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Paper 8
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

RECKITT BENCKISER LLC,
Petitioner,

v.

GEMAK TRUST,
Patent Owner.

IPR2020-00186
Patent 6,486,116 B1

Before CHRISTOPHER M. KAISER, WESLEY B. DERRICK, and JEFFREY W. ABRAHAM, *Administrative Patent Judges*.

ABRAHAM, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314(a)

I. INTRODUCTION

Reckitt Benckiser LLC ("Petitioner"), filed a Petition (Paper 1, "Pet.") requesting *inter partes* review of claims 1–13 of U.S. Patent No. 6,486,116 B1 (Ex. 1001, "the '116 patent"). Gemak Trust ("Patent Owner"), filed a Preliminary Response to the Petition (Paper 7, "Prelim. Resp.").

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a) (2019). The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted "unless the Director determines . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

For the reasons set forth below, upon considering the Petition, Preliminary Response, and evidence of record, we determine the information presented in the Petition fails to establish a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims. Accordingly, we deny the Petition, and do not institute an *inter partes* review.

A. Related Proceedings

The parties identify *GEMAK Trust v. Reckitt Benckiser LLC, C.A.*, No. 1:18-cv-1855-RGA (D. Del.), and note that Petitioner has filed a petition seeking to institute *inter partes* review of US Patent No. 6,787,514 B2 (IPR2020-00184). Pet. 3; Paper 5, 2.

B. The '116 Patent

The '116 patent, titled "Detergent," issued on November 26, 2002. Ex. 1001, code (45), (54). The '116 patent is directed to "detergent product formulations which can be packaged in water soluble film." Ex. 1001, 3–4.

The '116 patent discusses several problems with conventional detergent systems provided in a sachet. Ex. 1001, 1:15–42. These include (1) the instability of conventional ingredients, such as zeolites and perborates, in water soluble films, (2) the instability of sodium percarbonate, a recognized bleaching agent, when combined with other components having a high moisture content, and (3) the fact that phosphates, which "are required as solublisers and aid detergency," have a detrimental effect on the environment. Ex. 1001, 1:15–42. The '116 patent also explains that the perforated film used to form prior art twin compartment sachets "does not confer a significant shelf life" to the components of the sachet, reducing the oxidizing power of the bleaching agent used in the detergent system. Ex. 1001, 1:30–33.

To overcome these problems, the '116 patent discloses a detergent composition that includes granulated percarbonate and sodium metasilicate, but does not contain a zeolite, a perborate, or a phosphate, wherein the composition is capable of being stored in water-soluble polyvinyl alcohol (PVA) film packaging for at least nine months. Ex. 1001, 1:47–55. The granulated percarbonate is encapsulated by a blend comprising a sulfate,[1]

[1] The '116 patent spells this term as "sulphate," but the parties use the spelling "sulfate." *See, e.g.*, Ex. 1001, 1:50; Pet. 1; Prelim. Resp. 1. Except when quoting directly from the '116 patent, we follow the parties' convention, and use the spelling "sulfate."

carboxymethyl cellulose (CMC), and a non-ionic surfactant. Ex. 1001, 1:47–51. According to the '116 patent, "[t]he granulated form of percarbonate . . . permits efficient bleaching action of the laundry product whilst not effecting the stability of the product in storage." Ex. 1001, 2:22–24.

C. Illustrative Claim

Petitioner challenges claims 1–13 of the '116 patent. Claim 1 is the only independent claim challenged and is reproduced below:

> 1. A detergent composition comprising a granulated percarbonate and a blend which encapsulates the percarbonate, the blend comprising a sulphate, carboxymethyl cellulose and a nonionic surfactant, wherein the detergent composition comprises sodium metasilicate and does not include a zeolite, a perborate or a phosphate, and wherein the composition is capable of being stored in a water-soluble PVA film packaging for at least nine months and wherein the composition comprises between 1% and 15% percarbonate.

Ex. 1001, 6:20–29.

D. The Asserted Unpatentability Challenges

Petitioner contends claims 1–13 of the '116 patent are unpatentable based on the following ground:

Claim(s) Challenged	35 U.S.C. §	Reference(s)
1–13	103	Baston,[2] Besse,[3] Lagnemo,[4] Falou[5]

Petitioner also relies on a declaration from Gregory Van Buskirk, Ph.D. (Ex. 1033, "the Van Buskirk Declaration").

