⁰ the invention related to improvements in dress forms or manikins, where every part of the form is adjustable, so that the form may be applied to a dress of any size or style.¹¹¹ The patentee filed two claims that were rejected by the Patent Office.¹¹² The first claim was rejected in view of the prior art, and the second claim was determined to lack novelty in view of the prior art.¹¹³ The patentee amended the second claim, U.S. Patent No. 233,240 issued on October 12, 1880, and the patentee asserted the second claim as infringed.¹¹⁴ The Court ruled, “It is well settled that the second claim must be read and interpreted with reference to the rejected claim and to the prior state of the art, and cannot be so construed as to cover either what was rejected by the Patent Office or disclosed by prior devices.”¹¹⁵

The Supreme Court also recognized that although the available range of equivalents may be narrowed, a patentee does not necessarily surrender all equivalents. For example, in *Computing Scale Co. of America v. Automatic Scale Co.*,¹¹⁶ the Court determined that, through claim amendments made to overcome prior art and representations made to the examiner regarding the invention, the patentee had conceded that the claims were limited to the spiral rod component of his computing scale shown in the specification.¹¹⁷ Thus, according to the Court, “it is of that narrow character of invention which does not entitle the patentee to any *175 considerable range of equivalents, but must be practically limited to the means shown by the inventor.”¹¹⁸

2. Excluding from a Claim More Subject Matter than Necessary to Overcome Prior Art Does not Eliminate Entire Excluded Subject Matter from the Claim Under the Doctrine of Equivalents

When an examiner rejects a claim over prior art, the patent applicant may amend the claim to carve out the minimum subject matter necessary to avoid the prior art while preserving the maximum subject matter as part of the claim. However, by design or inadvertence, the applicant may surrender by amendment more subject matter than was minimally necessary to avoid the prior art. Warner-Jenkinson provides guidance in assessing the scope of an estoppel when “too much” subject matter is relinquished to avoid prior art.

In Warner-Jenkinson, the examiner rejected the claim because of a prior art process with a pH above 9.0.¹¹⁹ Hilton Davis responded to the rejection by amending the claim to limit the pH to between 6.0 and 9.0.¹²⁰ Thus, Hilton Davis overly limited the pH range because excluding pHs below 6.0 was not necessary to overcome prior art.¹²¹ The Court remanded the case to the lower courts to give Hilton Davis an opportunity to explain why the claim was limited to a minimum pH of 6.0.¹²² Specifically, the Court instructed:

Because respondent has not proffered in this Court a reason for the addition of a lower pH limit, it is impossible to tell whether the reason for that addition could properly avoid an estoppel. Whether a reason in fact exists, but simply was not adequately developed, we cannot say. On remand, the Federal Circuit can consider whether reasons for that portion of the amendment were offered or not and whether further

opportunity to establish such reasons would be proper.¹²³

Implied in the Court's instructions is that Hilton Davis will not lose equivalents below a pH of 6.0 if the reason for limiting the claim to a pH of 6.0 and higher is established and that reason proves to be one that does not create prosecution history estoppel.

***176 3. Federal Circuit Cases prior to Festo VI**

a. A Range of Equivalents Should Remain Following an Amendment

Contrary to the Federal Circuit's decision in Festo VI, all equivalents should not be lost whenever prosecution history estoppel applies because such a rule has been expressly rejected by the Federal Circuit in other cases and repudiates the essence of stare decisis.¹²⁴ In Hughes Aircraft,¹²⁵ the Federal Circuit's first pronouncement on the doctrine of prosecution history estoppel, the court noted that several older regional circuit courts of appeal opinions expressed the view that any amendment of a claim creates an estoppel, thereby barring all resort to the doctrine of equivalents and strictly limiting the patentee to the literal language of the issued claims.¹²⁶ The court rejected this "wooden application of estoppel" view,¹²⁷ and clearly stated that when estoppel applies, not all equivalents are necessarily surrendered.¹²⁸ Accordingly, this statement was adopted in numerous other Federal Circuit opinions.¹²⁹

b. Prosecution History Estoppel Should only Apply to Amended Limitations

The determination of equivalents must be conducted on an element-by-element and case-by-case basis.¹³⁰ The corollary to this rule is that determinations of prosecution history estoppel also must be conducted on an element-by-element *177 basis. Thus, if an amendment to a claim element creates prosecution history estoppel, the estoppel applies only to the amended element, and unamended claim elements should still be entitled to their full range of equivalents.¹³¹

c. The Range of Equivalents Should Be Determined from the Viewpoint of a Reasonable Competitor

Festo VI does not overrule that the scope of equivalents surrendered, if any, is determined from an examination of the examiner's rejection, the prior art that triggered the amendment, and the amendment itself.¹³² These materials should still be reviewed objectively from the vantage point of a reasonable competitor and what such a person would reasonably conclude was given up by the applicant.¹³³

The Federal Circuit, however, should not limit the evidence upon which a patent holder may rely to establish that a narrowing amendment was made for a purpose unrelated to patentability to what is contained in the prosecution history record.¹³⁴ Such limiting unfairly penalizes the patent holder by precluding rebuttal in situations when the prosecution record does not entirely explain the reason for an amendment.¹³⁵ This impossibility of rebuttal was surely not contemplated by the Supreme Court in creating "[t]he presumption we have described, one subject to rebuttal if an appropriate reason for a required amendment is established"¹³⁶

***178 d. All Equivalents to an Amended Claim Limitation Are Surrendered When the Warner-Jenkinson Presumption Is Triggered**

The Federal Circuit answered En Banc Question 4 as follows: "When no explanation for a claim amendment is established, no range of equivalents is available for the claim element so amended."¹³⁷ With this answer, the Federal Circuit upholds current Federal Circuit and Supreme Court precedent.¹³⁸

