United States Court of Appeals for the Federal Circuit

AKZO NOBEL COATINGS, INC.,
Plaintiff-Appellant

v.

DOW CHEMICAL COMPANY,
Defendant-Cross-Appellant

2015-1331, 2015-1389

Appeals from the United States District Court for the District of Delaware in No. 1:12-cv-01264-LPS, Chief Judge Leonard P. Stark.

Decided: January 29, 2016

ELIZABETH GARDNER, Kenyon & Kenyon LLP, New York, NY, argued for appellant. Also represented by MICHAEL D. LOUGHNANE, RICHARD DELUCIA, MERRI C. MOKEN.

AARON A. BARLOW, Jenner & Block LLP, Chicago, IL, argued for cross-appellant. Also represented by PAUL DAVID MARGOLIS, HARRY J. ROPER; JOSHUA SEGAL, Washington, DC.

Before LOURIE, REYNA, and CHEN, *Circuit Judges*.

LOURIE, *Circuit Judge*.

Akzo Nobel Coatings, Inc. ("Akzo") appeals from the decision of the United States District Court for the District of Delaware granting summary judgment that Dow Chemical Company ("Dow") did not infringe the claims of U.S. Patent 6,767,956 ("the '956 patent"), either literally or under the doctrine of equivalents. *Akzo Nobel Coatings, Inc. v. Dow Chem. Co.*, No. 1:12-cv-01364 (D. Del. Jan. 26, 2015) ("*Decision*"). Dow cross-appeals from the court's conclusion that the claims of the '956 patent are not indefinite. *Id.* at 10–14. For the reasons that follow, we affirm both appeals.

BACKGROUND

Akzo owns by assignment the '956 patent, directed to an extrusion process that generates low viscosity aqueous polymer dispersions. '956 patent, at [57]. In order to achieve uniform distribution of the polymer in the aqueous medium, the specification notes that "the mixture cannot be heated above the boiling point of the carrier liquid, or else the liquid boils and it becomes impossible to disperse the polymer." *Id.* col. 1 ll. 57–59. The claimed invention aims to prevent such boiling, and thus achieve uniform polymer distribution, by maintaining the pressure in the extruder above atmospheric. *Id.* col. 2 ll. 26–33. Specifically, "[t]he pressure in the extruder [is] maintained by . . . connecting the outlet of the extruder to a pressurized collection vessel." *Id.* col. 2 l. 64–col. 3 l. 1.

Claim 1 is representative and reads as follows:

> 1. A process for producing a dispersion of a polymer in an aqueous medium in which the polymer is dispersed in an aqueous medium in an extruder at a temperature above 100° C. in an extruder having an outlet

> wherein the pressure in the extruder is maintained above atmospheric so that the aqueous medium does not boil characterized by maintaining the pressure above atmospheric for the extruder at the outlet with a *pressurized collection vessel* and
>
> wherein aqueous dispersion from the extruder has at least 25% by weight of the aqueous medium where the aqueous medium has less than 40% by weight of organic solvent and
>
> wherein the aqueous dispersion enters the outlet and *pressurized collection vessel* at a pressure above atmospheric so that the aqueous medium does not boil and is subjected to the action of a cooling zone to lower the temperature of the aqueous dispersion to below 100° C. to have *an aqueous dispersion with a viscosity below 10 Pa.s*.

Id. col. 7 l. 9–col. 8 l. 4 (emphases added). Claim 2 further requires: "[a] process according to claim 1 which is *carried out at a temperature of from about 5 to 150° C. above the melting point of the polymer*." *Id.* col. 8 ll. 5–7 (emphasis added).[1]

Dow's accused process, called BLUEWAVE™, uses an extruder to generate low viscosity polymer dispersions. In Dow's process, the dispersion exits the extruder, passes through a valve located at the extruder's outlet, and then travels through a series of pipes and heat exchangers.

