

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF MICHIGAN  
SOUTHERN DIVISION**

SFP WORKS, LLC,

Plaintiff/Counter-Defendant,

Case No. 14-13575

Hon. Gerald E. Rosen

v.

BUFFALO ARMORY LLC,

Defendant/Counter-Plaintiff.

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**OPINION AND ORDER REGARDING  
DEFENDANT’S MOTION FOR SUMMARY JUDGMENT**

At a session of said Court, held in  
the U.S. Courthouse, Detroit, Michigan  
on October 31, 2016

PRESENT: Honorable Gerald E. Rosen  
United States District Judge

**I. INTRODUCTION**

In this patent infringement suit, Plaintiff SFP Works, LLC alleges that Defendant Buffalo Armory LLC has infringed a patent held by Plaintiff, U.S. Patent No. 8,480,824 (the “‘824 Patent”), by continuing to use Plaintiff’s patented steel treatment technology after the expiration of a license granting Defendant the right to use this process. Defendant, in turn, has filed counterclaims against Plaintiff, seeking declarations that it has not infringed the ‘824 Patent and that this

patent is invalid on a number of grounds. This Court's subject matter jurisdiction over this case rests upon the parties' assertion of claims arising under federal patent law. *See* 28 U.S.C. § 1338(a).

Through the present motion, Defendant seeks an award of summary judgment in its favor as to Plaintiff's claim of patent infringement and Defendant's counterclaim of patent invalidity. In support of its challenge to Plaintiff's claim of patent infringement, Defendant contends that its accused steel treatment process does not meet two of the limitations of the asserted claims of the '824 Patent, whether literally or under the doctrine of equivalents. As for its claim of invalidity, Defendant argues that the asserted claims of the '824 Patent are invalid for indefiniteness, are anticipated by the relevant prior art, and are obvious in light of this prior art.

Defendant's summary judgment motion has been fully briefed by the parties. Having carefully and thoroughly reviewed the parties' briefs in support of and in opposition to Defendant's motion, as well as the exhibits accompanying these briefs, the Court finds that the relevant facts, legal issues, and authorities are sufficiently presented in these written submissions, and that oral argument would not aid the decisional process. Accordingly, the Court will decide Defendant's motion "on the briefs." *See* Local Rule 7.1(f)(2), U.S. District Court, Eastern

District of Michigan. This opinion and order sets forth the Court’s rulings on this motion.

## II. ANALYSIS

### A. **The Standards Governing Defendant’s Motion**

Through its present motion, Defendant seeks an award of summary judgment in its favor on Plaintiff’s claim of patent infringement and Defendant’s counterclaim of patent invalidity. Under the Federal Rule governing this motion, summary judgment is proper “if the movant shows that there is no genuine issue as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a).

As the Supreme Court has explained, “the plain language of Rule 56[] mandates the entry of summary judgment, after adequate time for discovery and upon motion, against a party who fails to make a showing sufficient to establish the existence of an element essential to that party’s case, and on which that party will bear the burden of proof at trial.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 322, 106 S. Ct. 2548, 2552 (1986). In contrast, to the extent that Defendant seeks an award of summary judgment in its favor on matters as to which it bears the burden of proof — *i.e.*, Defendant’s various challenges to the validity of the ‘824 patent — Defendant’s “showing must be sufficient for the court to hold that no

reasonable trier of fact could find other than for the moving party.” *Calderone v. United States*, 799 F.2d 254, 259 (6th Cir. 1986) (internal quotation marks, citation, and emphasis omitted). Regardless of the allocation of the burden of proof, the central issue under Rule 56 is “whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 251-52, 106 S. Ct. 2505, 2512 (1986).

In deciding a motion brought under Rule 56, the Court must view the evidence “in a light most favorable to the party opposing the motion, giving that party the benefit of all reasonable inferences.” *Smith Wholesale Co. v. R.J. Reynolds Tobacco Co.*, 477 F.3d 854, 861 (6th Cir. 2007). Yet, the nonmoving party may not rely on bare allegations or denials, but instead must support a claim of disputed facts by “citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations . . . , admissions, interrogatory answers, or other materials.” Fed. R. Civ. P. 56(c)(1)(A). Moreover, any supporting or opposing affidavits “must be made on personal knowledge, set out facts that would be admissible in evidence, and show that the affiant or declarant is competent to testify on the matters stated.” Fed. R. Civ. P. 56(c)(4). Finally, “[a] mere scintilla

of evidence is insufficient” to withstand a summary judgment motion; rather, “there must be evidence on which the jury could reasonably find for the non-moving party.” *Smith Wholesale*, 477 F.3d at 861 (internal quotation marks and citation omitted).