In a "classic" prosecution history estoppel case, in which a claim clearly is amended to overcome a prior art rejection by the PTO, the scope of equivalents surrendered normally is determined from a review of the examiner's rejection, the prior art that triggered the amendment, and any amendments and arguments made to distinguish such art.¹³⁹ In the relatively unusual circumstance in which those considerations are useless to assess the scope of an estoppel, all equivalents should be lost

whenever a voluntary amendment is made with no way to determine from the prosecution history as a whole why the amendment was made.¹⁴⁰

Although the reason for an amendment may not be clearly established, it is sufficient to determine that the amendment was not made for patentability reasons to avoid prosecution history estoppel.¹⁴¹ For example, if an added limitation is encompassed by the prior art of record and clearly is not needed to comply with any statutory requirements, a court properly may conclude that the amendment was not made for reasons of patentability.¹⁴² In this case, the amendment should not cause estoppel, even though the reason for the amendment is not expressly explained.¹⁴³

A rule presuming estoppel for inexplicable amendments makes sense given the nature of patent prosecution. While the result of such a holding may seem *179 harsh at first blush, the result is easily avoidable and properly places the risk of an incorrect outcome on the party most able to avoid the problem.¹⁴⁴

E. Prosecution History Estoppel Precludes an Analysis of the Doctrine of Equivalents and the All Elements Rule for the Carroll Patent but Not for the Sealing Rings of the Stoll Patent

The Federal Circuit answered En Banc Question 5 as follows: “We do not need to reach this question for reasons which will become clear in our discussion of the specific case before us. Accordingly, we leave for another day any discussion of the ‘all elements’ rule.”¹⁴⁵ The Federal Circuit did not reach this question because, using its answers to En Banc Questions 1 and 3, prosecution history estoppel barred application of the doctrine of equivalents and precluded an analysis of the “all elements” rule.¹⁴⁶ The court correctly concluded that prosecution history estoppel applied to the Stoll and Carroll patents, however, its reasoning was flawed by its application of the “complete bar” rule where the Warner-Jenkinson presumption did not apply.

1. The Stoll Patent

a. The Magnetizable Sleeve Element

Original claim 1 did not recite a magnetizable sleeve, although this feature of the invention was recited in original dependent claim 8.¹⁴⁷ In response to the first Office Action, however, Festo replaced original claim 1 with a claim reciting a magnetizable sleeve and canceled claim 8.¹⁴⁸ The Office Action rejected all of the claims under 35 U.S.C. § 112, paragraph 1, because it was not clear to the examiner whether the claimed device was a true motor or a magnetic clutch.¹⁴⁹ In addition, the Office Action rejected claims 4-12 under 35 U.S.C. § 112, paragraph 2, for *180 being improperly multiply dependent.¹⁵⁰ Accordingly, the amendment adding the magnetizable sleeve element did not address either of these rejections,¹⁵¹ and there is no statement in the prosecution history that explains why this element was included in the independent claim.¹⁵²

In its Supplemental Brief On Remand from the Supreme Court, Festo argued that the amendment was made to clarify the claim.¹⁵³ Specifically, Festo asserted that the “‘hollow cylindrical assembly’ recited in original claim 1 was ‘rewritten more clearly as a cylindrical sleeve made of a magnetizable material.’”¹⁵⁴ This assertion was inadequate to escape the Warner-Jenkinson presumption, however, because nothing in the prosecution history of the Stoll patent indicated that the magnetizable sleeve element was merely added for purposes of clarification unrelated to patentability.¹⁵⁵ Consequently, the Warner-Jenkinson presumption was triggered, barring all equivalents,¹⁵⁶ and an analysis of the claims under the “all elements” rule was precluded.¹⁵⁷

b. The Sealing Rings

The court correctly decided that prosecution history estoppel applied to the sealing ring elements of the Stoll patent, but it should not have precluded all equivalents on the basis that the amendment was made for reasons of patentability.¹⁵⁸ Evidence in the case history suggests that the Warner-Jenkinson *181 presumption was not triggered, and when the presumption is not triggered, some range of equivalents should remain for an amended claim element.¹⁵⁹

Festo argued from the prosecution history that its amendment to claim 1¹⁶⁰ was made in response to the 35 U.S.C. § 112 rejection by the Patent Office and not to avoid the prior art.¹⁶¹ Submitted with the amendment was a statement that the German patents supplied to the Patent Office were “obviously clearly distinguishable over the subject matter of the

[[amended] claims now present in th[e] application.”¹⁶² Also submitted with the amendment was an assertion that “[i]t is clear that neither of these two references discloses the use of structure preventing the interference of impurities located inside the tube and on the outside of the tube while the arrangement is moved along the tube.”¹⁶³ In view of these statements, the court concluded the amendment adding the sealing ring element was made to distinguish the German patents and, therefore, was made for reasons of patentability,¹⁶⁴ creating prosecution history estoppel¹⁶⁵ and barring all equivalents.¹⁶⁶

In this instance, however, the Warner-Jenkinson presumption was not triggered because Festo did not provide the Patent Office with an unexplained amendment. As a result, some reasonable range of equivalents should remain,¹⁶⁷ *182 and an analysis of the “all elements” rule should be required with respect to the sealing rings element of claim 1 of the Stoll patent. Consequently, a finding of infringement with regard the sealing rings of the Stoll patent would not violate Warner-Jenkinson’s requirement that the application of the doctrine of equivalents “is not allowed such broad play as to effectively eliminate [an] element in its entirety,”¹⁶⁸ and such a finding would not violate the “all elements” rule.