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[1] Claims 1–8 all contain the disputed "pressurized collection vessel" and "viscosity below 10 Pa.s" limitations. Claims 2–6 further contain the disputed "carried out . . . of the polymer" limitation. The parties only rely on those three limitations in challenging the district court's judgment.

Joint App. ("J.A.") 1012, 1040–41. The dispersion then continues on through a filter and collects in a "Product Tote," an unpressurized compartment, eventually used to transport the end-product. J.A. 1012.

In October 2012, Akzo sued Dow for patent infringement, alleging that Dow's BLUEWAVE™ process infringed claims 1–8 of the '956 patent. In view of what it considered to be Akzo's failure to identify any "pressurized collection vessel" in the accused process, Dow sought leave of court to file an early summary judgment motion of noninfringement. J.A. 685–88. The district court granted the request and combined the summary judgment and *Markman* hearings. J.A. 52–53.

After the combined hearings, the district court first construed several disputed limitations. *Decision* at 6–14. It construed "pressurized collection vessel" as "tubing, piping, or other container where a desired material accumulates, which is maintained above atmospheric pressure." *Id.* at 6–7. The court reasoned that, to properly give meaning to the word "collection," "some amount of material must be permitted to accumulate within the vessel, rather than all of the material flowing through the vessel at a constant rate." *Id.* at 7. It specifically relied on two examples in the specification, Examples 2 and 3, *id.*, which state: "[t]he dispersion was collected into a water-cooled pressurized vessel maintained under nitrogen at 7 bar and *from which the dispersion*, once cooled to below 100° C., *could be periodically removed*," '956 patent col. 6 ll. 40–44, col. 7 ll. 1–4 (emphases added).

The district court next addressed and rejected Dow's contention that the limitation "viscosity below 10 Pa.s" rendered claims 1–8 indefinite. According to Dow, the limitation could be definite only if it incorporated a requirement that the viscosity be tested at a certain temperature; a failure to require such a temperature, Dow suggested, was fatal. The court disagreed, instead finding

that "in context one of ordinary skill in the art would know with reasonable certainty that viscosity is to be measured at room temperature." *Id.* at 11. It accordingly construed "viscosity below 10 Pa.s" to mean "viscosity below 10 Pa.s at room temperature." *Id.* at 10.

The court then addressed and rejected Dow's contention that the limitation "carried out at a temperature of from 5 to 150° C. above the melting point of the polymer" rendered claims 2–6 indefinite. Specifically, Dow argued that the limitation failed to specify to which steps in the claimed process it applied, and that simply applying the limitation to every step, as the plain meaning suggests, would be irrational, for many steps require a temperature at or below 100° C. The court disagreed, however, instead finding that the specification explains that only a subset of steps in the claimed process occurs at elevated temperatures, *id.* at 14 (citing '956 patent col. 2 ll. 38–41), and therefore "the limitation in claim 2 refers to the elevated temperature phases," *id.* The court concluded: "Dow has provided no evidence to show that a person of ordinary skill in the art would not know with reasonable certainty the steps to which the limitation in claim 2 applies." *Id.* It accordingly construed the limitation to mean "[t]he elevated temperature phases of claim 1 are carried out at a temperature of from 5 to 150° C above the melting point of the polymer." *Id.* at 13.

In light of the above constructions, the district court granted Dow's motion for summary judgment of noninfringement of claims 1–8. In describing Dow's accused process, the court found that "Dow's accused process uses a valve and allows the polymer dispersion to flow continuously. It does not accumulate." *Id.* at 17. That lack of accumulation precluded a finding of literal infringement. Indeed, as the court noted: "no reasonable juror could find that Dow's accused process uses a 'pressurized collection [vessel]'" because "a reasonable juror could only find that the accused BLUEWAVE™ process allows for the polymer

dispersion to flow continuously." *Id.* The lack of accumulation likewise precluded a finding of infringement under the doctrine of equivalents. As the court found, "[t]o allow Akzo to prevail on infringement by the doctrine of equivalents would vitiate the claim limitation that the 'pressurized collection vessel' be a 'container where the desired material accumulates.'" *Id.* at 18.

