UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ATTENDS HEALTHCARE PRODUCTS, INC., Petitioner,

v.

PAUL HARTMANN AG, Patent Owner.

> IPR2020-01479 Patent 8,771,249 B2

Before PATRICK R. SCANLON, HYUN J. JUNG, and NEIL T. POWELL, *Administrative Patent Judges*.

POWELL, Administrative Patent Judge.

DECISION Granting Institution of *Inter Partes* Review 35 U.S.C. § 314

I. INTRODUCTION

A. BACKGROUND

Attends Healthcare Products, Inc. ("Petitioner") filed a Petition for *inter partes* review of claims 1–54 of U.S. Patent No. 8,771,249 B2 (Ex. 1001, "the '249 patent"). Paper 12 ("Pet.").¹ Paul Hartmann AG ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp.").

An *inter partes* review may not be instituted "unless . . . the information presented in the petition . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition." 35 U.S.C. § 314(a) (2018). Having considered the arguments and the associated evidence presented in the Petition for the reasons described below, we institute *inter partes* review of all the challenged claims on all the grounds set forth in the Petition.

B. REAL PARTIES IN INTEREST

Petitioner identifies Attends Healthcare Products, Inc. and Domtar Corporation as the real parties in interest for the Petition. Pet. 1. Patent Owner identifies Paul Hartmann AG as the real party in interest. Paper 4, 1 (Patent Owner's Mandatory Notices).

C. RELATED PROCEEDINGS

Petitioner identifies as related matters IPR2013-00173, IPR2020-01477, IPR2020-01478, and IPR2020-01480. Pet. 1.

¹ With our authorization (Paper 8), Petitioner filed a Motion to File Corrected Petition (Paper 9), and Patent Owner filed an Opposition to Petitioner's Motion to File Corrected Petition (Paper 10). We granted Petitioner's Motion (Paper 11), and a Corrected Petition was filed (Paper 12). Our citations to the Petition below are to the Corrected Petition.

D. THE '249 PATENT

The '249 patent relates to incontinence diapers. Ex. 1001, 1:13. Figure 1 of the '249 patent is reproduced below.



Figure 1 shows a top view of an outer face of an incontinence diaper. Ex. 1001, 11:62–63, 12:17–18. Incontinence diaper 2 has main part 4 that consists of front area 6, crotch area 12, and rear area 8. *Id.* at 12:19–22. Absorbent body 14 is between liquid-permeable topsheet 11 and liquid-impermeable backsheet 10. *Id.* at 12:22–26.

Incontinence diaper 2 also includes front side parts 16 and rear side parts 17 attached to main part 4. Ex. 1001, 12:31–32. Side parts 16, 17 can connect to each other by closure means 32 with mechanical closure aides 31 when incontinence diaper 2 is worn. *Id.* at 12:41–47. "The over-abdomen

retaining forces between the closure means 32 and the outer face of the side parts 16... are higher than the over-abdomen retaining forces between the closure means 32 and the outer face of the backsheet nonwoven material component." *Id.* at 13:43–46.

E. ILLUSTRATIVE CLAIM

Of the challenged claims, claims 1 and 34 are independent. Claims 2–

33 and 35–54 depend directly or indirectly from claim 1 or claim 34.

Claim 1 is illustrative and is reproduced below with certain

reformatting:²

1. [1[p]] An absorbent incontinence diaper for an adult user, comprising:

- [1[a][1]] a chassis having an inner face which, when in use, is directed toward a user body and an outer face which, when in use, is directed away from the user body,
- [1[a][2]] said chassis having an absorbent body and a backsheet on a side of said absorbent body which, when in use, is directed away from the user body,
- [1[a][3]] said absorbent body having a smaller width than said backsheet,
- [1[a][4]] said chassis also having a rear area, a front area, and a crotch area lying between said rear area and said front area,
- [1[a][5]] said chassis further defining first and second side edges;
- [1[b]] a first ear attached as a separate component to said first side edge in said front area;
- a second ear attached as a separate component to said second edge in said front area;

² We have added carriage returns and numbered the claim limitations with the same numbers used by the Petition to identify claim 1's limitations.

- a third ear attached as a separate component to said first side edge in said rear area;
- a fourth ear attached as a separate component to said second side edge in said rear area;
- [1[c][1]] said third and fourth ears having a closure component including mechanical closure aids;
- [1[c][2]] which, when in use, hold the diaper on the user body when said closure component is selectively fastened to either said outer face of said chassis or to said outer face of said first and second ears;
- [1[d]] wherein retaining forces between said closure component and said outerface of said chassis are lower than retaining forces between said closure component and said outer face of said first and second ears.