The Stoll claimed element of “first sealing rings” is associated with the function of the wiping of impurities to avert contamination of magnets.¹⁶⁹ SMC thus argues that the claim term “first sealing rings” designates two elements, and when one of the sealing rings is absent, the wiping function is not performed.¹⁷⁰ According to SMC, in order for the all elements rule to be satisfied in this case, the substitution of two separate elements that are the same or equivalent elements is required.¹⁷¹

The written description, however, explains that the wiping function is also performed by the adjacent guide rings where “any such impurities are pushed along in front of piston 16 by the sealing rings 26 or--should they manage to get past these--by the sliding guide rings 24, so that the annular magnet arrangement is invariably faced with a clean section of the internal tube wall.”¹⁷²

SMC argues that this multiplicity of rings and functions distinguishes the Stoll invention from that of the Carroll patent, such that even if the all elements rule is met as to Carroll, it is violated as to Stoll.¹⁷³ The evidence, however, supports the contrary conclusion because “Festo’s witnesses testified to the correspondence between the first sealing rings and the SMC two-way sealing ring, and that the guide rings in the SMC devices also perform a wiping function as taught in the specification.”¹⁷⁴

Inquiry under the all elements rule is informed by “an analysis of the role played by each element in the context of the specific patent claim.”¹⁷⁵ The role of the sealing rings and the guide rings in wiping the cylinder was fully explored at trial in the district court, and SMC did not dispute that the wiping function is *183 performed in the SMC devices.¹⁷⁶ In addition, on the question of equivalency in fact, Festo’s mechanical expert and the inventor testified to the facts of interchangeability of the ring structures, and the substantial identity of function, way, and result.¹⁷⁷ SMC did not present any contrary evidence or witnesses, further supporting that substantial evidence supported the verdict of infringement under the doctrine of equivalents with respect to the issue of the first sealing rings.¹⁷⁸

2. The Carroll Patent

The Federal Circuit correctly ruled that all equivalents are barred to the pair of sealing rings added by amendment to claim 9 of the Carroll patent due to prosecution history estoppel, however, its reasoning was flawed by application of its answer to En Banc Question 3 to bar all equivalents.¹⁷⁹ Equivalents of the pair of sealing rings should have been barred simply because Festo did not provide an adequate explanation unrelated to patentability for the addition of the sealing rings to claim 9, triggering the Warner-Jenkinson presumption.

The original claims of the Carroll patent did not mention the sealing rings claim clause.¹⁸⁰ Festo introduced the clause, along with several other changes to the claims, after the Carroll patent was accepted for reexamination.¹⁸¹ Festo stated that the new issue flowing from the supplied German patent was not related to the sealing rings, referring to the prosecution record.¹⁸² The prosecution record shows a lengthy discussion of the magnets, the cushion, and end members, but mentions the sealing rings only in a list of changes to the claim.¹⁸³ In addition, Festo admits *184 there is “[n]o specific mention of the sealing rings” in the prosecution history record,¹⁸⁴ making Festo’s purpose for the amendment unclear.

Festo argues that the amendment adding the pair of sealing rings element was not “required,” and thus was voluntary.¹⁸⁵ Festo states that because the amendment was voluntary, it cannot give rise to prosecution history estoppel under Warner-Jenkinson, which speaks of only “required” amendments.¹⁸⁶ Festo’s reading of Warner-Jenkinson is too literal. The broader, more

reasonable, reading of Warner-Jenkinson suggests that whether an amendment is voluntary or required by the PTO is irrelevant.¹⁸⁷ Consequently, Warner-Jenkinson requires that where no reasonable explanation is established for the addition of the sealing rings element, the court should presume that Festo had a substantial reason related to patentability for including the element.¹⁸⁸ In this situation, prosecution history estoppel completely bars the application of the doctrine of equivalents to the sealing rings element of the Carroll patent.¹⁸⁹

V. Conclusion

The overriding concern of this paper is the balance between the rights of patent holders to a fair scope of protection and the rights of their competitors to know where that scope of protection ends.¹⁹⁰ The flexible approach taken by the Federal Circuit prior to Festo VI should be the guide for applying prosecution history estoppel.¹⁹¹ Estoppel should not depend on whether an amendment responds to certain enumerated statutory grounds, but whether a competitor would reasonably believe that the applicant surrendered subject matter during prosecution.¹⁹² This approach best serves the “public notice” function of the prosecution history while allowing patent holders an adequate scope of protection for their patented inventions.¹⁹³

Footnotes

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¹ See *Hughes Aviation v. United States*, 717 F.2d 1351, 1362, 219 U.S.P.Q.(BNA) 473, 481 (Fed. Cir. 1983) (indicating that the estoppel applies to claim amendments to overcome rejections based on prior art and to arguments submitted to obtain a patent), overruled by *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558; 56 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 2000).

² See *id.*

³ See, e.g., *Hughes Aviation*, 717 F.2d at 1363; 219 U.S.P.Q. at 481 (“Depending on the nature and purpose of an amendment, it may have a limiting effect within a spectrum ranging from great to small to zero”). See also *Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29, 41 U.S.P.Q.2d (BNA) 1865, 1871 (1997) (“Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.”).

⁴ See *Hughes Aviation*, 717 F.2d at 1363, 219 U.S.P.Q. at 481.

⁵ See *Warner-Jenkinson*, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873.

⁶ See *id.*

⁷ See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, No. 88-1814-PBS (D. Mass. Feb. 3, 1994) [hereinafter *Festo I*], 72 F.3d 857 (Fed. Cir. 1995) [hereinafter *Festo II*], vacated, *Shoketsu Kinzoku Kogyo Kabushiki Co. v. Festo Corp.*, 520 U.S. 1111 (1997) [hereinafter *Festo III*], remanded, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 172 F.3d 1361, 50 U.S.P.Q.2d (BNA) 1385 (Fed. Cir. 1999) [hereinafter *Festo IV*], reh’g en banc granted & vacated, 187 F.3d 1381 [hereinafter *Festo V*], reh’g en banc, 234 F.3d 558 (Fed. Cir. 2000) [hereinafter *Festo VI*].

⁸ See *Festo IV*, 172 F.3d at 1365, 50 U.S.P.Q.2d at 1386.

⁹ See *id.*

10 See id.

11 See id., 50 U.S.P.Q.2d at 1386-87.

12 See Festo II, 72 F.3d at 861, 37 U.S.P.Q.2d at 1163.

13 See id. at 863, 37 U.S.P.Q.2d at 1163.

14 See id. at 863-64, 37 U.S.P.Q.2d at 1163.

15 See id. at 857, 37 U.S.P.Q.2d at 1161.

16 See Festo IV, 172 F.3d at 1365, 50 U.S.P.Q.2d at 1387.

17 See Festo III.

18 520 U.S. 17 (1997).