Akzo timely appealed and Dow timely cross-appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

DISCUSSION

I. Akzo's Appeal

We review the district court's grant of summary judgment under the law of the regional circuit, here, the Third Circuit. *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 769 F.3d 1371, 1377 (Fed. Cir. 2014). Applying the law of the Third Circuit, we review the grant of summary judgment de novo. *Nicini v. Morra*, 212 F.3d 798, 805 (3d Cir. 2000) (en banc). Summary judgment is proper when, drawing all justifiable inferences in the non-movant's favor, "there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a); *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986).

Evaluation of summary judgment of noninfringement is a two-part inquiry: construing the claims and comparing the properly construed claims to the accused product. *Abbott Labs. v. Sandoz, Inc.,* 566 F.3d 1282, 1288 (Fed. Cir. 2009). We review de novo the ultimate interpretation of a claim term and the evidence intrinsic to the patent. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 574 U.S. ___, 135 S. Ct. 831, 841 (2015). When a district court makes factual findings about extrinsic evidence, we review those subsidiary factual findings for clear error. *Id.* at 835, 841.

Infringement, whether literal or under the doctrine of equivalents, is a question of fact. *Absolute Software, Inc.*

v. Stealth Signal, Inc., 659 F.3d 1121, 1129–30 (Fed. Cir. 2011). As such, it is amenable to summary judgment when no reasonable factfinder could find that the accused product contains every claim limitation or its equivalent. *PC Connector Sols., LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1364 (Fed. Cir. 2005); *see Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29, 39 n.8 (1997).

A. Claim Construction

On appeal, Akzo first faults the district court for narrowly construing "pressurized collection vessel" to require accumulation. Akzo argues that the term should instead assume its ordinary meaning of "gather or receive." Akzo contends that such a construction is supported by both the claim language and specification, neither of which requires the dispersion to be held for a period of time. According to Akzo, the court's construction imports further, unspecified process limitations on how long the dispersion must be in the vessel and the manner by which the dispersion exits the vessel, among others. *See* Appellant's Br. 34.

Dow responds that "collection," in context, necessarily requires accumulation, as the district court held. Dow relies primarily on Examples 2 and 3 in the specification, which state: "from which the dispersion, once cooled to below 100° C., could be periodically removed." Appellee's Br. 28 (quoting '956 patent col. 6 ll. 40–44, col. 7 ll. 1–4). According to Dow, "'once cooled' implies . . . that the material is sitting there and 'periodically removed' requires not immediately removed; it is removed after a period of time. Both of those assume that accumulation has occurred." Oral Argument 14:30–14:42. Moreover, Dow contends, construing the term to broadly mean "gather or receive" renders the limitation superfluous because, under a "gather or receive" construction, any pressurized vessel is a "pressurized collection vessel."

We agree with Dow and affirm the district court's construction of "pressurized collection vessel" as "tubing, piping, or other container where a desired material accumulates, which is maintained above atmospheric pressure." Our claim construction analysis begins with the language of the claim itself, as it would have been understood by one of ordinary skill in the art at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). The claims "must be read in view of the specification, of which they are a part." *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc)). Indeed, we have said that the specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

As an initial matter, we agree with the district court that adopting Akzo's proffered construction of "gather or receive" would "obviate[] the import of the word 'collection.'" *Decision* at 7. There is no dispute that the "pressurized collection vessel" receives the dispersion; that function is clearly contemplated by the surrounding claim language. '956 patent col. 7 ll. 19–21 ("[T]he aqueous dispersion enters the outlet and pressurized collection vessel at a pressure above atmospheric."). But allowing "collection" to mean "receive" would render "collection" entirely superfluous and allow any pressurized vessel to constitute a "pressurized collection vessel"; such a result is disfavored. *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."). The district

court's construction of "accumulation," on the other hand, gives the term "collection" proper meaning in context.