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, we construe claim terms according to the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc). 37 C.F.R. § 42.100(b). Under *Phillips*, claim terms are afforded "their ordinary and customary meaning." *Phillips*, 415 F.3d at 1312. "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at 1313. "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." *Id.*

Petitioner and Patent Owner indicate that the Board does not need to construe any claim terms at this time. Pet. 18; Prelim. Resp. 9.

After reviewing the parties' arguments and evidence, we agree that we do not need to expressly construe any terms for purposes of this Decision.

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[2] WO 95/28467, published Oct. 26, 1995 (Ex. 1008).

[3] WO 92/01037, published Jan. 23, 1992 (Ex. 1010).

[4] US 5,336,433, issued Aug. 9, 1994 (Ex. 1009).

[5] US 5,160,654, issued Nov. 3, 1992 (Ex. 1011).

See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co., 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) ("[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.")).

B. Level of Ordinary Skill in the Art

Petitioner argues that a person of ordinary skill in the art for the '116 patent would have "(1) a bachelor's degree in chemistry; and (2) a minimum of 3–4 years of industry experience with detergent engineering and manufacture. However, an individual with an advanced degree in chemistry would require less industry experience (*e.g.*, 1–2 years)." Pet. 17 (citing Ex. 1033 ¶¶ 35–37).

Patent Owner contends that Petitioner's definition of a person of ordinary skill in the art excludes the inventor of the '116 patent, and, therefore, proposes a different definition. Prelim. Resp. 6. According to Patent Owner, a person of ordinary skill in the art would have had "a Bachelor of Science in chemistry with 2–3 years of practical experience in detergent formulations. In the alternative, a POSITA can be someone with at least eight years of practical experience with detergent formulations." Prelim. Resp. 6. Patent Owner states that its "arguments do not change if [Petitioner's] definition is adopted." Prelim. Resp. 6.

We first note that there is a large degree of overlap between the parties' definitions. To the extent the definitions do not overlap, we agree with Patent Owner that a person of ordinary skill in the art should include the inventor. *See Daiichi Sankyo Co., Ltd. v. Apotex, Inc.*, 501 F.3d 1254, 1256–57 (Fed. Cir. 2007). As a result, for purposes of this Decision, we

adopt Patent Owner's proposed definition, such that a person of ordinary skill in the art would have had a Bachelor of Science in chemistry with 2–3 years of practical experience in detergent formulations or eight years of practical experience with detergent formulations. This level of skill is consistent with the field of endeavor of the '116 patent and the disclosures of the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995).

C. Claims 1–13 — Alleged Obviousness in view of Baston, Besse, Lagnemo, and Falou

Petitioner contends claims 1–13 are unpatentable as obvious in view of Baston, Besse, Lagnemo, and Falou. Pet. 34–67. Petitioner directs us to portions of the references that purportedly disclose all the limitations of the challenged claims, and argues that a person of ordinary skill in the art would have been motivated to combine the teachings of the references. Petitioner also relies on the Van Buskirk Declaration to support its arguments.

1. Baston (Ex. 1008)

Baston is directed to detergents containing an enzyme and a delayed release peroxyacid bleaching system. Ex. 1008, 1. Baston states that enzymes and bleaches enable the removal of stains, but notes that bleach can affect the color stability of the fabrics being washed and also degrade and reduce the activity of the enzyme. Ex. 1008, 1. According to Baston,

> where a composition containing both an enzyme and a peroxyacid bleach source is employed, and wherein a means is provided for delaying the release to a wash solution of the peroxyacid bleach relative to the release of the enzyme[,] enhanced stain/soil removal, particularly on coloured naturally occurring stains/soils, may be obtained.

Ex. 1008, 2. Baston teaches that means for delaying the release of the peroxyacid includes applying a coating to the peroxyacid to provide a controlled rate of release. Ex. 1008, 20–21. Baston discloses several suitable coating materials. Ex. 1008, 21–22.