19 See Festo IV.

20 See id. at 1374, 1381, 50 U.S.P.Q.2d at 1393, 1398.

21 See id. at 1367-71, 50 U.S.P.Q.2d at 1388-91.

22 See id. at 1371, 50 U.S.P.Q.2d at 1391.

23 See id. at 1371-74, 50 U.S.P.Q.2d at 1391-93.

24 See Festo V.

25 Warner-Jenkinson, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873.

26 Id.

27 Id. at 29, 41 U.S.P.Q.2d at 1871.

28 Festo V, 187 F.3d at 1381-82, 51 U.S.P.Q.2d at 1959-60.

- 29 See Warner-Jenkinson, 520 U.S. at 34-35; 41 U.S.P.Q.2d at 1873 (“[T]he claim extends to the thing patented, however its form or proportions may be varied.”) (citation omitted).
- 30 See Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608; 85 U.S.P.Q. (BNA) 328, 330 (1950) (“The essence of the doctrine [of equivalents] is that one may not practice a fraud on a patent.”).
- 31 Warner-Jenkinson, 520 U.S. at 29, 41 U.S.P.Q.2d at 1871.
- 32 See 35 U.S.C. §112, para. 2 (1994 & Supp. 2000).
- 33 See Warner-Jenkinson, 520 U.S. at 25-26, 41 U.S.P.Q.2d at 1869-70 (opining that the doctrine of equivalents is not inconsistent with primacy of PTO in setting the scope of a patent through the patent prosecution process).
- 34 See id. at 36, 41 U.S.P.Q.2d at 1874 (discussing the tests of infringement for designed around patents).
- 35 See, e.g., State Indus., Inc. v. A.O. Smith Corp., 751 F.2d 1226, 1236; 224 U.S.P.Q. (BNA) 418, 424 (Fed. Cir. 1985) (“One of the benefits of a patent system is its so-called ‘negative incentive’ to ‘design around’ a competitor’s products, even when they are patented, thus bringing a steady flow of innovations to the marketplace.”).
- 36 Warner-Jenkinson, 520 U.S. at 29; 41 U.S.P.Q.2d at 1871 (“Each element contained in a patent claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole.”).
- 37 Id.
- 38 See Exhibit Supply Co. v. Ace Patents Corp., 315 U.S. 126, 136-37 (1942) (stating that “it has long been settled that recourse may not be had...to recapture claims which the patentee has surrendered by amendment”); Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1460, 46 U.S.P.Q.2d (BNA) 1169, 1178 (Fed. Cir. 1998) (“Prosecution history estoppel provides a legal limitation on the application of the doctrine of equivalents by excluding from the range of equivalents subject matter surrendered during prosecution of the application for the patent.”) (citation omitted).
- 39 See, e.g., Texas Insts., Inc. v. U.S. Int’l Trade Comm’n, 988 F.2d 1165, 1174, 26 U.S.P.Q.2d (BNA) 1018, 1025 (Fed. Cir. 1993) (“As a general proposition, prosecution history estoppel is based upon a showing that an applicant amended a claim to avoid a cited prior art reference.”) (citation omitted).
- 40 See, e.g., Haynes Int’l, Inc. v. Jessop Steel Co., 8 F.3d 1573, 1577-78; 28 U.S.P.Q.2d (BNA) 1652, 1655 (Fed. Cir. 1993) (“The essence of prosecution history estoppel is that a patentee should not be able to obtain, through litigation, coverage of subject matter relinquished during prosecution.”) (citation omitted).
- 41 See Festo VI, 234 F.3d at 569, 56 U.S.P.Q.2d at 1868 (“When a claim amendment creates prosecution history estoppel with regard to a claim element, there is no range of equivalents available for the amended claim element.”).
- 42 Hughes Aviation, 717 F.2d at 1363, 219 U.S.P.Q.2d at 481.
- 43 See Cybor, 138 F.3d at 1457, 46 U.S.P.Q.2d at 1174 (citing Insituform Techs., Inc., v. Cat Contracting, Inc., 99 F.3d 1098, 1107-08; 40 U.S.P.Q.2d (BNA) 1602, 1606 (Fed. Cir. 1996)).

- 44 See Warner-Jenkinson, 520 U.S. at 30, 41 U.S.P.Q.2d at 1867 (“[P] etitioner reaches too far in arguing that the reason for an amendment during patent prosecution is irrelevant to any subsequent estoppel.”).
- 45 See id. at 33, 41 U.S.P.Q.2d at 1873 (“[T]he presumption we have described [is] subject to rebuttal if an appropriate reason for a required amendment is established....”).
- 46 See id. (“[W]e think the better rule is to place the burden on the patent holder to establish the reason for an amendment required during patent prosecution.”).
- 47 See id. (“Where no explanation is established, however, the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”).
- 48 See Festo VI, 234 F.3d at 566-78, 56 U.S.P.Q.2d at 1870-80.
- 49 See Festo V, 187 F.3d at 1381-82, 51 U.S.P.Q.2d at 1959.
- 50 Festo VI, 234 F.3d at 565, 56 U.S.P.Q.2d at 1872.
- 51 See id. at 565, 56 U.S.P.Q.2d at 1872 (“In view of the functions of prosecution history estoppel--preserving the notice function of the claims and preventing patent holders from recapturing under the doctrine of equivalents subject matter that was surrendered before the Patent Office....”).
- 52 See id.
- 53 Shepard v. Carrigan, 116 U.S. 593, 598 (1886).
- 54 See id. at 598 (“If an applicant, in order to get his patent, accepts one with a narrower claim than that contained in his original application, he is bound by it.”). See also Festo VI, 234 F.3d at 575, 56 U.S.P.Q.2d at 1878 (“By narrowing his claims, a patentee disclaims subject matter encompassed by the original claims.”), citing Shepard, 116 U.S. at 598.
- 55 See Warner-Jenkinson, 520 U.S. at 33, 41 U.S.P.Q.2d at 1870 (“Mindful that claims do indeed serve both a definitional and a notice function, we think the better rule is to place the burden on the patent holder to establish the reason for an amendment required during patent prosecution.”).
- 56 See id. (“Where the reason for the change was not related to avoiding the prior art, the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element.”).
- 57 See id. (“Where no explanation is established, however, the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment.”).
- 58 Festo VI, 234 F.3d at 574, 56 U.S.P.Q.2d at 1875.
- 59 See id. (“[T]he notice function of patent claims has become paramount, and the need for certainty as to the scope of patent protection has been emphasized.”).