Moreover, the remainder of the specification supports the court's construction. In addition to the limitation itself, "collection" and/or "collected" is used twice in the specification, in Examples 2 and 3. '956 patent col. 6 l. 40, col. 7 l. 1. In those examples, the dispersion is collected, allowed to cool, and then "periodically removed." *Id.* col. 6 l. 43, col. 7 l. 4. Those examples clearly contemplate a buildup or accumulation of dispersion in the collection vessel before the eventual "periodic removal." Thus, as the court noted, to give meaning to "collection" consistent with the specification, "material must be permitted to accumulate within the vessel, rather than all of the material flowing through the vessel at a constant rate." *Decision* at 7; *cf. Kinetic Concepts, Inc. v. Blue Sky Med. Grp., Inc.*, 554 F.3d 1010, 1018–19 (Fed. Cir. 2009) (construing "wounds" as "skin wounds" because "[a]ll of the examples described in the specification involve skin wounds," and construing otherwise "would thus expand the scope of the claims far beyond anything described in the specification").

B. Literal Infringement

Akzo next argues that it has raised a genuine issue of material fact as to literal infringement under the court's construction of "pressurized collection vessel."[2] According to Akzo, it proved "substantial facts to rebut Dow's claims regarding the function of its control valve," and provided "unrebutted evidence to support a finding that dispersion 'accumulates' in Dow's heat exchange equipment," includ-

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[2] Because we affirm the district court's construction of "pressurized collection vessel," we need not address Akzo's arguments regarding infringement under Akzo's proffered construction.

ing inspections of Dow's BLUEWAVE™ process and the expert declaration of Dr. Eldridge M. Mount III. Appellant's Br. 46, 48 (referencing J.A. 1098 ¶ 46).

Dow responds that Akzo did not provide sufficient evidence from which a reasonable jury could find accumulation. Moreover, Dow contends, the declaration Akzo relies on fails to create a genuine issue of material fact because it is ambiguous at best about whether dispersion "accumulates" in the heat exchangers.

We agree with Dow and the district court that Akzo failed to raise a genuine issue of material fact as to literal infringement, and thus affirm the district court's grant of summary judgment of no literal infringement. All of the claims contain the "pressurized collection vessel" limitation and are thus subject to the same analysis and conclusion.

Literal infringement exists when every limitation recited in the claim is found in the accused device. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 532 (Fed. Cir. 1996). On appeal from a grant of summary judgment of no literal infringement, we determine, after resolving all inferences in favor of the patentee, whether the district court correctly concluded that no reasonable jury could find infringement. *Move, Inc. v. Real Estate Alliance Ltd.*, 709 F.3d 1117, 1121 (Fed. Cir. 2013).

As the movant, Dow had "the initial responsibility of identifying the legal basis of its motion, and of pointing to those portions of the record that it believes demonstrates the absence of a genuine issue of material fact." *Novartis Corp. v. Ben Venue Labs., Inc.*, 271 F.3d 1043, 1046 (Fed. Cir. 2001). Dow satisfied this burden by identifying that its accused process lacks a "pressurized collection vessel," as construed, and by pointing to record evidence suggesting that, in its process, "the material continuously passed through the heat exchangers." J.A. 914 ("Dow's dispersion is only collected at the very end of the Dow process in

a large open-to-the-atmosphere plastic crate or an even larger, open-to-the-atmosphere storage tank, neither of which is pressurized."). Accordingly, "the burden shift[ed] to [Akzo] to designate specific facts showing that there is a genuine issue for trial." *Novartis*, 271 F.3d at 1046. The court correctly determined that Akzo failed to meet that burden.

For its part, Akzo had to present evidence that the dispersion accumulates in Dow's downstream heat exchangers and pipes. Akzo primarily relied on the declaration of its expert, Dr. Mount, which stated that the piping "represents a defined volume of space in which the dispersion collects and is resident for a period of time such that a backpressure is created" on the extruder. J.A. 1098 ¶ 46. According to Akzo, that "unrebutted" statement established a genuine issue of material fact as to whether Dow's pipes and heat exchangers "accumulate" dispersion, as required by the claims.