**B. The Accused Steel Treatment Process Used by Defendant Does Not Meet Each of the Limitations of the ‘824 Patent, As Necessary To Sustain Plaintiff’s Patent Infringement Claim.**

**1. The Standards Governing Plaintiff’s Claim of Infringement**

Turning first to Plaintiff’s claim of patent infringement, this Court’s inquiry is governed by a two-step analytical framework. *See Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998); *Lear Automotive Dearborn, Inc. v. Johnson Controls, Inc.*, 528 F. Supp.2d 654, 659 (E.D. Mich. 2007). First, the pertinent claims of the ‘824 Patent must be construed to determine their meaning and scope. *See Ethicon Endo-Surgery*, 149 F.3d at 1315. Next, the claims as construed must be compared to the accused process practiced by Defendant. *See Ethicon Endo-Surgery*, 149 F.3d at 1315. As the party alleging infringement, Plaintiff must demonstrate by a preponderance of the evidence that Defendant’s accused process meets every limitation of one or more claims of the ‘824 Patent, either literally or under the doctrine of equivalents. *Cross Medical Products, Inc. v. Medtronic Sofamor Danek, Inc.*, 424 F.3d 1293,

1310 (Fed. Cir. 2005). The failure of the accused process to meet even “a single limitation is sufficient to negate infringement of the claim.” *Laitram Corp. v. Rexnord, Inc.*, 939 F.2d 1533, 1535 (Fed. Cir. 1991).

The first step in the infringement analysis, claim construction, is a question of law to be determined by the Court. *See Ethicon Endo-Surgery*, 149 F.3d at 1315; *Lear Automotive*, 528 F. Supp.2d at 660. The second step, however — *i.e.*, “determining whether [Defendant’s accused process] infringes a properly construed claim” of the ‘824 Patent — is a question of fact. *Ethicon Endo-Surgery*, 149 F.3d at 1315. Nonetheless, an infringement inquiry is amenable to resolution through a motion for summary judgment if no reasonable trier of fact could find other than for the moving party. *See Ethicon Endo-Surgery*, 149 F.3d at 1315.

**2. The Record Establishes as a Matter of Law that Defendant’s Accused Process Does Not Infringe the Asserted Claims of the ‘824 Patent.**

Of the asserted claims of the ‘824 Patent, claims 1 and 17 are the only independent claims. Each of these two claims requires that steel be “rapidly heat[ed], within 5 seconds,” to a temperature of at least 1832 degrees Fahrenheit. (Defendant’s Motion, Ex. A-1, ‘824 Patent at 10:51-54, 11:47-50.) As its first challenge to Plaintiff’s claim of patent infringement, Defendant contends that its

accused process does not heat steel within 5 seconds, regardless of whether one considers a preheating step in this process or just the time that the steel is heated by a main induction coil. Defendant further asserts that Plaintiff is estopped from invoking the doctrine of equivalents as a means of showing that Defendant's process meets this limitation of claims 1 and 17. It follows, in Defendant's view, that its process does not infringe either of these independent claims, or any of the other asserted claims of the '824 Patent that depend from these two claims. The Court agrees.

**(a) Literal Infringement**

Turning first to the question of literal infringement, Defendant states that its accused process heats steel in two steps, using a preheat induction oven followed by a main induction oven. In the preheating stage, steel passes through an oven that features an induction preheat coil of 30 inches in length, heating the steel to a temperature between 900 and 1040 degrees Fahrenheit. (*See* Defendant's Motion, Ex. A-2, 6/30/2015 Suppl. Interrogatory Responses at 6.) The steel then travels to a main austenitizing coil that is 4 inches in length, which heats the steel to an average temperature of 1785 degrees Fahrenheit (for low carbon steel plate) or 1558 degrees Fahrenheit (for high carbon steel plate). (*See id.* at 7, 10.) Throughout this time, the steel moves at a speed of 43 inches per minute ("IPM").

(*See id.* at 6-7, 9-10.)

Accordingly, multiplying the line speed (43 IPM) times the length of the induction preheat oven (30 inches) and the length of the main austenitizing coil (4 inches), Defendant contends that its accused process heats steel for approximately 41.8 seconds (in the preheat oven) plus approximately 5.6 seconds (in the main oven), for a total heating time of approximately 47.4 seconds. (*See id.* at 6-7.)<sup>1</sup> This total heating time is well in excess of the “rapid[] heating, within 5 seconds,” disclosed in independent claims 1 and 17 of the ‘824 Patent. Defendant insists that it is wholly appropriate to include the preheating step of its accused process, where this process would not work without a preheat oven. (*See* Defendant’s Motion, Ex. A-3, 5/14/2015 Nicholson Dep. at 258.) In any event, even considering just the second step of Defendant’s process, in which steel is heated with a main austenitizing coil, this 5.6-second heating stage of the accused process still exceeds the heating “within 5 seconds” disclosed in the ‘824 Patent. It follows, in Defendant’s view, that its accused process does not literally meet the “rapid[] heating, within 5 seconds” limitation of claims 1 and 17 of the ‘824

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<sup>1</sup>Defendant further observes that it takes an additional 55.8 seconds for steel to travel the 40 inches between the preheat oven and the main austenitizing coil. (*See id.* at 10.) Thus, the total elapsed time for steel to be heated from its initial ambient temperature to its final temperature is approximately 103.2 seconds.