60 See Warner-Jenkinson, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873 (“[W]e think the better rule is to place the burden on the patent holder to establish the reason for an amendment required during patent prosecution.”).

61 *Hubbell v. United States*, 179 U.S. 77, 83-84 (stating that amendments “must be strictly construed against the inventor and in favor of the public, and looked upon as in the nature of disclaimers”).

62 See *Festo VI*, 234 F.3d at 576, 56 U.S.P.Q.2d at 1883 (“In order to construe such amendments strictly against the patentee, no scope of equivalents can be afforded to a claim element that was narrowed because of patentability concerns.”).

63 See Warner-Jenkinson, 520 U.S. at 33, 41 U.S.P.Q.2d at 1872 (stating that an element added to a claim by amendment “does not necessarily preclude infringement by equivalents of that element.”); *Festo VI*, 234 F.3d at 568; 56 U.S.P.Q.2d at 1871 (“Thus, if a patent holder can show from the prosecution history that a claim amendment was not motivated by patentability concerns, the amendment will not give rise to prosecution history estoppel.”).

64 See *Festo VI*, 234 F.3d at 567; 56 U.S.P.Q.2d at 1870 (“The law has been clear that amendments made to avoid prior art give rise to prosecution history estoppel.”) (citation omitted).

65 *Id.*

66 Cf. Warner-Jenkinson, 520 U.S. at 33 & n.7, 41 U.S.P.Q.2d at 1872 (opining that a court may explore the reason for an amendment that purportedly is not made to avoid the prior art).

67 140 F.3d 1449 (Fed. Cir. 1998), overruled by *Festo VI*.

68 520 U.S. 17, 41 U.S.P.Q.2d (BNA) 1865 (1997).

69 See *Litton*, 140 F.3d at 1461, 46 U.S.P.Q.2d at 1331.

70 *Id.*

71 *Id.*

72 *Id.*

73 *Litton Systems, Inc. v. Honeywell, Inc.*, 145 F.3d 1472, 1473, 47 U.S.P.Q.2d (BNA) 1106, 1107 (Fed. Cir. 1998) (quoting Warner-Jenkinson, 520 U.S. at 1054, 41 U.S.P.Q.2d at 1881).

74 *Id.*

75 *Id.* 234 F.3d 558, 569, 56 U.S.P.Q.2d 1865, 1872 (overruling *Festo IV* by holding that an amendment made for any reason related to the statutory requirements for a patent, including reasons related to 35 U.S.C. §112, gives rise to prosecution history estoppel; accordingly, no range of equivalents are available for the amended claim element).

76 181 F.3d 1313, 50 U.S.P.Q.2d (BNA) 1865 (Fed. Cir. 1999).

77 See id. at 1326, 50 U.S.P.Q.2d at 1873 (“We agree with the district court that the amendments made during prosecution were made in response to prior art and thus were made for purposes of patentability.”).

78 Id. (“If that were permitted amendments made in response to a § 102 or § 103 rejection would tend to be disguised as responding to the §112 rejection in an attempt to avoid the creation of prosecution history estoppel.”).

79 741 F.2d 383, 222 U.S.P.Q. (BNA) 929 (Fed. Cir. 1984).

80 Id. at 388, 222 U.S.P.Q. at 932.

81 Id.

82 Id.

83 See id. at 388-89, 222 U.S.P.Q. at 932.

84 Id. at 389, 222 U.S.P.Q. at 932-33.

85 Kinzenbaw, 741 F.2d at 389, 222 U.S.P.Q. at 933.

86 See id. (“Deere offers no convincing reason why a competing manufacturer was not justified in assuming that if he built a planter in which the radius of the wheels was greater than that of the disc, he would not infringe the Pust patent.”).

87 Id. (“Deere has not given any convincing reason why we should enlarge the literal scope of the Pust patent claims. Such enlargement would be particularly inappropriate here, where we deal with ‘improvement patents in a crowded art.’ ” (quoting Hughes Aviation, 717 F.2d at 1362, 219 U.S.P.Q. at 481)).

88 See Festo VI, 234 F.3d at 577-78, 56 U.S.P.Q.2d at 1879-80(discussing the importance of the public to be able to improve upon and design around patented technology).

89 Id. at 577, 56 U.S.P.Q.2d at 1879 (arguing that “certainty will stimulate investment in improvements and design-arounds because the risk of infringement will be easier to determine.”).

90 See id. at 577-78, 56 U.S.P.Q.2d at 1879 (discussing the importance of “counseling the public and the patentee on the scope of protection provided by an amended element....”).

91 Id. at 568, 56 U.S.P.Q.2d at 1871.

92 See id., 56 U.S.P.Q.2d at 1872 (“There is no reason why prosecution history estoppel should arise if the Patent Office rejects a claim because it believes the claim to be unpatentable, but not arise if the applicant amends a claim because he believes the claim to be unpatentable.”).

93 See Warner-Jenkinson, 520 U.S. at 33-34, 41 U.S.P.Q.2d 1872-73 (discussing that prosecution history estoppel is applied to voluntary amendments because they are presumed to be made for reasons of patentability, but that the presumption may be rebutted with appropriate explanations for the amendments).

94 See *id.*

95 See *Cybor*, 138 F.3d at 1460, 46 U.S.P.Q.2d at 1178 (estoppel can result from a “deliberate, unequivocal surrender” of claimed subject matter).

