

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALBANY INTERNATIONAL CORP.,
Petitioner,

v.

VOITH PATENT GMBH,
Patent Owner

IPR2025-01116
U.S. Patent 11,261,566

PATENT OWNER'S SURREPLY

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EXHIBIT LIST

Exhibit	Description
2001	Declaration of Dr. David Brookstein
2002	CV of Dr. David Brookstein
2003	<i>Nike, Inc., v. Lululemon USA Inc.</i> (1:23-cv-00771) Order (Exclusion of Dr. Pastore Testimony) (Dec. 20, 2024)
2004	<i>Nike v. Lululemon</i> (1:23-cv-00771) Hearing Transcript (“Junk Science”) (Dec. 19, 2024)
2005	Adanur & Rydin Figures Comparison
2006	Rydin Fig. 3 Seam Loop Detail
2007	Adanur Fig. 3.15 Scale Bar Detail
2008	Adanur Fig. 3.15 Seam Loop Detail
2009	Adanur Fig. 3.15 MD Thread Detail
2010	Rydin Fig. 2 MD Thread Detail
2011	Second Declaration of Dr. David Brookstein
2012	Transcript of Dr. Christopher Pastore’s 3/23/2026 Deposition
2013	Adanur, 1st Edition (excerpts)
2014	Simal et al., “Structure of Heat-Treated Nylon 6 and 6.6 Fibers. I. The Shrinkage Mechanism”
2015	U.S. Patent No. 7,892,402 to Hawes (“Hawes”)
2016	TAPPI Press, “The Paper Machine Wet Press Manual,” Copyright 1991
2017	Matthias W. Schmitt, “Advanced Innovative Fabric Materials for Paper Machine Clothing (PMC)” TAPPI/PIMA PaperCon ’08 Conference, May 4-7 2008, Dallas, TX

Exhibit	Description
2018	U.S. Patent No. 7,207,355 to Lee (“Lee_355”)
2019	Robert Eberhardt LinkedIn Page
2020	Susanne Klaschka Press Release
2021	July 31, 2025, PTO Memorandum
2022	Declaration of John Padro in Support of Motion for Pro Hac Vice Admission
2023	Transcript of Dr. Christopher Pastore’s 8/6/2026 Deposition

I. INTRODUCTION

Petitioner's Reply concedes the lack of merit in Grounds 1 and 3 when it presents new measurements, methodologies, and results for both grounds. When asked to defend these new Reply theories, Petitioner's expert repeatedly acknowledged that they were inconsistent with his original assessments, predicated on material outside the record that he did not provide, and that he made no fewer than six errors in his analysis. (EX2023, 22:10-25:8, 40:21-42:14, 118:4-23; §III, *infra*.) And while Voith has moved to strike these new analyses, even if considered, they do not cure the Petition's fundamental defect: none of the asserted references discloses the claimed LD/MDYD ratio or the claimed seam-loop density. Petitioner cannot manufacture those limitations by manipulating isolated images with flawed assumptions while using only the '566 patent as a roadmap. The claims are not obvious. Rather, as Petitioner's expert conceded "[t]here would be no reason to look for these ratios without the existence of the '566 patent." (EX2012, 130:22-131:3.)

On Ground 2, Petitioner still cannot provide any explanation why a POSITA would import Lee's *non-woven array* numbers into Sudre's *woven fabric* or how to account for the differences in the non-woven fabric structures and arrive at the claimed limitations. Claim 1's required flat-woven fabric is a fundamentally different structure than Lee's non-woven yarn-array. Unable to dispute this, the

Reply instead relies on unsupported claims about Lee and the alleged conventionality of Lee's non-woven structure. But, Lee never states that the non-woven attributes apply to woven structures; neither describes these attributes as conventional. Moreover, the Reply's "corroborating" references do not support that Lee's values are conventional, let alone do they provide a motivation for combination or expectation of success. None of the prior art discloses the claimed attributes of the '566 Patent. Nor is it appropriate to use the '566 patent as a roadmap for the claimed attributes. Petitioner's transparent attempts to cherry-pick attributes from structurally-different prior art or manufacture values that do not exist in the prior art without explanation are not a valid basis for obviousness.

II. THE REPLY DOES NOT RESCUE GROUND 2

None of the asserted references in Ground 2 discloses the '566 Patent's LD/MDYD ratio, seam-loop-density, or individual seam-loop diameter measurement. (POR, 37, 46.) Instead, Ground 2 improperly combines (1) Sudre's woven base structure, (2) diameter/density values from Lee's non-woven arrays and Penven's "internal void diameter," and (3) the '566 Patent's equations to combine these speculative arguments. (Petition, 75-88.) The Reply fails to salvage Petitioner's conclusory argument on each link.

