

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF GEORGIA  
ATLANTA DIVISION**

HEAT TECHNOLOGIES, INC.,  
Plaintiff,

v.

PAPIERFABRIK AUGUST KOEHLER SE,  
MANFRED HUBER, JOACHIM UHL,  
LUTZ KÜHNE, and MICHAEL BOSCHERT,  
Defendants.

Civil Action No.  
1:18-cv-01229-SDG

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PAPIERFABRIK AUGUST KOEHLER SE,  
Counterclaim Plaintiff,

v.

HEAT TECHNOLOGIES, INC. and ZINOVY  
PLAVNIK,  
Counterclaim Defendants.

**OPINION AND ORDER**

This matter is before the Court on the Special Master's Report and Recommendation (R&R) [ECF 153] regarding the claim construction of certain terms in U.S. Patent No. 9,851,146 (the '146 Patent) and U.S. No. 9,068,775 (the '775 Patent). On December 8, 2020, Defendants Papierfabrik August Koehler SE (Koehler), Manfred Huber, Joachim Uhl, Lutz Kühne, and Michael Boschert jointly

filed objections to the R&R.<sup>1</sup> For the following reasons, the R&R is **ADOPTED** in its entirety and Defendants' objections are **OVERRULED**.

## **I. BACKGROUND**

This is a dispute concerning the inventorship of the '146 Patent and, by extension, the validity of the '775 Patent.<sup>2</sup> Both patents are generally directed to ultrasonic dyeing technology. The parties dispute the meaning of certain terms used in the Patents. On September 9, 2020, the Court appointed William B. Dyer, III as Special Master to preside over claim construction in this case under *Markman v. Westview Instruments, Inc.*, 52 F.3d 967 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996). After extensive briefing and a hearing, the Special Master issued the R&R on November 10, 2020.<sup>3</sup> Defendants disagree with various recommendations made by the Special Master and have filed specific objections to the R&R.<sup>4</sup> HTI has filed a response in opposition to Defendants' objections.<sup>5</sup>

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<sup>1</sup> ECF 157.

<sup>2</sup> For the purposes of this Order, the Court incorporates by reference the R&R's description of the functionality of the underlying patents and the pertinent facts of this case.

<sup>3</sup> ECF 153.

<sup>4</sup> ECF 157.

<sup>5</sup> ECF 163. On January 22, 2021, without requesting or obtaining leave from the Court, Defendants filed a reply in support of their objections to the R&R [ECF 165]. This triggered yet another volley of briefs: HTI filed an objection to

## II. LEGAL STANDARD

In reviewing an R&R, the Court “must decide *de novo* all objections to findings of fact made or recommended by a master.” Fed. R. Civ. P. 53(f)(3). The Court must likewise “decide *de novo* all objections to conclusions of law made or recommended by a master.” Fed. R. Civ. P. 53(f)(4). After review, the Court may “adopt or affirm, modify, wholly or partly reject or reverse, or resubmit” the R&R “to the master with instructions.” Fed. R. Civ. P. 53(f)(1). The Court retains “wide latitude” in conducting claim construction and need not “proceed according to any particular protocol” as long as it “construes the claims to the extent necessary” relative to the case. *Ballard Med. Prod. v. Allegiance Healthcare Corp.*, 268 F.3d 1352, 1358 (Fed. Cir. 2001).

Like an infringement or invalidity analysis, the “first step” of an inventorship analysis is “a construction of each asserted claim to determine the

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that reply brief [ECF 167] and Defendants filed a response to that objection [ECF 170]. HTI is correct that neither the Federal Rules of Civil Procedure nor the Local Rules expressly contemplate the filing of a reply brief in support of objections to an R&R from a special master. Fed. R. Civ. P. 53(f); LR 53, NDGa. Likewise, the Court’s Order appointing the Special Master only authorized the parties to file objections and responses to the R&R [ECF 163]. However, the Local Rules do generally permit the filing of reply briefs in the ordinary course of motion practice. LR 7.1, NDGa. Given the Court’s preference for resolving disputes on the merits, the Court exercises its discretion to consider Defendants’ reply brief.

subject matter encompassed thereby.” *Trovan, Ltd. v. Sokymat SA, Irori*, 299 F.3d 1292, 1302 (Fed. Cir. 2002). Claim construction “is a question of law, to be determined by the court.” *Markman*, 517 U.S. at 384. A patent’s claimed terms “are generally given their ordinary and customary meaning.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). This refers to the “meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313.

In construing claims, the Court’s “analysis must begin and remain centered on the claim language itself, for that is the language the patentee has chosen to particularly point out and distinctly claim the subject matter which the patentee regards as his invention.” *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004) (quoting *Interactive Gift Exp., Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1331 (Fed. Cir. 2001) (brackets omitted). The Court must interpret claims “with an eye toward giving effect to all terms in the claim.” *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). Additionally, the Court should avoid an interpretation that renders terms superfluous. *E.g.*, *Merck & Co. v. Teva Pharm. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005) (“A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so.”); *Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1410

(Fed. Cir. 2004) (“[I]nterpretations that render some portion of the claim language superfluous are disfavored.”).