96 Cf. *Loral Fairchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1325-26, 50 U.S.P.Q.2d (BNA) 1865, 1870-71 (Fed. Cir. 1999) (discounting patentee’s explanation for the amendment because it conflicted with file history).

97 See *Warner-Jenkinson*, 520 U.S. at 22, 41 U.S.P.Q.2d at 1868.

98 See *id.*

99 See *id.* at 32, 41 U.S.P.Q.2d at 1872 (“[I]t is undisputed that the upper limit of 9.0 was added in order to distinguish the Booth patent.”).

100 See *id.* at 33-34, 41 U.S.P.Q.2d at 1873 (ordering that remand is required to determine reason for adding lower pH limit to determine whether prosecution history estoppel applies).

101 *Id.* at 33, 41 U.S.P.Q.2d at 1873.

102 *Id.* (emphasis added).

103 *Festo VI*, 234 F.3d at 568-69, 56 U.S.P.Q.2d at 1872 (citing *Warner-Jenkinson*, 520 U.S. at 34, 41 U.S.P.Q.2d at 1873).

104 See *id.* at 568, 56 U.S.P.Q.2d at 1871-72 (limiting prosecution history estoppel, however, to voluntary amendments that are added for reasons related to the “statutory requirements for a patent” and treating voluntary amendments “the same as other amendments”).

105 See *Sargent v. Hall Safe & Lock Co.*, 114 U.S. 63, 86 (1885) (“In patents for combinations of mechanism, limitations and provisos, imposed by the inventor, especially such as were introduced into an application after it had been persistently rejected, must be strictly construed against the inventor, and in favor of the public, and looked upon as in the nature of disclaimers.”). See also *Schriber-Schrath Co. v. Cleveland Trust Co.*, 311 U.S. 211, 221 (1940) (noting that the public will suffer “injurious consequences” that are “manifest” if a patentee is permitted to recapture subject matter surrendered); *Sextant Avionique, S.A. v. Analog Devices, Inc.*, 172 F.3d 817, 831-32, 49 U.S.P.Q.2d (BNA) 1865, 1875 (Fed. Cir. 1999) (endorsing finding of estoppel to avoid “detriment of the public” that would result if a claim is allowed to have an uncertain range of equivalents).

106 *Festo VI*, 234 F.3d at 569, 56 U.S.P.Q.2d at 1872.

107 See *id.* at 598-620, 56 U.S.P.Q.2d at 1896-1913 (Michel, J., dissenting) (arguing the majority’s decision contradicts Supreme Court precedent and policy in *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 41 U.S.P.Q.2d 1865 (1996), *Hubbell v. United States*, 179 U.S. 77 (1900), *Royer v. Coupe*, 146 U.S. 524 (1892), *Phoenix Caster Co. v. Spiegel*, 133 U.S. 360 (1890), *Hurlbut v. Schillinger*, 130 U.S. 456 (1889), *Sutter v. Robinson*, 119 U.S. 530 (1886), *Shepard v. Carrigan*, 116 U.S. 593 (1886), *Fay v. Cordesman*, 109 U.S. 408 (1883), and *Goodyear Dental Vulcanite Co. v. Davis*, 102 U.S. 222 (1880)).

108 130 U.S. 456 (1889).

109 See id. at 465-69 (“We are, therefore, of opinion that the first claim of the reissue as it stands after the disclaimer is infringed...”). See also id. at 471 (“[T]he first claim of the reissue, as it stood after the disclaimer, did not expand beyond the claim of the original what was claimed in the reissue.”).

110 150 U.S. 221 (1893).

111 Id. at 222.

112 Id. at 224.

113 Id.

114 See id. at 222, 224.

115 Id. at 224-25 (leaving open some range of equivalents). Other Supreme Court cases have denied equivalents to claim elements that encompass the prior art, but the cases do not rule out the possibility that some equivalents may still exist that are not in the prior art. See, e.g., *Keystone Driller Co. v. Northwest E. Corp.*, 294 U.S. 42, 48 (1935); *Smith v. Magic City Kennel Club*, 282 U.S. 784, 790 (1931); *Morgan Envelope Co. v. Albany Perforated Wrapper Paper Co.*, 152 U.S. 425, 429 (1894).

116 204 U.S. 609 (1907).

117 See id. at 621.

118 Id. (emphasis added).

119 See *Warner-Jenkinson*, 520 U.S. at 22, 41 U.S.P.Q.2d at 1868.

120 See id.

121 See id.

122 See id. at 34, 41 U.S.P.Q.2d at 1873.

123 Id.

124 See *Payne v. Tennessee*, 501 U.S. 808, 827 (1991) (stating that *stare decisis* “promotes the evenhanded, predictable, and consistent development of legal principles, fosters reliance on judicial decisions and contributes to the actual and perceived integrity of the judicial process”). See also *Festo VI*, 234 F.3d at 610, 613-16, 56 U.S.P.Q.2d at 1905, 1908-10 (Michel, J., dissenting) (suggesting that “the approach of today’s majority is contrary to any notion that judge-made law should evolve in a consistent, gradual, and predictable fashion”; and providing a list of 52 Federal Circuit cases from 1983 to 2000 that the majority overturns to highlight the degree by which the majority departs from settled Federal Circuit law).

125 717 F.2d 1351, 219 U.S.P.Q. (BNA) 473 (Fed. Cir. 1983).