Ex. 1001, 15:61–16:22.

F. Asserted Grounds of Unpatentability

Petitioner challenges the patentability of claims 1–54 of the

'249 patent on the following grounds (Pet. 4):

Claim(s) Challenged	35 U.S.C. §	Reference(s)
1–5, 7, 8, 11–27, 29–41, 43–54	$103(a)^3$	Karami '772 ⁴ , Benning ⁵

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) ("AIA"), amended 35 U.S.C. § 103. Because the '249 patent has an effective filing date prior to the effective date of the applicable AIA amendments, we refer to the pre-AIA versions of § 103.

⁴ Karami, U.S. Pub. No. 2006/0058772 A1, published Mar. 16, 2006 (Ex. 1003, "Karami '772").

⁵ Benning et al., U.S. Pub. No. 2005/0256496 A1, published Nov. 17, 2005 (Ex. 1002, "Benning").

Claim(s) Challenged	35 U.S.C. §	Reference(s)
1–5, 7, 8, 11–17, 19–27, 29–41, 43–54	103(a)	Benning, Karami '626 ⁶
1-5, 7, 12-18, 19-22, 24-27, 31, 32, 34-41, 43-46, 48, 50-54	103(a)	Benning, Karami '626, Stupperich ⁷

⁶ Karami, U.S. Pub. No. 2003/0220626 A1, published Nov. 27, 2003 (Ex. 1004, "Karami '626").

⁷ Stupperich et al., DE 10 2004 053 469 A1, published May 04, 2006 (Ex. 1009, "Stupperich")

Claim(s) Challenged	35 U.S.C. §	Reference(s)
6, 42	103(a)	Karami '772, Benning, Miyamoto '499 ⁸
6, 42	103(a)	Benning, Karami '626, Miyamoto '499
6	103(a)	Benning, Karami '626, Stupperich, Miyamoto '499
9	103(a)	Karami '772, Benning, Jacobs ⁹
9	103(a)	Benning, Karami '626, Jacobs
10, 18	103(a)	Karami '772, Benning, Anderson ¹⁰
10, 18	103(a)	Benning, Karami '626, Anderson
28	103(a)	Karami '772, Benning, Fernfors ¹¹
28	103(a)	Benning, Karami '626, Fernfors
28	103(a)	Benning, Karami '626, Stupperich, Fernfors

Petitioner relies on the Declaration of Arrigo D. Jezzi (Ex. 1012) in support of its unpatentability contentions.

II. ANALYSIS

A. CLAIM INTERPRETATION

In an *inter partes* review proceeding, a claim of a patent is construed using the same standard used in federal district court, including construing the claim in accordance with the ordinary and customary meaning of the

⁸ Miyamoto et al., U.S. Pub. No. 2004/0016499 A1, published Jan. 29, 2004 (Ex. 1005, "Miyamoto '499").

⁹ Jacobs, U.S. 5,814,178, issued Sept. 29, 1998 (Ex. 1007, "Jacobs").

¹⁰ Anderson et al., U.S. 6,605,172 B1, issued Aug. 12, 2003 (Ex. 1008, "Anderson").

¹¹ Fernfors, U.S. Pub. No. 2002/0193776 A1, published Dec. 19, 2002 (Ex. 1045, "Fernfors").

claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent. 37 C.F.R. § 42.100(b) (2019). According to the applicable standard, claim terms "are generally given their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention. Phillips v. AWH Corp., 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing Phillips, 415 F.3d at 1312–17). Extrinsic evidence is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language." Phillips, 415 F.3d at 1317. Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing Vivid Techs., Inc. v. America Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999)).

Petitioner proposes constructions for certain claim terms. Pet. 18–20. Patent Owner does not propose claim constructions. *See generally*, Prelim. Resp.

We discern no terms in need of express interpretation to determine whether to institute *inter partes* review. At this stage of the proceeding, we apply the legal standards set forth above when reading the claims.

B. LEVEL OF ORDINARY SKILL

Petitioner asserts that a person of ordinary skill in the art "would have had a bachelor's degree in chemistry, physics, mechanical, chemical, or

process engineering, or a related degree, and 2-3 years of experience designing diapers." Pet. 15. In support of this, Petitioner cites Mr. Jezzi's testimony. Ex. $1012 \ 18$. Additionally, Petitioner argues that "[t]he prior art and '249 patent also evidence this level of ordinary skill." Pet. 15. At this stage, Patent Owner neither identifies expressly a level of ordinary skill in the art, nor disputes Petitioner's asserted level of ordinary skill in the art. *See generally*, Prelim. Resp.