Patent.

In an effort to avoid this result, Plaintiff first asserts that Defendant's attempt to distinguish its accused process from the "within 5 seconds" limitation of claims 1 and 17 rests upon an unstated reading of these claims that is inconsistent with the plain language of the claims themselves. In particular, while Defendant multiplies line speed times the length of the main heating coil to conclude that steel spends 5.6 seconds in this coil, Plaintiff points out that the pertinent claim language does not limit the amount of time steel spends in a heating unit, but instead imposes a 5-second limit on the amount of time steel is "*heat[ed]* . . . at a heating unit" to reach "a selected temperature above the austenite conversion temperature." ('824 Patent at 10:51-53, 11:47-49 (emphasis added).) Under Plaintiff's preferred construction of this claim language, a process in which steel remains in a heating unit for more than 5 seconds may still be infringing, so long as the steel is "rapidly heat[ed], within 5 seconds, . . . to a selected temperature above the austenite conversion temperature" that is "at least 1832° F." (*Id.* at 10:51-54, 11:47-50.)

To show that Defendant's accused process performs this requisite "rapid[] heating" within 5 seconds, even if steel might reside in the main heating coil for more than 5 seconds, Plaintiff relies on the reports of its technical experts, Dr.

Arnold Marder and Dr. Herman Nied.<sup>2</sup> Upon analyzing Defendant’s accused process, Dr. Nied opines that steel passing through Defendant’s main heating coil “reach[es] its maximum temperature just before exit from the heater enclosure.” (Plaintiff’s Response, Ex. C, Nied 7/31/2015 Report at 6.) Dr. Marder, in turn, reasons that based on Dr. Nied’s findings, “one can conclude that the [steel] plate is at some temperature below [its maximum temperature of] 1929.9° F after being in the coil for 0.6 seconds and is then heated from this temperature to 1929.9° in under 5 seconds.” (Plaintiff’s Response, Ex. B, Marder 7/31/2015 Report at ¶ 110.) Thus, Dr. Marder concludes that in Defendant’s accused process, “the steel is rapidly heated within 5 seconds to a selected temperature of at least 1832° F,” (*id.* at ¶ 111), thereby literally meeting this element of claims 1 and 17 of the ‘824 Patent.

Notably absent from Plaintiff’s argument on this point, however, is any suggested basis in the record for characterizing the main heating coil in Defendant’s accused process as (i) heating steel to some temperature below the asserted maximum temperature of 1929° F, and then (ii) “rapidly heating” this

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<sup>2</sup>As noted in its reply in support of its motion, Defendant maintains that Plaintiff should be precluded from relying on the expert reports of Dr. Marder and Dr. Nied, on the ground that these reports were untimely served after the close of discovery. In a recent order, however, the Court denied Defendant’s motion to strike these expert reports. (*See* 9/30/2016 Order at 3-4.)

steel from its intermediate temperature to its maximum temperature shortly before it exits the heating coil. To be sure — and as discussed in greater detail immediately below — the pertinent language of the ‘824 Patent does not necessarily demand that steel be “rapidly heat[ed], within 5 seconds,” all the way from its initial ambient temperature to its maximum temperature of at least 1832° F. Nonetheless, Plaintiff and its experts must identify *some* evidentiary basis for segmenting the heating performed by Defendant’s main austenitizing coil into (i) a non-rapid phase that brings the steel to some point below its maximum temperature, followed by (ii) a rapid heating phase that brings the steel to its maximum temperature within 5 seconds.

Although Dr. Marder proposes in his report that Defendant’s process can be viewed in this manner — *i.e.*, with steel reaching “some temperature below” its maximum “after being in the [main heating] coil for 0.6 seconds” and then being rapidly “heated from this temperature to” its maximum temperature during its remaining 5 seconds within the coil, (Marder 7/31/2015 Report at ¶¶ 110-11) — nothing in this report (or elsewhere in the record) supports Dr. Marder’s apparent premise that Defendant’s main austenitizing coil heats steel differently in the first 0.6 seconds than in the remaining 5 seconds, with only the latter phase qualifying as “rapid” heating. Rather, Dr. Marder’s segregation of the first 0.6 seconds of

this heating process seems wholly arbitrary, and designed to ensure that the remaining, purportedly “rapid” portion of this process lasts 5 seconds or less. Accordingly, while the Court recognizes that the length of time steel remains in Defendant’s main heating coil is not, by itself, determinative of the time period within which the steel is rapidly heated to its final temperature, the Court finds no basis in the record for concluding that Defendant’s main heating coil “rapidly heat[s]” steel within 5 seconds to a temperature in excess of 1832° F, as required to literally meet this element of independent claims 1 and 17 of the ‘824 Patent.