First, Lee does not teach that its non-woven array values apply to a woven fabric. Second, Lee and the other cherry-picked references do not establish that the

selected values were conventional. Third, the fabricated range is not found in Lee and is legally insufficient for obviousness.

A. It Is Undisputed that Lee’s Non-Woven Array Values Are Distinct from Sudre’s Woven Fabric.

Petitioner cannot dispute the fundamental differences between Lee’s non-woven arrays and claim 1’s flat-woven structure. These differences defeat Ground 2 for at least three reasons. First, as a prima facie matter, Lee attributes its numerical values only to its nonwoven array embodiment and never to any woven fabric. Second, nothing in the art supplies a motivation to carry those values into Sudre’s woven structure. Third, Petitioner offers no evidence of a reasonable expectation of success in doing so. (POR, 28-32, 61-63; EX2011, ¶¶210-211.)

The MD threads of claim 1’s “flat-woven fabrics” form the seam loops. (EX1001, 9:61-10:15.) Because woven fabrics interlace warp and weft yarns, core design considerations are yarn diameters, weave patterns, and how tightly/loosely to weave. (EX1003, ¶¶34-36; EX1053, ¶8.) But, Lee’s relied-upon embodiment has no such interlacing. Instead, Petitioner relies on numerical ranges in Lee for “a *nonwoven* multiaxial press felt” where parallel monofilaments are bonded between adhesive webs—not to interlaced yarns. (EX1005, 11-12, 26-33.) These differences are significant. Lee’s attribute values describe, and were chosen for, a structure with none of the design constraints of a woven fabric seam. Rather, as Dr. Pastore conceded, designing a woven fabric requires choices that Lee’s arrays

never present: the weave pattern and how tightly/loosely the warp and weft yarns are interlaced. (EX2023, 189:9-192:2.) These parameters directly affect the diameter and density of the fabric and are necessary considerations to show the '566 patent's claimed elements. (EX2011, ¶¶202, 204-205.)

The Reply never disputes this. It identifies no testimony explaining how to apply Lee's values into an interlaced fabric, and it never answers Dr. Brookstein's unrebutted explanation that interlacing changes the properties and would change Lee's variables. (EX1052, 145:3-7; EX2011, ¶¶206-216.) For example, the Reply nowhere addresses that interlacing creates knuckles, which compact the fabric, create pressure points, and mark the paper. (EX2011, ¶¶52-53.) Lee itself warns that knuckle compaction changes void volume, permeability, and dewatering performance. (EX1005, 4-7). Petitioner cannot simply ignore differences that would have motivated a POSITA not to use Lee's attributes.

B. Lee Does Not Disclose the Relied Upon Attributes for Woven Fabrics.

Rather than address these fundamental differences, the Reply instead seeks to rewrite Lee. First, Petitioner asserts that Lee elsewhere permits a woven-base fabric and states that it would "be possible to use a woven structure to form continuous tube 300." (Reply, 12-14.) But a statement that another structure is possible does not disclose Lee's array dimensions to that structure. Nor is a possibility a motivation: "[i]t does not suffice to meet the motivation to combine

requirement to recognize that two alternative arrangements ... were both known in the art.” *Virtek Vision Int’l ULC v. Assembly Guidance Sys., Inc.*, 97 F.4th 882, 886-87 (Fed. Cir. 2024).

Second, the Reply claims that Lee’s parameters are “explicitly applicable to both woven and non-woven systems.” (Reply, 13) But Lee says no such thing. Petitioner relies only on two generic sentences that woven fabrics may be possible and dependent claim alternatives. None of these passages mentions a single dimension, diameter, or density, let alone the dimensions relied upon. In fact, Lee supplies no woven example using those dimensions and no explanation of how the density selected for parallel yarns would operate after the warp yarns are interlaced with weft yarns. (EX1005, 11-12, 26-33; POR, 28-32.) Nor does Lee provide any explanation of how to convert its bonded parallel arrays into an interlaced woven fabric. Put simply, Lee is of no value to woven fabrics. Rather, as detailed below, Lee proactively discourages the use of woven fabrics, and Lee purports to improve nonwoven arrays. (EX1005, 1 (“[P]articularly concerned with multi-layer press felts which include a *nonwoven yarn array* bonded to an elastic carrier”).) Lee’s passing remark that a woven tube would “be possible” is insufficient to disclose the claimed elements. (EX1005, 35; EX2011, ¶¶212-214.) A list of alternative structures in dependent claims fares no better. It is not a teaching that dimensions

selected for one transfer to the other, particularly when Lee criticizes the very alternative it lists. (§II.C, *infra*.)