“In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. However, because the meaning of a claimed term is often not immediately apparent, courts look to “sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean.” *Id.* These include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.* Although extrinsic evidence may “shed useful light on the relevant art,” it is considered “less significant than the intrinsic record in determining the legally operative meaning of claim language.” *Id.* at 1317.

### **III. DISCUSSION**

#### **A. Undisputed Recommendations**

The Special Master recommends construction of the following terms:

1. “Dewatering” to mean “to remove water from the web to a desired moisture content level.”

2. “Wrap region” to mean a “region generally along the exterior periphery of a roller or cylinder where the web is touching the roller or cylinder.”
3. “Open draw” to mean a “region where the web is under tension and between two web guide aids without contact to a transport means.”
4. “Transport means” to be (1) “governed by 35 U.S.C. § 112(6) (pre-AIA)”; (2) as to function, “to move the web relative to the at least one drying unit”; and (3) as to structure, “guides, guide rollers, a carrier, a continuously moveable carrier, a conveyor belt, a screen belt, a wire mesh, a drying screen, a drying felt, a conveyor band, paper guide rollers, and vacuum rollers, cylinders, rollers, and equivalents.”
5. “Conveyor belt” to be defined by its “[p]lain meaning” and “no construction [is] necessary.”
6. “Register surface” to mean a “surface used for proper relative placement.”<sup>6</sup>

No party has raised an objection to these recommendations. After a review, the Court finds no clear error; R&R is adopted as to the meaning of these terms.

## **B. Disputed Recommendations**

### **1. Definition of Person of Ordinary Skill in the Art**

A threshold inquiry in the claim construction process is “how a person of ordinary skill in the art would have understood claim terms at the time of the

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<sup>6</sup> “Register service” is the only term from the ‘775 Patent; the other terms relate to the ‘146 Patent.

invention.” *Pfizer, Inc. v. Teva Pharm., USA, Inc.*, 429 F.3d 1364, 1372–73 (Fed. Cir. 2005). This inquiry “provides an objective baseline from which to begin claim interpretation.” *Id.* The fictitious person is “deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.* According to the Federal Circuit:

Factors that may be considered in determining level of ordinary skill in the art include: (1) the educational level of the inventor; (2) type of problems encountered in the art; (3) prior art solutions to those problems; (4) rapidity with which innovations are made; (5) sophistication of the technology; and (6) educational level of active workers in the field. These factors are not exhaustive but are merely a guide to determining the level of ordinary skill in the art.

*Daiichi Sankyo Co. v. Apotex, Inc.*, 501 F.3d 1254, 1256 (Fed. Cir. 2007) (citations omitted). *See also Hologic, Inc. v. Minerva Surgical, Inc.*, 764 F. App’x 873, 879 (Fed. Cir. 2019) (“We have cautioned [ ] that the *Daiichi* factors are not exhaustive but are merely a guide. The [Patent Trial and Appeal Board] was not required to analyze level of skill in the art on a factor-by-factor basis.”).

As the R&R correctly noted, none of the parties addressed the Person of Ordinary Skill in the Art (POSA) standard in their underlying briefs. During the hearing before the Special Master, Plaintiff Heat Technologies, Inc. (HTI) and

Defendants proposed competing definitions. Although both definitions contained important similarities, they differed by Defendants' specific focus on pulp and paper engineering science. The R&R disagreed with Defendants' proposed definition and recommended the following level of skill for both the '146 Patent and '775 Patent:

Bachelor's degree in mechanical engineering or a related field, and several [years] of experience in the development or design of drying systems, or the equivalent, including some experience with acoustic drying technology; additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education.<sup>7</sup>

The R&R found Defendants' proposed definition improper because "[t]he focus of the claims for both patents is on the use of ultrasound while drying, not pulp or paper making."<sup>8</sup> Defendants now object to this recommendation, arguing the Special Master's definition of the POSA is incorrect because (1) it conflates the '146 Patent and '775 Patent, and (2) is indefinite and unclear. After a *de novo* review of the entire record, the Court agrees with the definition

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<sup>7</sup> ECF 153, at 10. The Court notes that the R&R seemingly made a typographical error by excluding the term "years" in its recommended POSA definition. As discussed below, the Court adopts the Special Master's recommended definition, which shall include this specific edit for all purposes hereafter.