For purposes of deciding whether Petitioner has demonstrated a reasonable likelihood of establishing unpatentability of at least one claim, we adopt Petitioner's assertion regarding the level of ordinary skill in the art.

C. Ground $1-Alleged \mbox{Obviousness over Karami '772 and Benning}$

1. Overview of Karami '772

Karami '772 relates to "an absorbent article having a fastening system that does not require a conventional loop-type fastening element." Ex. 1003 ¶ 1. Figure 6 of Karami '772 is reproduced below.



Figure 6 shows "a partially cut away plan view of the inside surface of a stretched out disposable diaper according to an exemplary embodiment." Ex. 1003 ¶ 22. Diaper 100 includes topsheet 122, absorbent core 126, and backsheet 130 with an hourglass configuration. *Id.* ¶¶ 45–47. The hourglass shape results in front wings 131, 133 and rear wings 132, 134 that have hook-type fasteners 150a–150d. *Id.* ¶ 47. Figure 8 of Karami '772 is reproduced below.



Figure 8 "shows a disposable diaper according to another exemplary embodiment." Ex. 1003 \P 24. "[D]iaper 100 can be provided with at least one stay-away zone 160 at the front waist portion." Stay-away portion 160 has "diminished affinity to hook-type fasteners." *Id.* \P 53.

2. Overview of Benning

Benning "relates to an absorbent incontinence article." Ex. 1002 \P 2. Figure 4 of Benning is reproduced below.



Figure 4 "shows a plan view of a hygienic article . . . in a schematic representation." Ex. 1002 ¶ 13. Main body portion 20 includes back region 24, crotch region 26, front region 22, and absorbent core 28. *Id.* ¶ 53. Around absorbent core 28 are underlayer 30 that can form an outer side of the article and topsheet 32. *Id.* Material sections 34 that form side flaps or lateral sections are attached to an edge of main body portion 20. *Id.* ¶ 54. Material sections 34 on the right of the figure are unfolded. *Id.* ¶ 55. Material section 34 can have two closures 42 in the form of closing tapes 44 that can "interact in a releasably adherent manner with an outside 46 of the front region 22." *Id.*

3. *Discussion*

The Petition argues that claims 1–5, 7, 8, 11–27, 29–41, and 43–54 would have been obvious in view of Karami '772 and Benning. Pet. 20–50. In support of this argument, Petitioner asserts that certain modifications of Benning's diaper would have been obvious in view of Karami '626. *Id.* 20–29. The Petition then maps the references' teachings and the limitations of the challenged claims. *Id.* at 29–50.

The Petition alleges that "[i]t was obvious to use 'separate wings bonded to the edges of a central chassis' that defines containment assembly 120, rather than Karami '772's integral-wing configuration." *Id.* at 24. The Petition asserts that "Benning confirms this was an obvious construction," explaining that Benning discloses a diaper with such a construction. *Id.* at 25–26. The Petition also notes that Karami '772 discloses using separate wings. *Id.* at 26. In particular, the Petition argues that Karami '772 "teaches that '[a]s in the wings of the previously-described T-shaped diaper, the wings 131 and 133 of the diaper 100 can be made of any . . . bonded nonwoven,' which 'would have invited [person of ordinary skill in the art] to use wings that are separate from and not necessarily the same material as the backsheet." *Id.* at 26.

The Petition argues that a person of ordinary skill in the art would have had multiple reasons for modifying Karami '772's diaper to use Benning's construction of separate wings attached to the diaper chassis. *Id.* at 27. Petitioner argues that a person of ordinary skill in the art would have done so to decrease cost and promote manufacturability. *Id.* at 27–28. Petitioner also argues that a person of ordinary skill in the art would have

done so to allow the use of different materials for the wings and chassis. *Id.* at 28–29.

Patent Owner argues that there are two reasons Ground 2 fails. We turn now to detailed discussions of the disputes raised by the two deficiencies alleged by Patent Owner.

a) Patent Owner's Argument that Petitioner Relies on Different Embodiments of Kamari '772

When explaining Kamari '772's diaper disclosures, the Petition cites to both Figures 6 and 8 of Kamari '772. Pet. 20–24. With reference to an annotated version of Kamari '772's Figure 6, the Petition asserts that "Karami '772 describes diaper 100 having backsheet 130 defining four [blue] wings 131-134 extending outwardly from [red] containment assembly 120 with [purple] absorbent core 126 between topsheet 122 and the backsheet." *Id.* at 20. Petitioner's annotated version of Karami '772's Figure 6 is reproduced below.