Next, Plaintiff takes issue with Defendant’s contention that the heating time of its accused process should include the approximately 41.8 seconds that steel is heated in an induction preheat oven. As Plaintiff observes, claim 5 of the ‘824 Patent depends from claim 1, and includes the additional limitation of “a pre-heating step to heat the steel to a temperature below the austenitic conversion temperature.” (‘824 Patent at 11:3-5.) It follows, in Plaintiff’s view, that the “rapid[] heating[] within 5 seconds” language of claim 1 cannot be construed as requiring that steel be heated from its ambient temperature to its maximum temperature within 5 seconds, because this would not allow for the preheating step in claim 5 that heats steel to a point above its ambient temperature but below the austenitic conversion temperature. *See Wright Medical Technology, Inc. v.*

*Osteonics Corp.*, 122 F.3d 1440, 1445 (Fed. Cir. 1997) (emphasizing that a court “must not interpret an independent claim in a way that is inconsistent with a claim which depends from it”). Yet, even accepting that Defendant cannot rely on the 41.8 preheating phase of its accused process to establish that this process does not “rapidly heat[]” steel “within 5 seconds,” Defendant correctly observes that the 5.6-second period that steel is heated in its main austenitizing coil suffices, by itself, to show that its process does not literally meet the limitation of rapid heating within 5 seconds. Thus, the Court need not decide whether the preheating phase of Defendant’s accused process should or should not count toward the total time that this process “rapidly heat[s]” steel.

Finally, Plaintiff challenges the factual basis for Defendant’s claim that the length of its main heating cycle invariably exceeds 5 seconds. First, while Defendant’s calculation of a 5.6-second heating time rests on the premise that its line operates at a consistent speed of 43 inches per minute, Plaintiff points to evidence that purportedly reveals an “appreciable variance” in this line speed during the operation of Defendant’s process. (Plaintiff’s Response Br. at 9 (citing Plaintiff’s Response, Ex. A-3 (entry pinch roller data from 5/19/2015 run); Ex. A-

4 (exit pinch roller data from 5/19/2015 run)).<sup>3</sup> As Defendant’s expert observes without contradiction, however, the variances identified by Plaintiff reflect second-to-second fluctuations in entry and exit roller speeds that are “to be expected in any mechanical system,” and these fluctuating roller speeds demonstrate that Defendant’s system “is imparting the energy necessary to make sure that the steel is always moving at 43 inches per minute.” (Defendant’s Reply, Ex. B, Putatunda 9/1/2015 Rebuttal Report at ¶ 81.) Plaintiff has failed to produce any expert opinion or other evidence that would support a different reading of this run data.

Moreover, to the extent that Plaintiff suggests that Defendant’s measurement of its line speed might be inaccurate, and that error rates as small as 4 percent purportedly would suffice to raise an issue of fact as to whether Defendant’s main austenitizing coil heats steel within 5 seconds, (*see* Plaintiff’s Response Br. at 10 n.3), Defendant correctly observes that this challenge rests wholly upon speculation, without any evidentiary basis for concluding that Defendant’s measurements and readings suffer from any such inaccuracies.

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<sup>3</sup>Plaintiff also complains that it was not able to observe Defendant’s accused process in actual operation, nor gain access to the entire archive of data captured during Defendant’s operation of this process. The Court addressed these matters in orders issued on July 15 and November 19, 2015, and no further discussion is warranted here.

Similarly, while Plaintiff points to the testimony of Defendant’s representative, Brent Nicholson, that 43 IPM is the “intended” rather than actual speed of Defendant’s line, (Plaintiff’s Response, Ex. A-5, Nicholson Dep. at 93), nothing in the record reflects any significant deviation from the intended 43 IPM line speed that would result in a heating time of 5 seconds or less. To the contrary, Mr. Nicholson testified that even minor changes in line speed, on the order of “1000s of an inch per minute,” will cause the line to shut down, so that it may safely be assumed that the actual line speed matches the intended speed. (*Id.* at 93-94.)