Nor is the Reply's assertion supported by any testimony from Petitioner's expert. Dr. Pastore initially described Lee as relating to press felts "formed from flat woven base fabrics" even though Lee calls the relied-upon embodiment "a nonwoven multiaxial press felt." (EX1003, ¶¶249-250; EX1005, 11; POR, 28-32; *see also*, EX2023, 184:5-9, 188:19-22; EX1061, 12; EX1053, ¶23.) Unable to rely on their own expert, Petitioner's claims that Lee's woven and non-woven configurations are interchangeable are based solely on conclusory attorney argument. (Reply, 14.) Petitioner still provides no response to Dr. Brookstein's explanation that a POSITA would not treat yarn diameters/densities from a non-woven, non-interlaced array as interchangeable with those of a woven fabric. (EX2011, ¶202.)

Third, Petitioner even mischaracterizes Dr. Brookstein in an effort to create a woven range disclosure that does not exist. (Reply, 14.) The Reply partially quotes his answer and omits his clarification that "you wouldn't get the same properties" as in Lee's non-woven planar assemblies because those assemblies "[a]re not interlaced." (EX1052, 145:1-7.) Nor does it matter whether the combination "could" be made. *InTouch Techs., Inc. v. VGO Commc'ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014). The issue is whether the art would give a reason

to select Lee's array values for Sudre's woven fabric. Lee provides no such reason. Moreover, neither Pastore declaration analyzes how interlacing or the associated weave choices affect use of the selected values. (EX2011, ¶¶206-216, 284; EX1053, ¶¶53-55.) These are basic design considerations necessary to understand the proposed combination, and without which Petitioner's arguments are little more than conclusory assertions.

C. There Is No Motivation to Use Lee's Non-Woven Array Attributes with Sudre's Woven Structure

Petitioner still provides no explanation why a POSITA would be motivated to use Lee's bespoke non-woven array dimensions in a woven fabric. Instead, it seeks to justify not providing a specific motivation at all and makes unsupported claims of conventionality. Both fail.

Petitioner's arguments that it "imports solely Lee's thread dimensions and density," not Lee's two-fabric architecture, merely highlight the conclusory and hindsight-driven nature of these arguments. (Reply, 14-15; *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).) Leaving Lee's structure behind makes the evidentiary gap *more* pronounced: the Petition must still show why a POSITA would apply dimensions taught for that structure to the different woven structure in the proposed combination. *Keller* does not excuse Petitioner from providing a reason to combine, and no such reason appears in the references. Instead, Petitioner just

arbitrarily selects a partial range from a different fabric structure in an effort to manufacture a limitation that is disclosed nowhere in the prior art.

Lee's own discussion reinforces the absence of motivation. Lee is directed to its nonwoven array approach. In explaining its non-woven structures, Lee criticizes woven constructions as time-consuming and costly, susceptible to manufacturing nonuniformities, and subject to knuckle compaction that changes void volume, permeability, and dewatering performance. (EX1005, 4-7, 35; POR, 61-63.) This is a quintessential example of teaching away: Lee "criticize[s], discredit[s], or otherwise discourage[s]" the claimed woven path. *See Galderma Lab'ys, L.P. v. Tolmar, Inc.*, 737 F.3d 731, 738 (Fed. Cir. 2013). In so doing, it also raises the very concerns that a POSITA would have to address when changing Lee's non-woven arrays. (POR, 61-63, 73-77.) The Reply cannot downplay these criticisms of woven fabrics as merely "unpreferred in some circumstances." (Reply, 15-16.) A reference that warns a POSITA that woven constructions dewater worse cannot at the same time supply the reason to build one. *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1326 (Fed. Cir. 2009) (an inference of non-obviousness is "especially strong where the prior art's teachings undermine the very reason being proffered" for the combination).

The shortcoming here is not simply that there is no explanation why these references would be combined and changed, but that no evidence explains why the

particular numerical teachings would be applied to Petitioner's proposed woven fabric. The "specific example" Petitioner relies upon confirms the selection problem. (Petition, 78-79, 83, 86.) Lee's exact pair, 0.4mm and 9.45 yarns/cm, describes its second, CD-oriented array. (EX1005, 28-29; POR, 43-44.) Lee says that "certain applications" may use equal values in the first and second arrays, but Lee does not identify or explain those applications. (EX1005, 29; EX2012, 318:5-17.) As Dr. Pastore admitted, the "certain applications" sentence necessarily presupposes a fabric having both array structures, but the proposed Sudre-Lee combination explicitly removes this structure. (EX2012, 320:19-322:2.) Thus, Lee provides no reason that "certain applications" would apply to the Sudre-Lee combination's single structure. This is yet another structural difference in Lee that Petitioner ignores.

The Reply's new argument that 0.4mm falls within the first array's 0.3-0.6 mm range (Reply, 21) appears nowhere in the Petition. (Petition, 82-83, 86-88.) In any case, nothing in Lee or any other reference directs a POSITA to select that particular point from the range; the only guide to 0.4mm is the '566 Patent. That is not a prior-art teaching. It is one more value chosen only because the claims require it.