Petitioner's annotated version of Karami '772's Figure 6 shows diaper 100 with different parts highlighted in different colors by Petitioner.

With reference to an annotated version of Figure 8, the Petition argues that "a portion of backsheet 130 underlying containment assembly 120 is untreated 'such that it has 'diminished affinity to hook-type fasteners in relation to the remainder of the front waist portion' to define a stay-away zone 160." *Id.* at 22. Petitioner's annotated version of Karami '772's Figure 8 is reproduced below.



Petitioner's annotated version of Karami '772's Figure 8 shows diaper 100 with different parts highlighted in different colors by Petitioner, as well as certain reference numbers added by Petitioner.

Mr. Jezzi's cited testimony regarding the disclosures of Karami '772 includes his opinion that

[a person of ordinary skill in the art] would have understood that the FIG. 8 diaper is, at most, a variation of the FIG. 6 diaper because they are described with the same reference numerals (*see, e.g.*, Karami '772 at ¶¶ [0046] and [0053] ("as shown in FIG. 8, the diaper 100 can be provided with at least one stayaway zone 160")) and are depicted as having the same hourglass configuration with wings, fasteners 150a-150d, and containment assembly 120.

Ex. 1012 ¶ 75, n.1

Contending that Kamari '772's Figure 6 and Figure 8 show different embodiments, Patent Owner argues Petitioner did not provide a reason to combine these embodiments. Prelim. Resp. 24–28. Patent Owner argues that Karami '772 describes Figure 6 as showing "one embodiment" and Figure 8 as showing "*another* embodiment." *Id.* at 25 (quoting Ex. 1003 ¶¶ 45, 53 (emphasis in Prelim. Resp.)). Patent Owner contrasts this with Karami '772's disclosure that Figure 5 shows an embodiment that "is *the same* as the previous embodiment except [for certain things]." *Id.* at 26. Patent Owner concludes that

Karami '772 is unambiguous when it intends for one diaper embodiment to be nearly the same as another or part of the same embodiment. Unlike the Fig. 5 diaper, Karami '772 discloses the Fig. 8 diaper as "another exemplary embodiment," *id.*, ¶ [0053], without describing it as being nearly "the same" as the Fig. 6 diaper.

Id. Patent Owner also disputes Mr. Jezzi's opinion regarding how a person of ordinary skill in the art would have understood the relationship between Figures 6 and 8. *Id.* at 28. Patent Owner argues that Mr. Jezzi ignores the explicit disclosure of Karami '772 that "FIG. 8 shows a disposable diaper according to *another* exemplary embodiment of the invention." *Id.*

At this stage, we find the parties' arguments and evidence about the relationship between Figures 6 and 8 of Kamari '772 raise highly fact dependent issues regarding how a person of ordinary skill in the art would understand Kamari '772. We deem these issues best-suited for resolution based on a fuller record developed during trial.

b) The Dispute Regarding Limitations 1[c][1], 1[c][2], and 1[d]

At this stage, there is also a dispute regarding Limitations 1[c][1], 1[c][2], and 1[d]. Limitation 1[c][1] recites "said third and fourth ears having a closure component including mechanical closure aids." Ex. 1001, 16:12–13. Limitation 1[c][2] recites "which, when in use, hold the diaper on the user body when said closure component is selectively fastened to either said outer face of said chassis or to said outer face of said first and second ears." *Id.* at 16:13–17. Limitation 1[d] recites "wherein retaining forces between said closure component and said outer face of said chassis are lower than retaining forces between said closure component and said outer face of said cuter face of said first and second ears." *Id.* at 16:19–22.

Addressing Limitation 1[c][1], the Petition asserts that "[d]iaper 100 includes closure components including mechanical closure aids: 'hook-type fasteners 150a-150d' with 'hook-type material,' that are connected to back wings 132, 134." Pet. 30–31.

Addressing Limitation 1[c][2], the Petition asserts that Karami '772's fasteners 150a–150d can releasably attach to wings 131, 133, as well as to containment assembly 120. *Id.* at 31. The Petition argues that fasteners 150a–150d can releasably attach "to the outer nonwoven surface of containment assembly 120, in both its treated zones and its untreated stay-away zone." *Id.* Petitioner contends that "[e]ven in stay-away zone 160, retaining forces between fasteners 150a–150d and backsheet 130 were sufficient to hold the diaper on the wearer." *Id.*

Addressing Limitation 1[d][1], the Petition argues that

[b]ecause the outer nonwovens of wings 131, 133 are treated, while stay-away zone 160's is not, the retaining forces between

fasteners 150a-150d and the outer surface of containment assembly 120 are lower than those between the fasteners and the outer faces of the wings. EX1003, ¶¶[0036]-[0037] ("water jet treatment and/or aperturing ... increase[] shear and peel strength"), [0053], FIG. 8; EX1012, ¶¶67-70, 74-77.