Plaintiff also points to data from runs of Defendant’s accused process in early April of 2015, disclosing line speeds of 55 or 60 IPM. (*See* Plaintiff’s Response, Ex. A-6, Run Sheets.)<sup>4</sup> Based on this data, Plaintiff surmises that on at least a few occasions, Defendant evidently operated its line “with main heating cycle times of less than 5 seconds.” (Plaintiff’s Response Br. at 10.) Accordingly, even if Defendant’s accused process ordinarily does not meet the claim limitation of rapid heating “within 5 seconds,” Plaintiff insists that it may pursue a claim of infringement based on the handful of instances where Defendant’s process did

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<sup>4</sup>Although Plaintiff states that it has produced evidence of “5 runs” with line speeds of 55 or 60 IPM, (Plaintiff’s Response Br. at 10), the evidentiary record reflects only three such runs — one each on April 1, 2, and 8, 2015 — with Plaintiff having produced duplicate run sheets for two of these runs.

satisfy this limitation, in light of the “principle that an accused product that sometimes, but not always, embodies a claimed method nonetheless infringes.” *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 622-23 (Fed. Cir. 1995).

As Defendant points out in response, however, Plaintiff never identified this theory of infringement at any point during discovery, despite having been given the relevant run data on April 16, 2015, well before the close of discovery, (*see* Defendant’s Reply, Ex. A, Wiggins 9/10/2015 Decl. at ¶ 1), and despite having supplemented its theories of infringement multiple times during discovery, (*see* Defendant’s Motion, Ex. A-5, Third Supplemental Discovery Responses at 6, Third Supplemental Preliminary Claim Chart at 2-3). In light of Plaintiff’s failure to timely disclose this theory at a point when Defendant could have explored it in discovery, the Court declines to consider Plaintiff’s claim of infringement arising from the handful of occasions when Defendant ran its accused process at line speeds greater than 43 IPM. *See O2 Micro International Ltd. v. Monolithic Power Systems, Inc.*, 467 F.3d 1355, 1369 (Fed. Cir. 2006) (finding that the district court in that case did not abuse its discretion by denying leave for the plaintiff to amend its infringement contentions after the deadline for doing so).

In any event, if Plaintiff had pursued this matter in discovery, Defendant



states without contradiction that Plaintiff would have learned that the April 2015 runs at issue were not used to make commercial product, but instead were “experimental runs where [Defendant was] trying to find a way to run 36 inch wide product” rather than its usual 24-inch material. (Defendant’s Reply, Ex. C, Nicholson 9/10/2015 Decl. at ¶¶ 6-7.) Defendant further states, again without contradiction, that these test runs “did not work,” that it “immediately switched back to 43 IPM to make commercial product,” and that it has “run the line at that speed ever since.” (*Id.* at ¶ 7.) As the Federal Circuit has explained, “tests of an accused device under unusual conditions are not necessarily relevant to an infringement analysis.” *Hilgraeve Corp. v. Symantec Corp.*, 265 F.3d 1336, 1343 (Fed. Cir. 2001); *see also High Tech Medical Instrumentation, Inc. v. New Image Industries, Inc.*, 49 F.3d 1551, 1556 (Fed. Cir. 1995) (holding that an accused device that does not infringe under its intended configuration does not become infringing by being altered into an infringing configuration under unusual circumstances). Finally, even if Defendant’s limited test runs of its accused process at line speeds greater than 43 IPM were deemed infringing, Defendant correctly points out that Plaintiff could not recover the royalties it seeks as its principal form of damages, given that these runs did not (and were not intended to) result in any commercial product that Defendant could offer for sale. Accordingly,

the Court concludes as a matter of law that Defendant's accused process does not literally infringe the asserted claims of the '824 Patent.<sup>5</sup>

**(b) Infringement Under the Doctrine of Equivalents**

Although Plaintiff cannot show that Defendant's accused process literally meets each limitation of the asserted claims of the '824 Patent, it may still prevail on its claim of infringement by resort to the doctrine of equivalents. "Under this doctrine, a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21, 117 S. Ct. 1040, 1045 (1997). While "[i]nfringement under the doctrine of equivalents is a question of fact," *Kraft Foods, Inc. v. International Trading Co.*, 203 F.3d 1362, 1371 (Fed. Cir. 2000), Defendant argues that the principle known as prosecution history estoppel precludes Plaintiff from establishing an equivalence between Defendant's 5.6-second main heating cycle and the claim limitation of "rapid[] heating[] within 5

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<sup>5</sup>In light of the Court's determination that Defendant's accused process does not literally meet the "rapid[] heating[] within 5 seconds" limitation of the asserted claims of the '824 Patent, it need not consider whether, as Defendant maintains, the accused process also fails to meet the "drawing the steel" limitation of these claims.

seconds.” As discussed below, the Court agrees.