We disagree. Dr. Mount's statement is ambiguous at best as to whether accumulation occurs in Dow's accused process. It does not recite "accumulation," nor does it expressly refute Dow's contention that dispersion flows continuously throughout its process and does not accumulate. Akzo instead relies heavily on Dr. Mount's language, "resident for a period of time." Such reliance is misplaced, however, for such a phrase does not invoke the "accumulation" envisioned by the claims, and certainly, as Dow notes, "liquid passing through pipes is always 'resident for a period of time.'" Appellee's Br. 47. Ultimately, the passage states that "dispersion collects," yet it fails to identify which construction of "collection" it relies on. Such evidence did not establish a genuine issue of material fact.

Accordingly, Akzo failed to provide sufficient evidence from which a reasonable jury could find that the dispersion in Dow's process accumulates within a "pressurized

collection vessel." The district court's grant of summary judgment of no literal infringement of all the claims was therefore correct.

C. Infringement Under the Doctrine of Equivalents

Akzo lastly contends that the district court committed legal error by applying the concept of vitiation and impermissibly creating "a 'binary choice' in which an element is either present or 'not present.'" Appellant's Br. 52 (quoting *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1356 (Fed. Cir. 2012)). Under a correct application of the doctrine of equivalents, Akzo argues, it raised a genuine issue of material fact as to whether Dow's equipment performed the same function in substantially the same way to reach the same result.

Dow responds that the district court engaged in the proper "function-way-result" inquiry and simply concluded that Akzo failed to meet its burden of showing a genuine issue of material fact.

We agree with Dow and affirm the district court's grant of summary judgment of no infringement under the doctrine of equivalents. Although infringement under the doctrine of equivalents is a question of fact, summary judgment is proper "[w]here the evidence is such that no reasonable jury could determine two elements to be equivalent." *Warner-Jenkinson*, 520 U.S. at 39 n.8. A patentee must establish "equivalency on a limitation-by-limitation basis" by "particularized testimony and linking argument" as to the insubstantiality of the differences between the claimed invention and the accused device or process. *Texas Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558, 1566 (Fed. Cir. 1996). The function-way-result test "often suffice[s] to show the substantiality of the differences." *Id.* "[A]ll claim limitations are not entitled to an equal scope of equivalents." *Moore USA, Inc. v. Standard Register Co.*, 229 F.3d 1091, 1106 (Fed.

Cir. 2000). Ultimately, "many limitations warrant little, if any, range of equivalents." *Id.*

Akzo hones in on and challenges the district court's use of "vitiate" in its equivalents analysis. We find this challenge unpersuasive. As the Supreme Court has stated, "if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court . . . ." *Warner-Jenkinson*, 520 U.S. at 39 n.8. The dictionary defines the term "vitiate" as "to make ineffective." *See* MERRIAM WEBSTER, http://www.merriam-webster.com/dictionary/vitiate (last visited Dec. 15. 2015). Under the doctrine of equivalents, an infringement theory thus fails if it renders a claim limitation inconsequential or ineffective. And as we have explained, "saying that a claim element would be vitiated is akin to saying that there is *no equivalent* to the claim element in the accused device based on the well-established 'function-way-result' or 'insubstantial differences' tests." *Brilliant Instruments, Inc. v. GuideTech, LLC*, 707 F.3d 1342, 1347 (Fed. Cir. 2013) (emphasis added); *cf. Cadence Pharm. Inc. v. Exela PharmSci Inc.*, 780 F.3d 1364, 1372 (Fed. Cir. 2015) ("The determination of equivalence depends not on labels like 'vitiation' or 'antithesis' but on the proper assessment of the language of the claimed limitation and the substantiality of whatever relevant differences may exist in the accused structure.").