<sup>8</sup> *Id.* at 9.

recommended by the Special Master. The Court does not find that the Special Master erred by recommending the same POSA standard for both Patents, even if Defendants intended to offer alternative definitions during the hearing. And the Court agrees that it would be improper to limit and narrow the claims by including “pulp and paper engineering science” in the definition. Finally, the Court does not believe the recommended POSA standard is impermissibly indefinite or ambiguous. As noted by HTI, the Federal Circuit recently affirmed a similarly worded POSA standard. *See Hologic, Inc. v. Minerva Surgical, Inc.*, 764 F. App’x 873 (Fed. Cir. 2019). Therefore, the Court finds the POSA definition articulated by the R&R is correct and adopts it in full. Defendants’ objection is overruled.

## **2. Definition of Claimed Terms**

The Special Master recommends construction of the following terms:

1. “Dryer section” to mean a “dryer section of a machine.”
2. “Web” and “web of fibrous material” to mean a “continuous sheet comprising fibers.”
3. “Reduction in moisture content” to mean that “the quantity of moisture is reduced.”
4. “Size press” to mean a “unit used to apply a sizing agent to the web.”

Defendants object to each of these recommendations. After a *de novo* review, the Court finds the R&R’s proposed constructions correct and adopts them in full.

First, Defendants object to the R&R's recommended definitions for the terms "dryer section," "web," and "web of fibrous material" because the R&R did not include express limitations to paper and paper variants for which Defendants maintain the claims in the '146 Patent are directed. However, as noted by the R&R and HTI, the Federal Circuit has seemingly foreclosed Defendants' argument. *Phillips*, 415 F.3d at 1323 ("[W]e have expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment."). The Court also finds that Defendants' objections do not address the other problems with Defendants' sought-after definitions as articulated in the R&R. Therefore, these objections are overruled.

Second, Defendants argue the R&R's proposed definition of "reduction in moisture content" is incorrect because it does not include a specified range of the reduction in moisture content. The R&R expressly considered and rejected this argument, finding the '146 Patent's specifications did not require the sought-after limitation. After a *de novo* review, the Court agrees with the Special Master's reasoning and conclusion. See *N. Am. Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1348 (Fed. Cir. 2005) ("[U]nless required by the specification, limitations

that do not otherwise appear in the claims should not be imported into the claims.”). Therefore, this objection is overruled.

Third, Defendants object to the R&R’s recommended definition of the term “size press,” arguing it is “unclear and will only confuse the jury” because the term “sizing agent” is a technical term that remains undefined. Defendants propose an alternative definition that would include specific references to fibrous materials and paper variants. Although Defendants argued during the hearing that HTI’s proposed definition – adopted verbatim by the Special Master – did not provide a complete construction, Defendants did not indicate that “sizing agent” is a technical term or otherwise propose a definition. Instead, they raised these concerns for the first time in their objections. Nonetheless, the Court concludes Defendants’ objection is another attempt to impermissibly limit and narrow the scope of the claims to include paper and paper variants. The Court finds the Special Master’s recommendation correct and overrules this objection.

Finally, the R&R found that the terms “guide rollers,” “screen belt,” “wire mesh,” and “smoothing unit” are not technical terms that required construction and that a “factfinder will have no trouble understanding what these

terms mean based on their ordinary and customary meaning.”<sup>9</sup> Defendants object and argue that (1) a factfinder is highly unlikely to be familiar with these terms, and (2) the Court should defer construction until the parties complete further discovery. After a *de novo* review of the record, the Court agrees with the R&R. It is axiomatic that “[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning.” *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips*, 415 F.3d at 1312–13; *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). The Court need not articulate a technical construction for a term that would be readily understandable by a factfinder based on its ordinary meaning in light of the patent’s language and specifications. *E.g.*, *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015) (“Because the plain and ordinary meaning of the disputed claim language is clear, the district court did not err by declining to construe the claim term.”); *Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed. Cir. 2001) (holding district court did not err by declining to construe the term “melting” as it did “not appear to have required construction,

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<sup>9</sup> ECF 153, at 30–31. As noted, the R&R additionally found the term “conveyor belt” required no construction. Defendants do not raise an objection to that finding.

or to depart from its ordinary meaning”); *Mentor H/S, Inc. v. Med. Device All., Inc.*, 244 F.3d 1365, 1380 (Fed. Cir. 2001) (holding district court did not err by declining to construe the terms “irrigating” and “frictional heat” and “relying on the ordinary meanings of these terms”). That is the precise case here. These four terms are not technical or scientific. Their ordinary and customary meaning will be easily understood by the factfinder. Additionally, further discovery—as Defendants request—is not necessary and will not further illuminate the terms’ ordinary meanings. Therefore, the R&R’s recommendation is adopted and Defendants’ objection is overruled.

#### IV. CONCLUSION

The Special Master’s R&R [ECF 153] is **ADOPTED** in its entirety. Defendants’ objections [ECF 157] are **OVERRULED**. Within 7 days of entry of this Order, the parties shall file a revised joint scheduling report with proposed dates certain for remaining discovery and dispositive motion deadlines.

**SO ORDERED** this the 1st day of April 2021.

  
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Steven D. Grimberg  
United States District Court Judge