In *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 122 S. Ct. 1831 (2002), the Supreme Court described in detail the purpose and scope of prosecution history estoppel:

Prosecution history estoppel requires that the claims of a patent be interpreted in light of the proceedings in the [Patent and Trademark Office (“PTO”)] during the application process. Estoppel is a rule of patent construction that ensures that claims are interpreted by reference to those that have been cancelled or rejected. The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes. When, however, the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent. On the contrary, by the amendment the patentee recognized and emphasized the difference between the two phrases, and the difference which the patentee thus disclaimed must be regarded as material.

A rejection indicates that the patent examiner does not believe the original claim could be patented. While the patentee has the right to appeal, his decision to forgo an appeal and submit an amended claim is taken as a concession that the invention as patented does not reach as far as the original claim. Were it otherwise, the inventor might avoid the PTO’s gatekeeping role and seek to recapture in an infringement action the very subject matter surrendered as a condition of receiving the patent.

535 U.S. at 733-34, 122 S. Ct. at 1838-39 (internal quotation marks, alterations, and citations omitted). Accordingly, prosecution history estoppel is triggered in

this case if Plaintiff seeks to “recaptur[e] under the doctrine of equivalents subject matter [it] surrendered during prosecution to obtain” the ‘824 Patent. *Cross Medical Products*, 480 F.3d at 1341.

In seeking to invoke this principle here, Defendant first observes that independent claims 1 and 17 of the ‘824 Patent, as originally drafted, called for “heating the [steel] under tension at a heating unit to a selected temperature above the austenite conversion temperature,” (Defendant’s Motion, Ex. A-6, ‘824 Patent Prosecution History at BA 1307, BA 1309),<sup>6</sup> without specifying any time limit (5 seconds or otherwise) for this heating. These claims were rejected as unpatentable in light of U.S. Patent No. 3,964,938 to Tolliver *et al.* (the “Tolliver” prior art reference). (See ‘824 Patent Prosecution History at BA 1108.) The patent applicant initially sought to overcome this rejection by contending that the heating in the claimed invention “takes place within several seconds,” in contrast to the language in Tolliver stating that heating occurs “in a relatively short amount of time,” (*id.* at BA 1090), but the patent examiner disagreed, noting that “the claims as written make no mention of any heating time short, long, or otherwise,” (*id.* at BA 1065). In response, the applicant amended the claims to incorporate their

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<sup>6</sup>As noted by Defendant, the present claim 17 of the ‘824 Patent was originally filed as claim 18.

present language — *i.e.*, the limitation that steel is “rapidly heat[ed], within 5 seconds,” (*id.* at BA 1032, BA 1035) — explaining that these amendments “recite the limitation of rapid heating and immediate rapid cooling, thereby overcoming the rejection based on the Tolliver, et al. reference,” and that “such extremely rapid heating and immediate rapid cooling produces different microstructures in the resulting alloy that is not evident in the cited references,” (*id.* at BA 1045).

In Defendant’s view, these amendments to independent claims 1 and 17 operated to “narrow[] the scope of the claimed process from an indefinite time for heating to heating specifically within 5 seconds.” (Defendant’s Motion, Br. in Support at 7.) Defendant further asserts that these amendments were “plainly made for purposes of patentability as [they were] made directly in response to a rejection from the examiner based on the prior art.” (*Id.*) It follows, according to Defendant, that because the patent applicant explicitly surrendered the subject matter of heating for *more* than 5 seconds in order to secure the ‘824 Patent, Plaintiff should be estopped from trying to reclaim this surrendered territory through the application of the doctrine of equivalents.

In response, Plaintiff concedes that the amendments in question “narrowed the scope of the claims and [were] made for the purpose[] of patentability to overcome” the Tolliver prior art reference. (Plaintiff’s Response Br. at 13.)

Plaintiff further acknowledges that under the Supreme Court’s decision in *Festo*, these circumstances give rise to a “presumption” that Plaintiff may not invoke the doctrine of equivalents in order to overcome the lack of literal infringement of the “rapid[] heating, within 5 seconds” limitation of claims 1 and 17 of the ‘824 Patent. (*Id.*) Nonetheless, Plaintiff correctly observes that it may rebut this presumption “by showing that the alleged equivalent was unforeseeable at the time the amendment was made, that the alleged equivalent was tangential to the purpose of the amendment, or that there was some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.” *Chimie v. PPG Industries Inc.*, 402 F.3d 1371, 1382 (Fed. Cir. 2005). In this case, Plaintiff pursues the second and third avenues for rebutting the presumption recognized in *Festo*.