Pet. 32. The Petition adds that "[i]t also was obvious to use a higher-basisweight nonwoven in Karami '772's wings than in its containment assembly (§VIII.A.4), which would have rendered fastener retaining forces lower in the containment assembly, including in its treated and stay-away zones." *Id.* at 33.

Patent Owner argues that "Petitioner's ground 1-challenge depends on Karami '772's stay-away zone having at least *some* affinity to hook-type fasteners." Prelim. Resp. 32. Patent Owner also argues that "Petitioner's argument is unsupported by Karami '772 or Benning and relies on inherency." *Id.* at 31. Patent Owner argues that "Mr. Jezzi testified in an earlier IPR that he could not tell whether the retaining forces in Karami '772 are sufficient between the closure means and the main part to hold the diaper on a user." *Id.* at 32–33. Patent Owner also argues that "Petitioner does not acknowledge that ground 1 depends on inherency." *Id.* at 33. Patent Owner also argues that retaining forces between hook-type fasteners and stay-away zone 160 are necessarily present or a natural result of the combination of Karami '772 and Benning. *Id.* at 35. Accordingly, Patent Owner argues, Petitioner fails to show inherency of retaining forces between the hook-type fasteners and Karami '772's stay-away zone 160.

The parties' arguments regarding Limitations 1[c][1], 1[c][2], and 1[d] raise highly factual questions. We find these questions best-suited for resolution on a fuller record developed during a trial.

Nonetheless, we have some further observations regarding this dispute. We do not necessarily agree with Patent Owner that Petitioner ties its unpatentability assertions exclusively and inseparably to the contention that hook-type fasteners would have some affinity to stay-away zone 160. As noted above, the Petition asserts that (1) the fasteners can attach to containment assembly 120 "in both *its treated zones* and its untreated stay-away zone 160" (Pet. 31), and (2) "[i]t also was obvious to use a higherbasis-weight nonwoven in Karami '772's wings than in its containment assembly (§VIII.A.4), which would have rendered fastener retaining forces lower in the containment assembly, including in its treated and stay-away zones" (*id.* at 33). If proven, these assertions appear to provide a basis for showing that the combination of the references' teachings would meet 1[c][1], 1[c][2], and 1[d] by virtue of the fasteners attaching to the treated portions of containment assembly 120 with a lower force than they attach to the wings.

Additionally, regarding affinity of hook-type fasteners to stay-away zone 160, we do not necessarily agree with Patent Owner that Petitioner's assertions must demonstrate inherency. In this vein, we note that "[i]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." *In re Preda*, 401 F.2d 825, 826 (CCPA 1968).

D. GROUND 2 – ALLEGED OBVIOUSNESS OVER BENNING AND KARAMI '626

1. Overview of Karami '626

Karami '626 relates to "an absorbent article having a fastener element which does not require a special loop providing landing zone." Ex. 1004 ¶ 2. Figure 1 of Karami '626 is reproduced below.



Figure 1 shows a top plan view of a disposable absorbent article. Ex. 1004 ¶ 24. Absorbent article 10 has back portion 20, crotch portion 24, front portion 22, frontsheet 30, backsheet 32, and an absorbent core between frontsheet 30 and backsheet 32. *Id.* ¶¶ 35, 36. Wings 40 extend laterally from back portion 20, and one wing 40 has at least one hook-type fastener element 41. *Id.* ¶ 37. Frontsheet 30 has fastener elements 42. *Id.*

"[F]astener elements 41, 42 do not require landing zones and may engage directly with any portion of the nonwoven surface constituting the frontsheet 30, backsheet 32 or wings 40." *Id.* ¶ 40. One wing 40 can contact both fasteners 42 on frontsheet 30; both wings 40 can be secured to each

other to form a belt; or each wing 40 can be secured to a respective fastener element 42. *Id.* ¶¶ 39, 40.

2. Discussion

The Petition argues that claims 1–5, 7, 8, 11–17, 19–27, 29–41, and 43–54 would have been obvious in view of Benning and Karami '626. Pet. 50–75. In support of this argument, Petitioner asserts that certain modifications of Benning's diaper would have been obvious in view of Karami '626. *Id.* 50–57. The Petition then maps the references' teachings and the limitations of the challenged claims. *Id.* at 58–75.