Petitioner's cherry-picking is again evident from its nonresponse on Lee's thermal-processing. (Reply, 22-23.) The relied-embodiment in Lee uses thermal

processing, which affects the size and characteristics of Lee's structure. (EX1005, 27; POR, 53-54; EX2011, ¶¶235-242.) The Reply's only response is attorney argument: it suggests the Ground 2 combination simply removes the adhesive but no reference supports that change. (Reply, 22-23.) It also does not establish that Lee's array density describes the finished, interlaced, needled, and heat-set seam of the proposed combination. (POR, 53-54; EX1003, ¶¶293-297.)

Petitioner even improperly raises new "motivations" for the first time in Reply. The Reply asserts that the Petition "demonstrated" that thread diameter and density "contribute to mechanical and water management advantages," with "seam strength and paper quality benefits." (Reply, 11.) The Petition's Ground 2 motivation section says no such thing. (Petition, 79-81.) In any case, these belated motivations carry no weight. For example, in Lee the void space provides water management, and in the embodiment whose dimensions Petitioner borrows, that void reservoir is supplied by the second fabric structure. (EX1005, 3-4; POR, 43-44, 62-63; EX2011, ¶¶251-255.) But Petitioner's combination removes the second fabric and with it the reservoir. Thus, a water-management motivation cannot justify copying numbers from a structure whose water-management solution the combination throws away. In any case, that every press felt manages water says nothing about using Lee's non-woven numbers in a woven fabric. The Reply's other generalized goals fare no better. (Reply, 11.) They do not identify Lee's

0.4mm and 9.45 yarns/cm values, Penven's 1.27mm passageway void, or the simultaneous claimed windows as the choices for Sudre's woven fabric.

D. Lee's Non-Woven Attributes Are Not Conventional For Woven Fabrics.

Petitioner's own references do not support its characterization that the selected Lee non-woven values "conventional for woven press felts." (Reply, 11-13.) Unsupported attorney argument is insufficient to remedy the lack of a motivation to combine or expectation of success. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016), (POR, 55-56.)

First, Lee does not describe its attributes as conventional, and even if Lee did, it would refer to non-woven arrays. Sudre likewise provides no such statement, and—in fact—discloses no weaving dimensions at all. (POR, 16-17; EX2011, ¶¶118-120.) Penven at most describes the internal void of a "typical seam," a geometry at odds with the Lee structure from which Petitioner takes its dimensions. (POR, 43, 57.)

Second, Petitioner's other arguments are even farther afield. For example, Xu does not corroborate the warp density used in Ground 2. (Reply, 11; EX1053, ¶55.) During cross-examination, Dr. Pastore admitted that he "made an error" in relying on Xu and agreed that Xu "does not confirm that there is a warp yarn density of 8 yarns/cm." (EX2023, 222:9-225:3.) Instead, Xu discusses the weft density. (EX1016, 6:4-9, 9:4-9.)

Nor does Goetemann establish that Lee's solid-array dimensions were "conventional" for woven fabrics. Goetemann is directed to *hollow* monofilaments, which differ from solid filaments in Lee. (EX1024, 1:56-2:11.) As Goetemann teaches, hollow filaments behave differently from solid filaments, including greater interlocking and rigidity. (EX1024, 2:24-36.) Not only does this range substantially vary from the 0.3-0.6mm yarns in Lee, but EX1053 provides "no discussion of hollow or solid" when transferring Goetemann's range to Lee. (EX2023, 218:13-221:21.)

Third, Walkenhaus cannot supply the required loop density. Walkenhaus supplies only a thread density, without the corresponding diameter, making it impossible to calculate loop density. (EX2023, 225:13-226:2 (Dr. Pastore admitting this).) Dr. Pastore further conceded that applying Walkenhaus's density to otherwise disclosed diameters yields "a very broad range of loop density," "[c]ertainly much bigger than what the patent claims." (*Id.*; EX1059, ¶166.) That is not corroboration of conventionality. It is confirmation that the art disclosed no range at all. *See Janssen Pharms., Inc. v. Teva Pharms. USA, Inc.*, 141 F.4th 1367, 1377 (Fed. Cir. 2025) (a "very wide prior-art range" can make the presumption "inapplicable").

Finally, Penven does not disclose an individual seam-loop diameter. As Dr. Pastore confirmed, Penven's "about 50 mils" is the internal void of the passageway

formed by *multiple intermeshed loops*, not a single loop, and that a “loop diameter” appears nowhere in Penven. (EX1006, 3:13-16, 3:63-67; EX2023, 195:3-198:16, 201:18-22, 203:4-20.) Nor can Dr. Pastore’s new “smallest individual loop” theory rescue his assessment, because his own second declaration disclaims it. That declaration states that he does not rely on “the specific geometry of Penven’s pintle system or the shape of the passageway...” (EX1053, ¶56.) Yet the “about 50 mils” he now calls a loop diameter is based on such a geometry, which he disclaimed. (EX1053, ¶57; EX2023, 191:19-193:17, 197:24-198:16, 201:23-202:14.)