2. Besse (Ex. 1010)

Besse is directed to detersive systems[6] packaged in a water soluble enclosure. Ex. 1010, 1:9–10. Besse explains that water-soluble polymeric films, such as PVA films, are known to be used for packaging, and that the "primary use of [polymeric film] packets has been in household applications in which pre-measured quantities of detergent materials can be packaged in water-soluble films for ease of use." Ex. 1010, 1:19–23. Besse further explains that soluble film packaging helps eliminate problems arising from human contact with dust, which can cause skin irritation or other problems upon ingestion or inhalation. Ex. 1010, 1:23–27. Besse, however, recognizes that many of the chemical components of detersive systems can attack the film, negatively affecting the structural integrity and/or water solubility of the packaging. Ex. 1001, 1:36–2:4.

Besse teaches that "water soluble film packaging can be protected from degradation by a detersive system by dispersing a water soluble barrier about the detersive system," to prevent a film degrading component from promoting film breakdown. Ex. 1010, 2:30–3:3. Besse discloses one embodiment wherein particles within the detersive system that contain film degrading chemicals are coated with a water soluble barrier coating to protect the film. Ex. 1010, 3:14–22.

[6] Besse defines detersive systems as "mixtures of chemicals that can remove impurities, dirt or soil from a surface or fabric." Ex. 1010, 1:14–16.

3. Lagnemo (Ex. 1009)

Lagnemo is directed to "particles having a core of a peroxy compound and a coating comprising a hydrophobic substance, a surfactant, and water swellable grains," and detergent compositions comprising such particles. Ex. 1009, 1:4–9, 5:9–20. Lagnemo explains that detergent compositions often contain peroxy compounds as bleaching agents, but peroxy compounds are unstable in detergent compositions for a variety of reasons, and "[t]herefore, storage of a detergent even at room temperature and normal humidity, involves decomposition of peroxy compounds therein." Ex. 1009, 1:10–21. Lagnemo states that it was known that active agents in detergent could be preserved using a protective coating, but recognizes that "since bleaching agents in a detergent must dissolve rapidly in the washing machine, it is a great problem to find a coating composition showing a satisfactory rate of dissolution at the same time as it provides sufficient protection of peroxy compounds." Ex. 1009, 1:22–28. Lagnemo indicates that its inventive coating provides storage-stable peroxy compounds that are readily soluble in cold water. Ex. 1009, 1:46–50.

4. Falou (Ex. 1011)

Falou discloses a laundry treatment product in the form of a sachet comprising at least two compartments, wherein the first compartment contains sodium percarbonate and the second compartment contains other detergent ingredients. Ex. 1011, 2:48–56. The sachet may be formed from water-soluble or water-dispersible film material, preferably PVA film. Ex. 1011, 2:62–65. According to Falou, the compartmentalized sachet provides a solution to the problem of sodium percarbonate instability by segregating it from other ingredients that may have a detrimental effect on

its stability. Ex. 1011, 3:7–21. Falou further teaches that the solubility of the sachet is not adversely affected by the contents of the sachet, and that its sachet provides the "recognized advantages of . . . convenience, lack of contact of the contents with the hands, lack of wastage or underdosing." Ex. 1011, 3:22–25.

5. Analysis

Claim 1 of the '116 patent recites a detergent composition comprising granulated percarbonate and sodium metasilicate, wherein the percarbonate is encapsulated by a blend comprising a sulfate, carboxymethyl cellulose, and a nonionic surfactant. Ex. 1001, 6:20–29.

Petitioner contends that Baston discloses a detergent composition including sodium metasilicate and percarbonates, and that the percarbonates can be encapsulated with a coating. Pet. 34–35. Petitioner further contends that Baston discloses its coating can include sulfates, a nonionic surfactant (nonionic ethoxylated alcohol), and CMC. Pet. 36–38, 43–44. Petitioner also presents an alternative argument, wherein Petitioner contends that given known problems with the stability of percarbonates, a person of ordinary skill in the art would have been motivated to consult other coating solutions used in detergents, including the coatings in Lagnemo and Besse. Pet. 39–40. Petitioner contends that Lagnemo and Besse demonstrate a person of ordinary skill in the art would have understood that CMC should be used with a nonionic surfactant (per Lagnemo) and a sulfate (per Besse) to provide the desired encapsulation of percarbonate. Pet. 42.