The Petition alleges that it would have been obvious in view of Karami '626 to modify Benning's diaper to have a film-nonwoven backsheet. *Id.* at 53–54. The Petition asserts that film-nonwoven backsheets had certain known advantages. Id. According to the Petition, it was known that the film layer prevented leakage, while the nonwoven layer "promote[s] wearer comfort and visual appeal with a cloth-like outer surface." Id. at 53. The Petition contends that a person of ordinary skill in the art would have found Karami '626's film-nonwoven backsheet especially desirable because "its nonwoven's lower (e.g., 'optimally 20 gsm') basis weight . . . was known to promote 'a generally cloth-like texture." Id. at 53. In view of this, the Petition asserts that a desire to provide a comfortable, visually pleasing cloth-like outer surface would have motivated a person of ordinary skill in the art to modify Benning's diaper with Karami '626's filmnonwoven backsheet. Additionally, Petitioner asserts that a person of ordinary skill in the art would have been motivated to use Karami '626's film-nonwoven backsheet to promote adjustability by allowing "fasteners" like Karami '626's to '[e]ngage directly with any portion of [a diaper's]

nonwoven surface[s]' to secure the diaper on a wearer." *Id.* at 54 (quoting Ex. 1004 \P 40).

The Petition also argues that it would have been obvious to replace Benning's closures 42 with Karami '626's hook-type fasteners. *Id.* at 54– 56. The Petition explains that such a construction would have provided one way to allow widely adjustable sizing with a film-nonwoven backsheet and a nonwoven wing. *Id.*

The Petition also alleges that the obvious combination of Benning and Karami '626 would have been a construction with higher basis weight nonwoven in wings 34 than in the film-nonwoven backsheet. Id. at 57. The Petition notes that Karami '626 teaches "its nonwoven basis weight being 'optimally 20 gsm."" Id. The Petition also notes that Benning teaches wings 34 with "higher basis weights of 'specifically [] 25-50 [gsm]." Id. (quoting Ex. 1002 ¶ 32). The Petition also notes that Karami '626 teaches a preference for "slightly higher basis weights . . . on the wings . . . , while relatively lower basis weights of 15-30 gsm (optimally 20 gsm) are preferred for the backsheet." Id. (quoting Ex. 1004 ¶ 65). Additionally, noting that both Karami '626's T-shaped diaper and the modified Benning diaper would have had separate wings that would engage fasteners and surround the user's waist, Petitioner argues that it would have been understood that "higherbasis-weight wings would have [] been preferred for the modified Benning diaper." Id. Petitioner also argues that "[i]ndependently, [a person of ordinary skill in the art would have] recognized that higher-basis-weight (e.g., 18-60 gsm, such as 30 gsm) wings would have desirably promoted diaper-strength while lower-basis-weight nonwovens (e.g., 10-30 gsm, such

as 20 gsm) for backsheets would have desirably promoted wearer comfort." *Id.*

Patent Owner argues that there are two reasons Ground 2 fails. We turn now to detailed discussions of the disputes raised by the two deficiencies alleged by Patent Owner.

> *a)* Patent Owner's Argument that Petitioner's Alleged Reasons for Modifying Benning Are Conclusory and Nonsensical

Patent Owner argues that Petitioner alleges two conclusory, nonsensical reasons that a person of ordinary skill in the art would have modified Benning's diaper to have a film-nonwoven backsheet, as taught by Karami '626. Prelim. Resp. 43–47. Given the conclusory, nonsensical nature of the alleged reasons for the modification, Patent Owner argues Petitioner's obviousness conclusion rests on hindsight. *Id*.

Patent Owner argues that the Petition does not support sufficiently its assertion that a person of ordinary skill in the art would have given Benning's diaper a film-nonwoven backsheet to "provide a more comfortable and visually appealing cloth-like outer surface for Benning's diaper." *Id.* at 43–44. Patent Owner argues that Petitioner has not demonstrated that Benning's underlayer 30 is uncomfortable or unappealing. *Id.* at 44. Given this, Patent Owner dismisses Petitioner's allegation that providing a comfortable, visually appealing diaper would have motivated the modification. *Id.* at 44–45. In particular, Patent Owner likens Petitioner's alleged motivation to the "generic desire for improvement" rejected as insufficient in *ActiveVideo Networks, Inc. v. Verizon Commc 'ns, Inc.*, 694 F.3d 1312 (Fed. Cir. 2012). *Id.*

Patent Owner also characterizes Petitioner's assertion of motivation based on beneficial adjustability with hook-type fasteners as conclusory and nonsensical. *Id.* at 45–47. As discussed in greater detail below, Patent Owner argues that "there would have been no reason to make the alleged modification because Benning already achieves what Petitioner alleges would have been sought by the change." *Id.* at 46–47.