None of these references calls Lee’s paired non-woven array values conventional for woven fabrics. Taken together, they show different yarn directions, materials, structures, and incomplete variables, and they highlight the complexity associated with variable selection in fabric design. Petitioner never addresses this complexity and its conclusory claims of conventionality are legally and factually unsupported.

E. Petitioner’s Calculated Spans Are Not Disclosed Prior-Art Ranges.

Contrary to Petitioner’s claims, Voith disputes that the Sudre-Lee-Penven combination teaches a range encompassing the LD/MDYD ratio. (Reply, 17, 20.) No reference teaches the claimed feature in an overlapping amount.

As a preliminary matter, the overlapping-range presumption Petitioner bases its arguments on does not apply here. It applies when a prior-art reference

discloses the claimed feature in overlapping amounts. *Janssen*, 141 F.4th, 1375; *E.I. DuPont de Nemours & Co. v. Synvina C.V.*, 904 F.3d 996, 1006 (Fed. Cir. 2018) (quoted at Reply, 16-17). Here, no reference includes the required range. As explained in *Janssen*, the presumption does not apply where no reference discloses the claimed parameter as a range and where that parameter reflects a relationship between variables that cannot be selected independently. *Janssen*, 141 F.4th, 1378. This is the case here: LD/MDYD and seam-loop density are interdependent parameters that no asserted reference ever identified, let alone disclosed as ranges. This is why Petitioner instead manufactures its spans out of whole cloth: it selectively pairs Lee's array dimensions with Penven's passageway void and then applies equations supplied by the '566 Patent. (Petition, 83-88; EX1003, ¶¶294-306.)

Petitioner's spans are also internally inconsistent. Thread diameter and thread density must come from the same fabric. Dr. Pastore admitted the critical implication: shrinking the thread to bring a 91% loop density inside the claimed window drives LD/MDYD above the claimed 3.6. (EX2023, 105:8-110:15.) This is not a claim construction argument. (*See* DI, 13-14.) Claim 1 itself requires one fabric, with one MDYD, satisfying both claimed ranges simultaneously. (EX2023, 98:2-4, 103:16-104:6.) Because MDYD appears in both parameters, the shared attribute is arithmetic, not an added limitation.

Nor does mixing the largest and smallest values of Lee's diameter and density ranges describe any fabric Lee actually taught. Petitioner's own calculation proves as much: pairing every value in Lee's diameter and density ranges yields loop densities from 35% to 188%. (EX1003, ¶295.) This is an untenable "assessment," as even Dr. Pastore acknowledged that values above 100% are nonphysical and that 188% is "not viable." (*Id.*) A calculation that includes impossible fabrics does not describe a range the art taught a POSITA to explore. It shows that Petitioner combined variables without the structural constraints that govern a woven fabric.

Nor does recognition of individual components (Lee's yarn diameters and densities, or Penven's void) establish recognition of the claimed parameters. *Antonie* rejected optimization where the prior art did not recognize the claimed ratio as the relevant function; that recognition was "essential," and a result dependent on facts read into the reference and assumptions about motivation was "mere speculation." *In re Antonie*, 559 F.2d 618, 620-21 & n.4 (CCPA 1977). Here, the references discuss yarns, loops, or passageways, but none teaches that the ratio of individual-loop diameter to yarn diameter, or twice yarn density multiplied by yarn diameter, should be used as a seam-design variable. Dr. Pastore admitted that "[t]here's nothing in the literature that suggests someone should divide one by

the other” and that he “never saw anyone do that calculation.” (EX2012, 371:5-11, 373:6-9.)

Petitioner therefore must prove ordinary obviousness without a presumption. Petitioner does not. The references supply no reason to compute the claimed parameters, no reason to select the inputs that produce the claimed ranges, and no analysis carrying Lee’s non-woven array values into Sudre’s woven fabric. Dr. Pastore admitted: “There would be no reason to look for these ratios without the existence of the ’566 patent.” (EX2012, 130:22-131:3.)

The same hindsight infects the specific-value theory (Lee’s 0.4mm second non-woven fabric example). Penven’s 1.27 mm passageway divided by Petitioner’s selected 0.4 mm point yields 3.175, and Lee’s selected 0.4mm and 9.45 yarns/cm yield 75.6%. (Petition, 82-83, 86-88.) But the art did not identify those as values for the claimed parameters or direct a POSITA to select them together for Sudre’s woven fabric. The other allegedly disclosed choices also fall outside the claims, including Lee’s preferred 0.5mm loop-forming yarn paired with Penven’s void. (EX1005, 12, 26-27; POR, 38, 44-47.) Petitioner’s selection lands within the claims only because the claims supplied the target. This is hindsight and not based on any teaching in the prior art or expectation of success associated with changing Lee’s non-woven array into a woven fabric.