- 126 See *id.* at 1362 (citing *Nationwide Chem. Corp. v. Wright*, 584 F.2d 714, 718-19, 200 U.S.P.Q. (BNA) 257, 258 (5th Cir. 1978); *Ekco Prods. v. Chicago Metallic Mfg. Co.*, 347 F.2d 453-55, 146 U.S.P.Q. (BNA) 146, 147 (7th Cir. 1965)).
- 127 See *Hughes Aviation*, 717 F.2d at 1362, 219 U.S.P.Q. at 481.
- 128 See *id.* at 1363, 219 U.S.P.Q. at 481 (stating that an amendment may have limiting effect within a spectrum ranging from “great to small to zero”).
- 129 See, e.g., *LaBounty Mfg., Inc., v. U.S. Int’l Trade Comm’n*, 867 F.2d 1572, 9 U.S.P.Q.2d (BNA) 1995 (Fed. Cir. 1989); *Mannesmann Demag Corp. v. Engineered Metal Prods.*, 793 F.2d 1279, 1284, 230 U.S.P.Q. (BNA) 45, 48 (Fed. Cir. 1986).
- 130 See *Warner-Jenkinson*, 520 U.S. at 40, 41 U.S.P.Q.2d at 1876 (“We expect that the Federal Circuit will refine the formulation of the test for equivalence in the orderly course of case-by-case determinations.... [and t]he determination of equivalence should be applied as an objective inquiry on an element-by-element basis.”).
- 131 *Festo VI*, 234 F.3d at 565, 56 U.S.P.Q.2d at 1869 (stating that estoppel applies to claim elements affected by amendment but not discussing the disposition of unamended claim elements, suggesting that equivalents remain for unamended elements). *Contra id.* at 619, 56 U.S.P.Q.2d at 1913-14 (Rader, J., dissenting) (“All patent protection for amended claims is lost when it comes to after-arising technology, while the doctrine of equivalents will continue to accommodate after-arising technology in unamended claims.”).
- 132 See *id.* at 586, 56 U.S.P.Q.2d at 1886 (“In order to give due deference to public notice considerations under the Warner-Jenkinson framework, a patent holder seeking to establish the reason for an amendment must base his arguments solely upon the public record of the patent’s prosecution, i.e., the patent’s prosecution history.”).
- 133 See *Pharmacia & Upjohn Co. v. Mylan Pharm., Inc.*, 170 F.3d 1373, 1377, 50 U.S.P.Q.2d (BNA) 1033, 1036 (1999) (“To determine what subject matter has been relinquished, an objective test is applied, inquiring ‘whether a competitor would reasonably believe that the applicant had surrendered the relevant subject matter.’”), quoting *Cybor*, 138 F.3d at 1457, 46 U.S.P.Q.2d at 1175.
- 134 See *Festo VI*, 234 F.3d at 586, 56 U.S.P.Q.2d at 1886 (“[A] patent holder seeking to establish the reason for an amendment must base his arguments solely upon the public record of the patent’s prosecution, i.e., the patent’s prosecution history.”).
- 135 See *id.* at 630, 56 U.S.P.Q.2d at 1922 (Newman, J., dissenting) (arguing the rebuttable presumption set forth by Warner-Jenkinson becomes irrebuttable under *Festo VI*).
- 136 *Warner-Jenkinson*, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873.
- 137 *Festo VI*, 234 F.3d at 579, 56 U.S.P.Q.2d at 1880.
- 138 See *id.* (citing *Warner-Jenkinson*, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873, and *Sextant*, 172 F.3d at 832, 49 U.S.P.Q.2d at 1875).
- 139 See *Sextant*, 172 F.3d at 826-27, 49 U.S.P.Q.2d at 1870 (“The extrinsic evidence proffered by *Sextant* cannot alter the construction indicated by the intrinsic evidence, thereby injecting an ambiguity where none exists.”).
- 140 See *Warner-Jenkinson*, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873 (“Where no explanation is established...the court should presume that the patent applicant had a substantial reason related to patentability for including the limiting element added by amendment. In those circumstances, prosecution history estoppel would bar the application of the doctrine of equivalents as to that element.”).

141 See *id.* at 40-41, 41 U.S.P.Q.2d at 1876 (“[I]f the patent holder demonstrates that an amendment required during prosecution had a purpose unrelated to patentability, a court must consider that purpose in order to decide whether an estoppel is precluded.”).

142 See *Festo VI*, 234 F.3d at 567-68, 56 U.S.P.Q.2d at 1871 (“[I]f a patent holder can show from the prosecution history that a claim amendment was not motivated by patentability concerns, the amendment will not give rise to prosecution history estoppel.”).

143 See *id.*

144 See *Shepard*, 116 U.S. at 598 (“[I]t is his province to make his own claim and his privilege to restrict it.”).

145 See *Festo VI*, 234 F.3d at 578, 52 U.S.P.Q.2d at 1880.

146 See *id.* at 587, 590, 52 U.S.P.Q.2d at 1887, 1889 (concluding same and finding that “prosecution history estoppel bars the application of the doctrine of equivalents...[accordingly] we do not reach the ‘all elements’ rule.”).

147 See *Festo IV*, 172 F.3d at 1379, 50 U.S.P.Q.2d at 1397 (“*Festo* also replaced the phrase ‘hollow cylindrical assembly’ of original claim 1 with ‘a cylindrical sleeve made of a magnetizable material and encircles said tube,’ from dependent claim 8.”).

148 See *Festo VI*, 234 F.3d at 583, 56 U.S.P.Q.2d at 1883.

149 See *Festo IV*, 172 F.3d at 1378-79, 50 U.S.P.Q.2d at 1397 (“The examiner’s only substantive comment was under ‘112 & 1, the examiner stating: ‘Exact method of operation unclear. Is device a true motor or magnetic clutch?’”).

150 See *id.* at 1379, 50 U.S.P.Q.2d at 1397 (“The examiner objected, citing ‘112 & 2, to some of the claims as being in multiple dependent form, a style prohibited in United States practice.”).

151 See *id.* (stating that the “amendment did not appear to be needed to distinguish from prior art”).

152 See *id.* (“No mention was made, by applicant or examiner, of the magnetizable material or any other changes to the claims.”).

153 See Appellee *Festo*’s Supplemental Brief On Remand from United States Supreme Court, at 7.

154 *Id.*

155 See *Festo IV*, 172 F.3d at 1379, 50 U.S.P.Q.2d at 1397 (“No explanation was given for these changes.”).

156 See *id.*

157 See *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 4 U.S.P.Q.2d (BNA) 1737 (Fed. Cir. 1987) (en banc) (holding that there can be no infringement under the doctrine of equivalents if even one element of a claim or its equivalent is not present in the accused device); cf. *Warner-Jenkinson*, 520 U.S. at 39 n.8., 41 U.S.P.Q.2d at 1875 n.8 (requiring that if the court determines that a finding of infringement under the doctrine of equivalents “would entirely vitiate a particular claim element,” the court should rule that there is no infringement under the doctrine of equivalents).