With these principles in mind, we conclude that Akzo failed to establish a genuine issue of material fact as to whether Dow's process operates in substantially the same way. In fact, the opposite is true. The claimed process operates by using a pressurized collection vessel wherein dispersion accumulates to maintain backpressure in the extruder. To state it differently, it is the accumulation of dispersion in the collection vessel that generates the backpressure. Dow's accused process, on the other hand, "uses a valve" and does not allow for accumulation in the

downstream pipes. *Decision* at 17. Thus, in order to survive summary judgment, Akzo had to show that a valve and a series of pipes and heat exchangers, wherein the dispersion flows continuously, generate backpressure in the extruder in substantially the same way to increase the boiling point of the carrier fluid. It did not do so.

Akzo introduced Dr. Mount's declaration as support. In the last paragraph of a fifty-one paragraph declaration, Dr. Mount states:

> Dow's and Michelman's piping and heat exchangers perform the same function (maintain the pressure) and achieve the same result (maintaining sufficient pressure to prevent boiling of the aqueous medium) in substantially the same way (by collecting the dispersed material in a contained volume) as the vessel used by the inventors in Examples 2 and 3 of the patent.

J.A. 1100–01. Dr. Mount's discussion of the doctrine of equivalents is broad and scant. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1329 (Fed. Cir. 2001) ("Broad conclusory statements offered by Telemac's expert are not evidence and are not sufficient to establish a genuine issue of material fact."). Nevertheless, what truly undermines Akzo's reliance on the above-quoted statement is the statement's failure to articulate how Dow's accused process operates in substantially the same way. Dr. Mount states that Dow's process operates "in substantially the same way (by collecting the disperse material in a contained volume)," yet he fails to articulate which construction of "collecting" he invokes, much less articulate how the differences between the two processes are insubstantial. Such ambiguity and generality cannot create a genuine issue of material fact.

Accordingly, Akzo failed to provide evidence from which a reasonable jury could find that Dow's valve, pipes, and heat exchangers operate in substantially the

same way as the claimed "pressurized collection vessel" to generate backpressure in the extruder. The court's grant of summary judgment was therefore correct.[3]

II. Dow's Cross-Appeal

In its cross-appeal, Dow challenges the district court's conclusion that the claims of the '956 patent are not invalid for indefiniteness. Specifically, Dow contests two limitations. First, Dow argues that "viscosity below 10 Pa.s" renders claims 1–8 indefinite because it fails to recite the temperature at which the viscosity measurement is to be taken. Second, Dow argues that "carried out at a temperature of from 5 to 150° C. above the melting point of the polymer" renders claims 2–6 indefinite because it fails to specify which steps in the claimed process occur at those elevated temperatures.

Indefiniteness is a question of law that we review de novo, *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014), subject to a determination of underlying facts. A patent claim is invalid for indefiniteness if its language, when read in light of the specification and prosecution history, "fail[s] to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. ____, 134 S. Ct. 2120, 2124 (2014). Patents are presumed to be valid, and the challenger bears the burden of establishing invalidity. *See* 35 U.S.C. § 282; *Nautilus*, 134 S. Ct. at 2130 n.10.

We first address the "viscosity below 10 Pa.s" limitation. The district court's determination that one of skill in the art would measure viscosity at room temperature in

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[3] As we agree with the reasoning relied on by the district court in affirming the grant of summary judgment of no infringement, we find it unnecessary to consider Dow's alternative grounds for affirmance.

the absence of a specified temperature was based on extrinsic evidence. Because we see no clear error in that fact finding here, and it does not conflict with the intrinsic record, we affirm. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1342 (Fed. Cir. 2015); *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015).

The district court considered, *inter alia*, two pieces of extrinsic evidence: Dr. Mount's declaration, J.A. 482–83, and the ASTM protocol, J.A. 542–49. Dr. Mount's declaration, in part, recites: "[t]he standard practice in analytical chemistry dictates that if a temperature is not specified for a given measurement, room temperature is implied." J.A. 482 ¶ 18. The ASTM protocol, on the other hand, relays a "test method [for] the determination of the apparent viscosity of hot melt adhesives . . . at temperatures up to 175° C." J.A. 542. The method then requires "report[ing] the apparent viscosity at a given temperature along with the particulars . . . ." J.A. 543.