F. Criticality Does Not Cure the Missing Prima Facie Showing.

The Reply's criticality and optimization arguments are misplaced. Criticality becomes relevant only *after* Petitioner identifies a prior-art range for the claimed parameter and establishes a prima facie case. *In re Peterson*, 315 F.3d 1325, 1329-30 (Fed. Cir. 2003). No reference discloses either claimed parameter or range, so there was nothing to optimize. Moreover, the Reply's secondary-considerations response (Reply, 26-27) never addresses the POR's long-felt-need and industry-migration showings. (POR, 73-77.)

III. THE REPLY DOES NOT RESCUE GROUNDS 1 AND 3

Grounds 1 and 3 fail twice over. First, neither Adanur nor Rydin discloses the claimed loop density or LD/MDYD. Rather, every value Petitioner attributes to them is based on "analysis" performed by Dr. Pastore on photographs outside of the actual disclosure of these references. That alone is dispositive. Second, Petitioner's "analysis" is rife with errors and inexplicable decisions, the only constant being the improper use of the '566 Patent as a roadmap in this arbitrary analysis. Petitioner concedes these flaws by presenting new "assessments" for both grounds in Reply. But the results of these new assessments depend entirely on which of three after-the-fact "diameters" one selects. This guesswork cannot sustain obviousness. (§III.C.2, *infra*.)

A. Neither Adanur Nor Rydin Discloses the Claimed Parameters; Every Value Is a Litigation Construct.

Petitioner relies on two Adanur photographs of unidentified “actual finished press fabrics.” (EX1003, ¶¶91; EX1021, 13.) Rydin’s figures are likewise photographs. Neither reference states a loop density, a seam-loop diameter, or an LD/MDYD ratio. Neither identifies the claimed parameters or associates any number with them. Dr. Pastore admitted as much. (EX2012, 364:7-20, 373:6-9.) The law requires the disclosure to come from the reference itself, and measurements of a reference’s pictures are no substitute. Patent drawings and figures “may not be relied on to show particular sizes if the specification is completely silent on the issue,” *Hockerson-Halberstadt, Inc. v. Avia Group International, Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000), and “arguments based on measurement of a drawing are of little value,” *In re Wright*, 569 F.2d 1124, 1127 (CCPA 1977). (POPR, 46.) Adanur and Rydin are silent on every claimed parameter, so there is nothing in either reference for measurement to reveal. A petitioner “cannot employ mere conclusory statements” to carry its burden of proving obviousness, and numbers manufactured by its expert are exactly that. *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016); (POR, 55.)

The parameters, and the methods of computing them exist only in the ’566 Patent. The loop-density formula is the patent’s own. (EX1001, 6:11-18; Petition, 36.) The loop diameter LD is also measured under the patent’s convention, which

no reference uses. (EX1001, 2:46-49.) This analysis is squarely prohibited. It uses the invention “as a template,” (*In re Gorman*, 933 F.2d 982, 987 (Fed. Cir. 1991) (POR, 19)), and the patent “as a roadmap,” (*Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004); *see In re Kubin*, 561 F.3d 1351, 1359 (Fed. Cir. 2009) (POR, 47)). This is improper hindsight.

For example, when Dr. Pastore inscribed circles on Adanur and Rydin’s photographs and divided by thread widths he measured in the same images, he was executing the ’566 Patent’s instructions on prior art that never gave them. His explanation of why no one had those numbers admits the validity of the patent: “There would be no reason to look for these ratios without the existence of the ’566 patent.” (EX2012, 130:22-131:3.)

B. Dr. Pastore’s Picture Measurements Cannot Fill That Gap and Are Entitled to No Weight.

Even beyond their lack of disclosure, Petitioner’s inconsistent annotated photographs cannot support measurements of the claimed precision. As set forth in the POR and unrebutted in Reply, the boundaries on which every calculation depends are cut, incomplete, or obscured by batt. (POR, 20-26; EX2011, ¶¶126-148, 156-170, 305-311.) Dr. Pastore admitted this. For Adanur, he agreed that the batt was “obscuring the top portion of the seam loop” he measured, that the sample cut is destructive and can misalign paired yarns, that the MD photograph shows the structure only as it exists on the cut plane, and that the two thread bands he

measured “do not belong to the same yarn.” (EX2012, 301:5-11; EX2023, 166:16-170:15, 174:9-23.) For Rydin’s Figure 3 he confirmed that he “can’t know for certain” whether the boundary he selected “is actually the yarn itself or fiber from the batt,” which is why he “said approximately ... every time.” (EX2012, 232:9-233:14; *see also*, EX2023, 181:2-5, 182:21-183:25.) Yet Petitioner still reports values to three figures from the very photographs its expert admitted he could not accurately assess. (EX1053, ¶¶46, 63-64.)