Claim 1 further requires that the composition "is capable of being stored in a water-soluble PVA film packaging for at least nine months." Ex. 1001, 6:27–28. Petitioner acknowledges that Baston does not disclose a

percarbonate compound stored in a water-soluble PVA film packaging, but argues that the use of water-soluble PVA film packaging for detergents comprising percarbonate was well known prior to 1998. Pet. 47. Petitioner asserts that Besse discloses the benefits of using water-soluble PVA film packets of detergent, which include "ease of use and the elimination of human contact with the detergent." Pet. 50. Petitioner also asserts that Falou identifies PVA film as the preferred water soluble film for storing sodium percarbonate. Pet. 50. Petitioner thus argues that a person of ordinary skill in the art would have been motivated to store Baston's percarbonate compound in the water-soluble PVA films of Besse and Falou. Pet. 50.

With regard to the claimed capability of being stored for at least nine months, Petitioner contends that the '116 patent indicates a "typical encapsulation blend" includes 5–98% sodium sulfate, 1–25% CMC, and 1–40% non-ionic surfactant blends, and that using such a blend will provide a stable detergent even after storage in a PVA film for nine months. Pet. 51 (citing Ex. 1001, 1:44–48). Petitioner argues that the prior art teaches using an encapsulating blend comprising sulfate, CMC, and nonionic surfactants in amounts falling within the weight percent ranges specified for the "typical encapsulating blend" in the '116 patent. Pet. 52–55. For example, Petitioner argues Baston teaches the use of 3–4.5% by weight of alcohol ethoxylates (identified in the '116 patent as suitable nonionic surfactants), which falls within the broad range of 1–40% for nonioninc surfactant blends in the '116 patent. Pet. 53–54 (also noting that Baston's weight range falls within the narrower range of 0.5–5% specified in the '116 patent for "alcohol polyglycol ethoxylate oxides"). Petitioner also argues that Besse

discloses an encapsulating coating comprising about 20 wt-% sodium sulfate and 5 wt-% CMC, amounts that fall within the weight ranges (5–98% and 1–25, respectively) disclosed in the typical encapsulation blend of the '116 patent. Pet. 54.

Petitioner acknowledges that the prior art references do not expressly disclose compositions capable of being stored in a water-soluble PVA film packaging for at least nine months. Pet. 56. Petitioner argues, however, that this feature is a result that naturally flows from the composition, such that a prior art combination that renders the particular composition obvious also renders obvious the claimed result. Pet. 56. Petitioner thus contends that the combined disclosures of Baston, Besse, Lagnemo, and Falou teach or suggest the nine month storage capability limitation in claim 1 because the references teach or suggest a composition similar to the "typical encapsulation blend" of the '116 patent, which can be stored for at least nine months. Pet. 55–57.

Patent Owner argues, *inter alia*, that Petitioner fails to show the combined teachings of Baston, Besse, Lagnemo, and Falou disclose or suggest a detergent composition "capable of being stored in a water-soluble PVA film packaging for at least nine months." Prelim. Resp. 42. Patent Owner emphasizes that the entire detergent composition must be capable of storage in a PVA pack for nine months, not just the encapsulation blend. Prelim. Resp. 43. Patent Owner contends that Petitioner "does not even explain what the final detergent product looks like after the supposed combination," and argues that detergent components other than the coated percarbonate granules matter. Prelim. Resp. 43, 45. According to Patent Owner, it was known that percarbonate had significant stability issues, and

"***none*** of [Petitioner's] prior art discloses any stability analysis or results such that the percarbonate's stability in PVA would be understood as the 'natural result flowing' from the disclosures without a full understanding of each component in the detergent product." Prelim. Resp. 43–44. In view of this, Patent Owner contends Petitioner's arguments are based on hindsight. Prelim. Resp. 48.

Patent Owner also contends that Petitioner's arguments are flawed because Petitioner "compar[es] the '116 patent's disclosure of the percentage of nonionic surfactant in the encapsulating blend with Baston's disclosure of the percentage of nonionic surfactant in the entire detergent." Prelim. Resp. 45–46. Specifically, Patent Owner argues that the example Petitioner relies upon indicates Baston's overall composition included 3–4.5 % by weight of nonionic surfactant, none of which was included in the coating on the percarbonate. Prelim. Resp. 46 (citing Ex. 1008, 57:23–25, 58–59, 62:8). As a result, Patent Owner contends Petitioner failed to show the prior art references disclose the claimed components within ranges specified for a "typical encapsulation blend," and, therefore, failed to support its argument that the claimed nine-month stability requirement "naturally flows from the composition" obtained by combining Baston, Besse, and Lagnemo. Prelim. Resp. 48.