At this stage, we do not agree with Patent Owner that Petitioner's contentions regarding beneficial comfort and visual appeal amount to an assertion of a conclusory, generic desire for improvement. Rather, Petitioner relies on Mr. Jezzi's testimony explaining in detail why he believes a person of ordinary skill in the art would have combined the specific prior art elements of Benning's diaper and Karami '626's film-nonwoven backsheet. Pet. 53 (citing Ex. 1012 ¶¶ 30–31, 112–113). In support of this opinion, Mr. Jezzi cites documentary evidence that it was known in the art that filmnonwovens provided the specific benefits that allegedly would have motivated the combination—comfort and visual appeal. See Ex. 1012 ¶¶ 30–31, 112–113 (citing Ex. 1004 ¶¶ 62–64; Ex. 1008, 1:51–67; Ex. 1019, 1:38-41, 1:65-2:2, 2:25-32, 3:66-24, 5:12-16; Ex. 1023, 8:3-28; Ex. 1037 ¶ 60). Thus, the circumstances here differ from *ActiveVideo*, where the expert provided "conclusory and factually unsupported" testimony that was "generic and [bore] no relation to any specific combination of prior art elements." 694 F.3d at 1328.

Additionally, at this stage, contrary to Patent Owner's arguments, we do not find conclusory or nonsensical Petitioner's assertion of motivation based on adjustability with a film-nonwoven backsheet and hook-type fasteners. Patent Owner argues that Benning's tapes 44 already allow

retention to main body portion 20. Prelim. Resp. 45. And Patent Owner argues that Petitioner indicates Benning already teaches the option to use hook-type fasteners. *Id.* at 46. These arguments do not appear to support Patent Owner's conclusion that Benning already provides the same functionality that the proposed modification would. Rather, it appears that the proposed modification would allow hook-type fasteners to engage Benning's main body portion 20. This differs from using tapes 44 to engage main body portion 20, and it differs from the alternative of using hook-type fasteners to engage parts of the diaper other than main body portion 20.

On the whole, Petitioner has provided sufficient evidence for purposes of institution that a person of ordinary skill in the art would have been motivated to modify Benning's diaper to use Karami '626's film-nonwoven backsheet.

b) The Dispute Regarding Limitation 1[d]

At this stage, there is a dispute regarding whether Petitioner has addressed sufficiently Limitation 1[d] of independent claim 1. Addressing this limitation, Petitioner asserts that "[a]s explained in Section VIII.B.1(c), the modified Benning diaper had or it was obvious to use a higher-basisweight nonwoven for wings 34 than for the modified underlayer." Pet. 60. Petitioner argues that "[f]or higher-basis-weight wings 34, 'more loops [would have been] available for engagement by the hook portion of the fastener' (EX1040, 2:35-39), resulting in higher fastener retaining forces (EX1044, 5:3-7 ('more hooks and loops [] engaged' provides 'high[er] peel and shear strength[s]')) than in the lower-basis-weight nonwoven of underlayer 30." *Id.* at 61.

Patent Owner counters that

[n]either Benning nor Karami '626 discloses a chassis and ears with a closure component including mechanical closure aids where "retaining forces between said closure component and said outer face of said chassis are lower than retaining forces between said closure component and said outer face of said first and second ears," as required in claims 1 and 34.

Prelim. Resp. 47–48. Given this, Patent Owner argues that Petitioner's challenge relies on inherency. *Id*.

In concert with this, Patent Owner argues that "Petitioner has not met the high standard for inherency." *Id.* at 48. Patent Owner elaborates that Petitioner needs to show that Limitation 1[d] "would have been the natural result," not just a possibility. *Id.*

Patent Owner argues that Petitioner has not shown that higher-basisweight wings would have been the natural result of combining Benning and Karami '626. *Id.* at 48–50. Instead, Patent Owner argues that the various ranges of basis weights disclosed by the references and those cited by Petitioner demonstrate only a possibility of a diaper with higher-basisweight in the wings than the backsheet. *Id.* Patent Owner dismisses Petitioner's citation of Karami '626's disclosed preference for higher-basisweight wings by noting that it "only states that '*slightly* higher basis weights' are preferred for wings and does not say *why*." *Id.* at 50 (emphases in Prelim. Resp.).