First, Plaintiff maintains that the purpose of the amendments at issue was to “quantitatively describe” the heating rate of the claimed invention, and thereby distinguish this invention from a prior art reference (Tolliver) that “use[d] only qualitative terms such as ‘rapidly’ and ‘relatively short’ to describe the heating rate.” (Plaintiff’s Response Br. at 14.)<sup>7</sup> Because the amendments were not made

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<sup>7</sup>As Defendant points out, Plaintiff’s identification of the reason for the amendments is based solely on the assertions of counsel, and is unsupported by citation to the pertinent record.

“to avoid prior art disclosing a particular heating rate,” (*id.*), Plaintiff suggests that it should not be precluded from demonstrating an equivalence between heating “within 5 seconds” and the accused product’s heating time of 5.6 seconds, where this difference between two specified heating times purportedly bears only a tangential relationship to the reason for amending the claims.

As emphasized by the Federal Circuit, however, “the tangential relation criterion for overcoming the Festo presumption [of prosecution history estoppel] is very narrow.” *Cross Medical Products*, 480 F.3d at 1342. More to the point, “an amendment made to avoid prior art that contains the equivalent in question is not tangential.” *Chimie*, 402 F.3d at 1383 (internal quotation marks and citation omitted). Such is the case here, where the prosecution history for the ‘824 Patent reveals that the applicant included the limitation of “rapid[] heating, within 5 seconds” in order to avoid the requirement in the Tolliver prior art reference that heating occurs “in a relatively short amount of time.” (‘824 Patent Prosecution History at BA 1090.)

Because this amendment abandoned rapid heating in excess of 5 seconds, the claimed equivalent here — namely, the heating time of approximately 5.6 seconds in Defendant’s accused process — falls squarely within the territory relinquished in order to avoid Tolliver. This is true even though Tolliver does not

express its heating time in explicit quantitative terms. All that matters is (i) that the applicant for the '824 Patent *did* choose to quantify the heating time for the claimed invention in order to avoid the Tolliver prior art reference, and (ii) that by so doing, the applicant relinquished heating times in excess of this specified value. As a matter of law, then, this amendment bears a direct, and not a tangential, relationship to the 5.6-second heating time in Defendant's accused process that Plaintiff seeks to claim as equivalent, and it follows that Plaintiff cannot invoke the "tangential relation" exception to overcome the *Festo* presumption of prosecution history estoppel.

Next, Plaintiff endeavors to appeal to the "catch-all" exception to the presumption recognized in *Festo*, contending that there was "some other reason" why the applicant for the '824 Patent "could not reasonably be expected to have described the insubstantial substitute" purportedly reflected in Defendant's accused product. *Chimie*, 402 F.3d at 1382. Specifically, Plaintiff notes that two figures accompanying the '824 Patent appear to disclose heating times of about 2 and 5 seconds, and it reasons that if the applicant had sought to claim a heating time in excess of 5 seconds, this amendment likely would have been rejected. This, in Plaintiff's view, provides the requisite "other reason" why the applicant could not have claimed the allegedly equivalent heating time of 5.6 seconds.



Once again, however, Defendant notes as a threshold matter that the “some other reason” exception to *Festo*’s presumption of prosecution history estoppel is “a narrow one.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 344 F.3d 1359, 1370 (Fed. Cir. 2003).<sup>8</sup> The “other reason” identified by Plaintiff “must be such that the patentee could not reasonably be expected to write a claim to encompass the equivalent, such as a shortcoming of language.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 457 F.3d 1293, 1316 (Fed. Cir. 2006) (internal quotation marks and citations omitted). Moreover, where the alleged equivalent is “presen[t] in the prior art cited against the patentee during prosecution, there can be no other reason the patentee could not have described the substitute in question.” *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d 1352, 1357 (Fed. Cir. 2003).

These principles defeat Plaintiff’s appeal to the “some other reason” exception. The claims of the ‘824 Patent as originally drafted specified only “heating . . . to a selected temperature above the austenite conversion temperature,” (‘824 Patent Prosecution History at BA 1307, BA 1309), and thus would have covered the alleged equivalent of 5.6 seconds (and, presumably, far

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<sup>8</sup>Indeed, Defendant observes that “of the 34 Federal Circuit cases that address this exception, none applied it.” (Defendant’s Reply Br. at 8.)

lengthier heating times). Although the applicant elected to avoid the Tolliver prior art reference by specifying a heating time of 5 seconds or less, no “shortcoming of language” dictated this course of action; rather, just as Tolliver recites a time limit in qualitative terms, as a “relatively short amount of time,” the applicant for the ‘824 Patent presumably could have avoided this prior art reference through a qualitative description of heating time that arguably continued to cover the alleged equivalent of 5.6 seconds. In addition — and as discussed earlier — the Tolliver prior art reference, with its limitation to heating within “a relatively short amount of time,” encompasses the allegedly equivalent 5.6-second heating time of Defendant’s accused process, and the Federal Circuit has held under these circumstances that “there can be no other reason the patentee could not have described the substitute in question.” *Pioneer Magnetics*, 330 F.3d at 1357.