The district court did not clearly err in crediting Dr. Mount's declaration over the ASTM protocol. The ASTM protocol does indicate that viscosity varies with temperature. But the described method only discusses "hot melt adhesives" above 175° C, which is inapposite to the claimed product that has been cooled to below 100° C, aims to find different viscosities over a range of temperatures, and fails to indicate what a skilled artisan would understand. Accordingly, the court correctly discounted the ASTM protocol to find that one of skill would understand that room temperature is implied for a viscosity measurement with no specified temperature. As the court then noted, Dow "fail[ed] to establish by clear and convincing evidence that a person skilled in the art would not know with reasonable certainty at what temperature to measure viscosity." *Decision* at 11.

Moreover, although the district court did not expressly rely on the intrinsic record, we conclude that the intrinsic record only further supports the court's determination. Granted, neither the claim language nor the specification indicates a temperature for the final viscosity measurement. But room temperature is the only temperature mentioned at all in the '956 patent in connection with a viscosity measurement. '956 patent col. 3 l. 23. Accordingly, we affirm the court's conclusion that the expression "viscosity below 10 Pa.s" does not render claims 1–8 indefinite, as well as its construction of that limitation as "viscosity below 10 Pa.s at room temperature."

We next address the "carried out . . . of the polymer" limitation.[4] The process recited in claim 2 is "a process according to Claim 1." *Id.* col. 8 ll. 5–8. Claim 1 recites a process "for producing a dispersion in an aqueous medium in which the polymer is dispersed in an aqueous medium in an extruder at a temperature above 100° C." *Id.* col. 7 ll. 9–11. The specification then teaches that the dispersing step necessarily takes place before the dispersion exits the extruder; it is during that dispersing step when the temperature exceeds the melting point of the polymer. Indeed, the specification describes a typical process where the polymer "is melted in the initial melt zone of the extruder at a temperature above the melting point of the polymer, preferably from 5 to 150° C, typically 10 to 130° C, above the melting point." *Id.* col. 2 ll. 36–41. Thus, as the district court found, "the specification supports a construction which indicates that the limitation in claim 2 refers to the elevated temperature phases and not to the stages that follow." *Decision* at 14.

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[4] Claims 2–6 all contain the same "carried out . . . of the polymer" limitation and are thus subject to the same analysis.

Further, in concluding that claims 2–6 were not indefinite, the district court stated that "Dow has provided no evidence to show that a person of ordinary skill in the art would not know with reasonable certainty the steps to which the limitation in claim 2 applies." *Decision* at 14. Absent any evidence contrary to the clear meaning of the intrinsic record, the court did not err in finding that one of skill in the art would understand which steps the elevated temperature range applied to. *See id.*

Dow suggests that, in affirming the district court's construction, we run afoul of the principle that courts may not redraft claims to sustain their validity. Appellee's Br. 67–68 (discussing *Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371 (Fed. Cir. 2004)). Dow's reliance on *Chef America*, however, is misplaced. In affirming the district court's construction, we are not redrafting the claims, but rather construing the claims to require the heightened temperature range to apply to the elevated temperature phases in accordance with the specification. *Eidos Display, LLC v. AU Optronics Corp.*, 779 F.3d 1360, 1367–68 (Fed. Cir. 2015) ("Determining how a person of ordinary skill in the art would understand the limitation, however, is different from rewriting the limitation."); *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1366–67 (Fed. Cir. 2011).

Accordingly, we affirm the district court's conclusion that "carried out . . . of the polymer" does not render claims 2–6 indefinite, as well as its construction of that limitation as "[t]he elevated temperature phases of claim 1 are carried out at a temperature of from 5 to 150° C above the melting point of the polymer."

CONCLUSION

We have considered all remaining arguments, but find them unpersuasive. For the reasons set forth above, we affirm the judgment of the district court.

AFFIRMED