We are persuaded by Patent Owner's arguments. Although we agree with Petitioner that Baston generally discloses the use of a coating for percarbonate that may include nonionic surfactants, we are not persuaded that Baston discloses using 1–40 wt-% of nonionic surfactants in that coating composition, which is the amount of nonionic surfactants the '116 Patent indicates is acceptable for use in the typical encapsulating blend. Petitioner

directs us to the examples in Baston that include an alcohol ethoxylate nonionic surfactant (24E5) in amounts ranging from 3–4.5% by weight. Pet. 53–54 (citing Ex. 1008, 57:23–25, 62:8, Example 1 (A–E)). Baston, however, indicates that the surfactant 24E5 is simply one component in the overall detergent composition, and lists coated percarbonate as a different component of the same detergent composition. Ex. 1008, 57 (identifying XYEZ as an "abbreviated component identification"), 58 (identifying "Percarbonate (fast release particle)" and "Percarbonate (slow release particle)" as additional components). There is no indication in Baston that 24E5 is included in the coating for percarbonate or for any other particle in Baston's detergent composition. Ex. 1008, 58–59. Thus, Petitioner has not demonstrated adequately that Baston discloses using 3–4.5% by weight of nonionic surfactant in its coating composition, or that the composition of the encapsulation blend taught or suggested by Baston, Besse, and Lagnemo is similar to that disclosed in the typical encapsulation blend of the '116 patent. This undermines Petitioner's argument that the stability characteristics of the prior art blend composition are the same as the typical blend composition of the '116 patent, and its conclusion that the prior art exhibits a composition capable of being stored in a water soluble PVA film for at least nine months, as claim 1 requires.

Even if Petitioner had demonstrated that the blend composition in the prior art was similar to the blend composition disclosed in the '116 patent, claim 1 is directed to a detergent composition that comprises more than just coated percarbonate, and it is the entire composition that must be capable of being stored for at least nine months. Notably, the '116 patent describes specific steps taken to "determine the storage and durability of sachets"

containing "products including the granulated percarbonate compounds," not just the coated percarbonate compounds themselves. Ex. 1001, 2:46–55. Furthermore, we note that Besse states that "many of the chemicals commonly used in detergent compositions can attack the film and cause failure in the package integrity and/or water solubility especially when stored or used in humid conditions." Ex. 1010, 1:28–2:4.

In addressing the stability limitation, however, Petitioner focuses on only the blend composition, and does not address adequately whether or how other ingredients in the remainder of the detergent composition disclosed in the prior art impacts the stability of the overall composition. Nor does Petitioner direct us to evidence of stability testing in any of its prior art references. Patent Owner points out that Falou and Besse discuss some stability testing, but only for four and five weeks, respectively. Prelim. Resp. 44 (citing Ex. 1010, 27–28; Ex. 1011, 13:34–60).

Petitioner bears the burden of demonstrating that the prior art discloses a detergent composition capable of being stored in a water-soluble PVA film packaging for at least nine months, and has not presented evidence sufficient to satisfy that burden. In view of this, we determine that Petitioner has failed to demonstrate adequately that the combined disclosures of Baston, Besse, Lagnemo, and Falou teach or suggest all limitations of claim 1, and, as a result, Petitioner has not shown a reasonable likelihood that it would prevail with respect to its argument that claim 1 is unpatentable as obvious in view of these references.

Claims 2–13 each depend directly or indirectly from claim 1, and, therefore, include all of the limitations of claim 1. Ex. 1001, 6:30–64; *see* 37 C.F.R. § 1.75(c) ("Claims in dependent form shall be construed to

include all the limitations of the claim incorporated by reference into the dependent claim."). In view of our determination that Petitioner fails to establish that the combined disclosures of Baston, Besse, Lagnemo, and Falou teach or suggest all limitations of claim 1, we reach the same result for claims 2–13.

III. CONCLUSION

For the foregoing reasons, Petitioner has not demonstrated a reasonable likelihood that at least one challenged claim of the '116 patent is unpatentable over the prior art of record. Accordingly, we decline to institute *inter partes* review.

IV. ORDER

It is hereby

ORDERED that the Petition is denied, and no trial is instituted.

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