Accordingly, Plaintiff has failed to rebut the *Festo* presumption that prosecution history estoppel applies here. It follows that Plaintiff cannot invoke the doctrine of equivalents as a means of demonstrating that Defendant’s accused process infringes the ‘824 Patent. In light of the Court’s earlier conclusion that Defendant’s accused process does not literally infringe this patent, Defendant is entitled to an award of summary judgment in its favor as to its non-infringement of the asserted claims of the ‘824 Patent.

**C. Exercising the Discretion Conferred Under the Declaratory Judgment Act, the Court Elects Not to Address Defendant’s Challenges to the Validity of the ‘824 Patent.**

Apart from seeking a declaration that its accused process does not infringe the ‘824 Patent, Defendant also is pursuing a counterclaim challenging the validity of this patent on a number of grounds. Likewise, Defendant requests in the present motion that summary judgment be awarded in its favor on this counterclaim of patent invalidity. As discussed briefly below, however, the Court chooses not to address this counterclaim, but instead will dismiss it without prejudice.

Despite the Court’s determination as a matter of law that Defendant’s accused process does not infringe the ‘824 Patent, Defendant’s counterclaim of patent invalidity remains in controversy and supports the Court’s continued exercise of jurisdiction. *See Liquid Dynamics Corp. v. Vaughan Co.*, 355 F.3d 1361, 1370 (Fed. Cir. 2004). Nonetheless, because Defendant’s remaining counterclaim seeks a declaration of invalidity, this Court has discretion under the Declaratory Judgment Act, 28 U.S.C. § 2201(a), to decide whether to address this claim for declaratory relief or instead dismiss the claim without prejudice. *See MedImmune, Inc. v. Genentech, Inc.*, 549 U.S. 118, 136, 127 S. Ct. 764, 776 (2007) (citing the discretionary language in § 2201(a) that a federal court “may

declare the rights and other legal relations of any interested party”); *see also Liquid Dynamics*, 355 F.3d at 1370-71; *Lear Automotive*, 528 F. Supp.2d at 674.

Under the circumstances presented here, the Court elects not to address Defendant’s counterclaim seeking a declaration of patent invalidity. First and foremost, the ‘824 Patent is presumed valid, *see* 35 U.S.C. § 282, and Defendant bears the burden of proving by clear and convincing evidence that the patent is invalid, *see Creative Compounds, LLC v. Starmark Laboratories*, 651 F.3d 1303, 1309-10 (Fed. Cir. 2011). Upon reviewing Defendant’s motion, it is not evident that Defendant can meet this heightened burden, and the Court’s uncertainty on this point militates against the exercise of the Court’s discretionary authority under the Declaratory Judgment Act. *See, e.g., Phonometrics, Inc. v. Northern Telecom Inc.*, 133 F.3d 1459, 1468 (Fed. Cir. 1998); *Split Pivot, Inc. v. Trek Bicycle Corp.*, 987 F. Supp.2d 838, 882 (W.D. Wis. 2013), *aff’d*, No. 2014-1241, 585 F. App’x 1011 (Fed. Cir. Dec. 8, 2014). In addition, the Court’s resolution of Plaintiff’s claim of infringement in Defendant’s favor ensures that Defendant will not face any further claims that its accused process infringes the ‘824 Patent. *See Wells-Gardner Electronics Corp. v. C. Ceronix, Inc.*, No. 10-C-2536, 2011 WL 1467182, at \*3 (N.D. Ill. Apr. 14, 2011) (citing the court’s finding of non-infringement as a basis for declining to consider a request for a declaration of

invalidity); *see also Phonometrics*, 133 F.3d at 1468 (recognizing a district court’s “discretion to dismiss a counterclaim alleging that a patent is invalid . . . where it finds no infringement”). Accordingly, the Court declines to address Defendant’s counterclaim of patent invalidity, but instead will dismiss this counterclaim without prejudice.

### **III. CONCLUSION**

For the reasons set forth above,

NOW, THEREFORE, IT IS HEREBY ORDERED that Defendant’s motion for summary judgment (docket #48) is GRANTED IN PART, to the extent that Defendant seeks an award of summary judgment in its favor as to its accused product’s non-infringement of the asserted claims of the ‘824 Patent. In all other respects, Defendant’s motion is DENIED WITHOUT PREJUDICE.

s/Gerald E. Rosen  
United States District Judge

Dated: October 31, 2016

I hereby certify that a copy of the foregoing document was served upon the parties and/or counsel of record on October 31, 2016, by electronic and/or ordinary mail.

s/Julie Owens  
Case Manager, (313) 234-5135