158 See Festo VI, 234 F.3d 234 F.3d at 587, 56 U.S.P.Q.2d at 1887 (finding the amendment was made to respond to the 35 U.S.C. §112 rejection and to distinguish the prior art, triggering the court’s answers to En Banc Questions 1 and 3).

159 See discussion supra Part III.C (arguing that some range of equivalents may remain following an amendment for reasons of patentability when prosecution history estoppel applies).

160 See Festo IV, 172 F.3d at 1378-79, 50 U.S.P.Q.2d at 1397 (replacing the “sealing means at each end” phrase with “first sealing rings located axially outside said guide rings,” in the text of dependent claim 4).

161 See Warner-Jenkinson, 520 U.S. at 33, 41 U.S.P.Q.2d at 1872 (“Where the reason for the change was not related to avoiding the prior art, the change may introduce a new element, but it does not necessarily preclude infringement by equivalents of that element.”).

162 See Festo IV, 172 F.3d at 1379, 50 U.S.P.Q.2d at 1379.

163 Id.

164 See Festo VI, 234 F.3d 589, U.S.P.Q.2d at 1888 (“Because a claim will not issue unless it satisfies the requirements of section 112, an amendment made to satisfy the statute is an amendment made for a reason related to patentability.”).

165 See id., 56 U.S.P.Q.2d at 1888-89 (citing Warner-Jenkinson, 520 U.S. at 30-31, 41 U.S.P.Q.2d at 1871-72 (noting that amendments made to avoid the prior art have been held to give rise to prosecution history estoppel)). But see Warner-Jenkinson, 520 U.S. at 33-34, 41 U.S.P.Q.2d at 1873 (suggesting when an amendment is accompanied by argument or explanation distinguishing an amended portion of the claims from the prior art, “prosecution history estoppel places reasonable limits on the doctrine of equivalents,” and it is appropriate to apply the established rules of prosecution history estoppel to the amended portion) (emphasis added).

166 See Festo VI, 234 F.3d at 569, 56 U.S.P.Q.2d at 1872 (ruling that when prosecution history estoppel applies, all equivalents are barred as to the amended claim element).

167 Compare discussion supra Part III.C. (arguing that some range of equivalents may remain following an amendment for reasons of patentability when prosecution history estoppel applies), with discussion supra Part III.D. (arguing that all equivalents to an amended claim limitation are surrendered when the Warner-Jenkinson presumption is triggered).

168 Warner-Jenkinson, 520 U.S. at 29, 41 U.S.P.Q.2d at 1871.

169 U.S. Patent No. 4,354,125, claim 1 (issued Oct. 12, 1982) [[hereinafter Stoll Patent] (“first sealing rings located axially outside said guide rings for wiping said internal wall as said piston moves along said tube to thereby cause any impurities that may be present in said tube to be pushed along said tube so that said first annular magnets will be free of interference from said impurities”).

170 See En Banc Opening Brief of Defendants-Appellants SMC Corp., at 21-22.

171 See id. at 17-22.

172 Stoll Patent, col. 3, lines 51-55.

173 See En Banc Opening Brief of Defendants-Appellants SMC Corp., at 11.

174 Festo IV, 172 F.3d at 1377, 50 U.S.P.Q.2d at 1396.

175 Warner-Jenkinson, 520 U.S. at 40.

176 See Festo IV, 172 F.3d at 1378, 50 U.S.P.Q.2d at 1396.

177 See id. See also Warner-Jenkinson, 520 U.S. at 40, 41 U.S.P.Q.2d at 1875 (“An analysis of the role played by each element in the context of the specific patent claim will thus inform the inquiry as to whether a substitute element matches the function, way, and result of the claimed element, or whether the substitute element plays a role substantially different from the claimed element.”) (emphasis added).

178 See Festo IV, 172 F.3d at 1377, 50 U.S.P.Q.2d at 1396.

179 See Festo VI, 234 F.3d at 591, 56 U.S.P.Q.2d at 1890 (“Indeed, the prosecution history indicates that the amendment was made for a reason related to patentability. In accordance with our answer to En Banc Question 3, prosecution history estoppel bars application of the doctrine of equivalents to the pair of sealing rings element.”).

180 See id. at 583, 56 U.S.P.Q.2d at 1884 (reciting limitations of claim 1 before reexamination).

181 See id. (describing cancellation of claim 1 and limitations added by claim 9).

182 See id. at 584, 56 U.S.P.Q.2d at 1884 (providing Festo’s argument that the amendment could not have been required because the German patent discloses a piston with sealing rings).

183 See Festo IV, 172 F.3d at 1373, 50 U.S.P.Q.2d at 1393 (discussing only the patentability of the claimed features of the plurality of spaced magnets and the end members and cushions).

184 See En Banc Responsive Brief of Plaintiff-Appellee Festo Corp., at 49.

185 See Festo IV, 172 F.3d at 1373, 50 U.S.P.Q.2d at 1392-93 (asserting that no estoppel applies because the amendment adding the sealing rings to the claim was voluntary and was not required).

186 See Warner-Jenkinson, 520 U.S. at 33-34, 41 U.S.P.Q.2d at 1873 (“The presumption we have described, one subject to rebuttal if an appropriate reason for a required amendment is established....”) (emphasis added).

187 See discussion supra Part IV.B.

188 See Warner-Jenkinson, 520 U.S. at 33, 41 U.S.P.Q.2d at 1873.

189 See id.

190 See discussion supra Part III.

¹⁹¹ See discussion supra Part IV.C.

¹⁹² See discussion supra Part IV.C.3.c.

¹⁹³ See discussion supra Part IV.A.2.