Patent Owner also suggests that higher-basis-weight wings may not provide higher retention forces than a lower-basis-weight nonwoven. *Id.* at 50–51. Patent Owner cites Karami '626's disclosure that "pore size in the nonwoven (that is, the size of the interstices formed by the fibers) typically affects the peel strength, a higher pore size providing greater peel strength for the fastener elements according to the present invention." *Id.*

At this stage, we find that Petitioner's arguments and evidence regarding Limitation 1[d] are sufficient to support a demonstration of a reasonable likelihood of prevailing on its challenge of independent claim 1 as allegedly obvious over Benning and Karami '626. The lack of any single prior art reference teaching a particular claim limitation does not compel reliance on inherency to address the limitation. Instead, we must consider what the references, in combination, would have taught or suggested to a person of ordinary skill in the art. *See, e.g., In re Keller* 642, F.2d 413, 425 (CCPA 1981). Here again, "[i]n considering the disclosure of a reference, it is proper to take into account not only specific teachings of the reference but also the inferences which one skilled in the art would reasonably be expected to draw therefrom." *Preda*, 401 F.2d at 826.

Contrary to Patent Owner's suggestion, Petitioner's treatment of Limitation 1[d] relies at least partially on assertions unrelated to inherency. For example, Petitioner expressly asserts that it would have been obvious to a person of ordinary skill in the art to use higher-basis-weight for the wings than for the backsheet. Pet. 57. Mr. Jezzi supports this with reasoned testimony citing documentary evidence of reasons for such a configuration. Ex. 1012 ¶ 117–122. The documentary evidence includes Karami '626's expressly stated preference for higher-basis-weight in the wings. Pet. 57; Prelim. Resp. 50. For purposes of institution, we find Petitioner has provided sufficiently persuasive evidence of known reasons to provide higher-basis-weight wings, even if Karami '626 suggests only "slightly" higher basis weights without expressly teaching why.

Additionally, for purposes of institution, we find Petitioner has presented sufficient evidence tending to show higher retention forces result

from higher-basis-weights, thereby addressing Limitation 1[d]'s recitation of different retention forces. To the extent Patent Owner's arguments about Limitation 1[d] demonstrate Petitioner has not yet conclusively demonstrated unpatentability of the challenged claims, this does not negate Petitioner's showing of a reasonable likelihood of prevailing. Instead, Patent Owner's arguments raise highly factual issues best resolved on a fuller record developed during trial.

c) Conclusion—Ground 2

Having reviewed the parties' arguments and evidence, we determine Petitioner has demonstrated a reasonable likelihood of prevailing at least with respect to its assertion that claim 1 would have been obvious over Benning and Karami '626.

E. GROUNDS 3–13

Each of Grounds 3–13 builds from one of Grounds 1 and 2, citing one or more additional prior art references as teaching certain claim limitations. *See* Pet. 75–98. At this stage, Patent Owner does not dispute any of grounds 3–13 separately from grounds 1 and 2. *See generally*, Prelim. Resp.

F. PATENT OWNER'S PROCEDURAL ARGUMENTS

Patent Owner argues that Petitioner structured the Petition in a procedurally deficient manner. Patent Owner argues that the Petition lacks sufficient particularity and circumvents our word limit. Prelim. Resp. 5–23. Patent Owner argues that, due to excessive shorthand, cross-references, incorporation, and redundancy, the Petition fails to explain clearly the bases of Petitioner's unpatentability contentions. *Id.* at 8–17. Similarly, Patent Owner argues that the Petition uses generic labels, shorthand references, and omission of natural spaces to effectively circumvent our word count. *Id.* at

17–23. At this stage, having considered the Petition and Patent Owner's procedural arguments carefully, we find that none of the issues identified by Patent Owner rises to a level that renders the Petition as a whole deficient, or otherwise warrants denying institution.

III. CONCLUSION

For the foregoing reasons and after considering all of Patent Owner's arguments to the contrary, we are persuaded that Petitioner has demonstrated a reasonable likelihood that it will succeed in showing at least one claim is unpatentable. The Supreme Court has held that a final written decision under 35 U.S.C. § 318(a) must decide the patentability of all claims challenged in the petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348 (2018). Accordingly, we institute an *inter partes* review of all challenged claims under all grounds set forth in the Petition.

Our determination at this stage of the proceeding is based on the evidentiary record currently before us. This decision to institute trial is not a final decision as to patentability of any claim for which *inter partes* review has been instituted. Our final decision will be based on the full record developed during trial.

IV. ORDER

For the reasons given, it is:

ORDERED that an *inter partes* review is instituted on all challenged claims under all challenged grounds; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(a), *inter partes* review of the '249 patent is hereby instituted commencing on the

entry date of this Decision, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

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