The Reply now argues that photographs can be used to determine relative proportions. (Reply, 6 (citing *Valve*).) But, *Valve* only highlights the flaws in this case. In *Valve*, the Board could verify the photographic comparisons by “[its] own independent review,” against a claimed range spanning 5 to 90 degrees, a known-size object, and no rebuttal evidence. *Valve Corp. v. Ironburg Inventions Ltd.*, IPR2017-01928, Paper 53, 19, 35 (PTAB Jan. 26, 2023). Nothing here is verifiable by eye: the boundaries are cut, obscured by batt, or out of the imaged plane, and the parties dispute the very pixel counts. The claimed windows here are narrow, and Dr. Pastore’s values land on both sides of them. (§III.C.2.)

Compounding these flaws, the source files, the workbook, the extracted JPEG, and the screenshots exist but were never filed. For example, every Adanur and Rydin pixel value was measured on files outside the record. For his first declaration, Dr. Pastore measured a screenshot of a digital copy of Adanur that is

outside the record. (EX2023, 118:17-119:24.) For his second Declaration, he measured an extracted JPEG—also outside the record—with his own tools, and he conceded that someone opening the same PDF directly might get numbers “off by a little bit **or a lot.**” (EX2023, 22:10-21.) His own footnotes concede that the exhibits as filed yield different counts. (EX1053, ¶¶29, 35, 67 nn.1-3.)

This is in addition to the fact that the kind of opinion here—measuring pixels—is not an established methodology, which is evident from the errors and guesswork in Dr. Pastore’s assessment. (POR, 23, 67; EX2011, ¶¶305-309.) Opinions built on unproduced data, without calibration, uncertainty, or repeatability, are entitled to little or no weight. (EX2023, 161:16-162:20, 214:3-7; 37 C.F.R. § 42.65(a).)

C. The Reply’s New Theories Are Improper and Confirm the Guesswork Behind Petitioner’s Analysis.

1. The Reply Abandons the Petition’s Analyses, Conceding They Could Not Carry Petitioner’s Burden.

Rather than defend the Petition’s analysis, the Reply replaces it. Voith has moved to strike the new analyses because a Reply may not “proceed in a new direction with a new approach” to complete a prima facie case. (Paper 34; 37 C.F.R. § 42.23(b); Trial Practice Guide, 73-74; *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369-70 (Fed. Cir. 2016).) But granted or denied, the substitution itself matters: abandoning the original methodology is a tacit

concession that the methodology could not carry its burden, and an expert who advances two inconsistent methodologies gives the Board no basis to credit either.

The Petition's Adanur ratio of 3.0 divided a loop diameter measured in one photograph by a thread diameter measured in a different photograph, assuming a common scale that Adanur nowhere supplies. (EX1003, ¶¶128-135.) The Reply now recasts the Petition as relying "solely" on the MD image and substitutes a same-image 3.3 ratio that appeared for the first time in EX1053. (Reply, 3-4; EX1053, ¶13.) Dr. Pastore did not defend the original method. He testified that the substitute let him "completely ignore" the magnification and same-fabric problems raised at his first deposition, but it ignores the horizontal diameter he agreed is appropriate to consider. (EX2023, 24:20-25:8, 33:13-36:2, 75:12-76:25, 79:21-81:19, 156:25-157:15.) The Reply does the same for Rydin, abandoning the Petition's finishing-step premise for a new 75% figure. (§III.C.4.)

2. Dr. Pastore's Constructs Straddle the Claimed Ranges and Fail to Meet the Claims.

Dr. Pastore's measurements land on every side of the claim boundaries depending only on which measurement convention he selects. This is insufficient as it is Petitioner's burden to show a prior-art fabric actually inside the claimed windows. 35 U.S.C. § 316(e). Horizontal-only diameters put the loop density above 90%, over claim 1's ceiling and "above the stated range" of claim 12. (EX2023, 52:19-53:9, 78:11-21.) Vertical-only diameters put it at 70.8%, nearly

twenty points lower and below claim 12's 72% floor. (Computed from EX1053, ¶¶38, 48, 50.) Only the "equivalent diameter" lands inside the claims, and that construct appears nowhere in EX1003 or the Petition. Dr. Pastore first conceived it after his first deposition, and "cherry-pick" was his own word for relying on any single value. (EX2023, 40:21-42:14, 236:5-239:14, 51:7-10.) A real fabric has one MDYD and one loop density so at most one of those outcomes can be true, and the prior art does not say which. (EX2023, 86:4-9.) Evidence that supports below-the-floor, above-the-ceiling, and inside-the-claims with equal force proves none of them by a preponderance.

3. Dr. Pastore's Conflicting MDYD Testimony Defeats the Grounds Either Way.

Dr. Pastore's assessment is fundamentally flawed for an independent reason: he does not use one consistent MDYD, and the claims require one. Claim 1 defines both claimed ranges through the same threads of the same fabric, "said diameter MDYD of said associated MD threads," and MDYD is an input to both the LD/MDYD ratio and the claimed loop density, so without one reliable MDYD there is no reliable value for either parameter. (EX1001, 10:11-13; EX2023, 89:22-90:12.) During examination, Dr. Pastore took conflicting positions on where MDYD comes from. He first testified that the '566 Patent does not define how to measure a thread's diameter. (EX2023, 71:17-89:21.) On redirect he embraced the opposite even though this appears in no declaration and no paper in this

proceeding. (EX2023, 229:9-18, 231:5-233:25.) Either way, Petitioner's position fails. If the patent leaves the measurement open, then Dr. Pastore supplied his own conventions without any basis, and even then his choices land outside the claimed boundaries. (§III.C.2.) If MDYD is the equal-area diameter, he never used it. Every Petition calculation used something else, and his photographs cannot supply it, because the MD image shows only the vertical thickness of a cut yarn with no cross section from which an equal-area diameter could be computed. (EX2023, 81:3-8, 91:19-99:2; EX2012, 256:18-257:19.)

4. Dr. Pastore's Flawed Reply Analysis Compounded the Errors.

First, none of his numbers survived his deposition. Dr. Pastore admitted that "not a single one" of the average values in EX1053's table is correct, after testifying that he performed and checked every calculation. (EX2023, 66:13-68:10, 11:13-12:10.) With the corrected input, the loop density that paragraph 39 reports as "0.90=90%" becomes 90.35%, above the claimed ceiling. (EX2023, 68:11-69:5, 45:20-48:17, 53:13-60:3.)

Second, his own validation for Adanur's images fails his own error tolerance. In his first declaration, the consistency check that gave Dr. Pastore "assurance" agreed to within 1% (EX1053, ¶12, discussing a 62.1-to-61.6 pixel difference). The same comparison in his second declaration disagrees by 12% (EX1053, ¶¶42-46, discussing a 37.9-to-33.8 pixel difference), which he attributed

to measurement error. (EX2023, 153:8-156:5.) Dr. Pastore had previously conceded that 10% “is a reasonable upper bound for measurement error” and “would be quite large.” (EX2023, 127:20-128:2.) By Dr. Pastore’s own self-serving standards, his analysis is incorrect and unreliable.

Third, his Rydin analysis is conclusory. Both declarations’ loop-density values come from an unfinished fabric of Figure 2 and the rationale for using Figure 3’s finished felt for the LD/MDYD calculation comes from the ’566 Patent. (EX1003, ¶¶368-370, 377-380; EX2012, 118:22-121:12; EX1053, ¶¶67-70.) On LD/MDYD, Ground 3 uses two different diameters for the one claimed variable MDYD, taken from figures Dr. Pastore admitted are possibly “different fabrics” with “no basis in Rydin” to conclude otherwise; applied consistently, his own values yield a 3.92 ratio, outside the claimed 2.7 to 3.6. (EX2023, 100:16-101:4; EX1003, ¶¶368, 381.) And the Reply’s “confirming” 3.2 value remeasured his own annotated first-declaration screenshot, not the Rydin exhibit. (EX1053, ¶71; EX2023, 129:25-135:9.)

D. The Reply’s New Evidence Cannot Save Claim 14.

The Reply’s claim 14 response rests entirely on evidence appearing nowhere in the Petition (EX1061-EX1063; EX1053, ¶¶73-74) and should be disregarded. Even considered, a yarn is an arrangement of fibers, not a fiber, so Lidar’s

elastomeric reinforcing yarns remain distinct from the claimed elastomeric nonwoven fibers. (POR, 26-27; EX2011, ¶¶175-189.)

IV. CONCLUSION

For the foregoing reasons, the Board should confirm the challenged claims.

Date: August 21, 2026

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CERTIFICATE OF WORD COUNT UNDER 37 CFR § 42.24(d)

Pursuant to 37 C.F.R. § 42.24(c), Patent Owner hereby certifies that this Surreply complies with the type-volume limits of 37 C.F.R. § 42.24(c)(4) because it contains 5,596 words, excluding the parts that are exempted by 37 C.F.R. § 42.24(a), according to the word processing system used in preparation of this Surreply. This word count was prepared using Microsoft Word.

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e)(4), the undersigned certifies that on August 21, 2026, a complete copy of the foregoing Patent Owner's Surreply was served on Lead and Back-up Counsel for Petitioner at the service address provided in Petitioner's Mandatory Notices:

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