

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FAVORED TECH CORPORATION,
Petitioner,

v.

P2I LTD,
Patent Owner.

IPR2020-00478
Patent 8,389,070 B2

Before KRISTINA M. KALAN, JEFFREY W. ABRAHAM, and
SHELDON M. McGEE, *Administrative Patent Judges*.

ABRAHAM, *Administrative Patent Judge*.

DECISION
Denying Patent Owner's Request for Rehearing
37 C.F.R. § 42.71(d)

I. INTRODUCTION

Favored Tech Corporation (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–17 of U.S. Patent No. 8,389,070 B2 (Ex. 1001, “the ’070 patent”). P2i Ltd (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 7, “Prelim. Resp.”). After receiving authorization from the Board (Paper 8), Petitioner filed a Reply to Patent Owner’s Preliminary Response (Paper 9), and Patent Owner filed a Sur-reply (Paper 10).

On August 25, 2020, we issued a Decision denying institution of *inter partes* review. Paper 11 (“Decision” or “Dec.”).

Patent Owner filed a Request for Rehearing of our Decision. Paper 12 (“Rehearing Request” or “Req. Reh’g”). For the reasons that follow, Patent Owner’s Rehearing Request is *denied*.

II. STANDARD OF REVIEW

The party challenging a decision in a request for rehearing bears the burden of showing the decision should be modified. 37 C.F.R. § 42.71(d) (2019). A request for rehearing “must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed.” 37 C.F.R. § 42.71(d). When rehearing a decision on a petition, the decision will be reviewed for an abuse of discretion. 37 C.F.R. § 42.71(c).

III. BACKGROUND

In the Petition, Petitioner contends claims 1–17 of the ’070 patent are unpatentable based on the following challenges (Pet. 4):

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–3, 6, 10–14	102	Baalmann ¹
1–15	103	Baalmann, Coulson ²
16, 17	103	Baalmann, Coulson, Hillman ³

In our Decision, we determined that Petitioner did not establish a reasonable likelihood that it would prevail with respect to its argument that Baalmann anticipates claims 1–3, 6, and 10–14, but did establish a reasonable likelihood of prevailing in its obviousness challenge of claim 1 based on Baalmann alone. Dec. 14, 22–23. Because we determined Petitioner demonstrated a reasonable likelihood of prevailing with respect to at least one of the claims challenged in the Petition, we instituted *inter partes* review of all claims and all challenges raised in the Petition.⁴ In an attempt to further guide the parties after institution, we indicated that we agreed with Patent Owner’s assertion that Petitioner failed to show that Coulson discloses a power density value falling within the scope of the claimed range. Dec. 27. We also addressed the evidence and arguments

¹ US 2001/0015284 A1, published Aug. 23, 2001 (Ex. 1004).

² Coulson et al., *Ultralow Surface Energy Plasma Polymer Films*, Chem. Mater. Vol. 12, No. 7, 2031–2038 (2000) (Ex. 1003).

³ US 5,451,258, issued Sept. 19, 1995 (Ex. 1005).

⁴ *Guidance on the Impact of SAS on AIA Trial Proceedings* (Apr. 26, 2018), <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial>; *see also SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

regarding whether a person of ordinary skill in the art would have had reason to combine the teachings of Baalmann and Coulson, and whether a skilled artisan would have had a reasonable expectation of success. Dec. 27–29. In our Decision, we expressly indicated that “we have not made a final determination with respect to the patentability of any challenged claim or any underlying factual or legal issues.” Dec. 33.

IV. DISCUSSION

Patent Owner contends that we “incorrectly instituted trial based on a ground not asserted in the Petition,” and that our Decision overlooks and misapprehends arguments and evidence “that undermine the new obviousness ground based on Baalmann alone.” Req. Reh’g 3–4. Patent Owner also contends that our Decision “suggest[s] that the alleged grounds based on Coulson in combination with Baalmann remain viable despite Coulson’s failure to disclose the claimed power density.” Req. Reh’g. 3.

1. Whether the Board Exceeded Its Authority and Abused Its Discretion by Instituting Inter Partes Review Based on Baalmann Alone

Patent Owner contends we abused our discretion to institute *inter partes* review because we instituted review on a new ground not asserted in the Petition. Req. Reh’g 4–6. We disagree. As we noted in the Decision, Petitioner presented evidence demonstrating Baalman alone disclosed or suggested all limitations in claim 1. Dec. 15–22. We also indicated that Petitioner presented evidence that a person of ordinary skill in the art would have had reason to combine the various disclosures within Baalmann to arrive at the claimed invention. Dec. 18–20. As such, we did not present a new argument on behalf of Petitioner, nor did we “raise address, and decide unpatentability theories never presented by the petitioner.” Req. Reh’g 5.

Instead, as permitted by statute, we instituted review based on information presented in the Petition. 35 U.S.C. § 314(a) (2018); Req. Reh’g 5. We identified where Petitioner presented “the grounds on which the challenge to each claim is based, and the evidence that supports the grounds for the challenge to each claim” in the Petition. Req. Reh’g 5 (citing 35 U.S.C. § 312(a)(3)) (emphasis omitted). Accordingly, we did not institute review on our own independent grounds of review, and, therefore, did not “act[] outside of [our] statutory and regulatory authority.” Req. Reh’g 6.

2. Whether the Board Erred in Instituting Inter Partes Review Based on Baalmann Alone

Patent Owner contends that we incorrectly determined that “Petitioner has presented evidence demonstrating . . . that a person of ordinary skill in the art would have had reason to combine the various disclosures within Baalmann to arrive at the claimed invention.” Req. Reh’g 9. Patent Owner notes that we cited pages 31 and 37 in support of this statement in our Decision, but contends that neither page of the Petition provides evidence regarding a reason to combine the various disclosures within Baalmann. Req. Reh’g 8. Patent Owner further argues that, absent evidence and a rational underpinning demonstrating why a person of ordinary skill in the art would have combined the distinct disclosures in Baalmann regarding plasma zone volume and power input, our determination that Petitioner has shown a reasonable likelihood that claim 1 is obvious over Baalmann conflicts with our determination that Petitioner failed to demonstrate Baalman discloses all of the limitations of claim 1 for purposes of Petitioner’s anticipation challenge. Req. Reh’g 10–11.

We are not persuaded by Patent Owner's arguments. Patent Owner criticizes our citation to pages 31 and 37 of the Petition on pages 18 through 19 of the Decision, alleging neither page 18 or 19 provides evidence regarding a reason to combine the various disclosures within Baalmann. But our discussion of this issue did not end on page 19 of the Decision, nor did we rely solely on pages 31 and 37 of the Petition. Instead, on pages 20–21 of the Decision, we stated that

Petitioner also provides a reason why a person of ordinary skill in the art would have used [Baalmann's] outer-wall configuration with a 1 m³ chamber such that the plasma zone covers the full chamber volume: "because doing so would have maximized the effective chamber capacity at any given chamber size by allowing the reactive plasma to reach all substrate surfaces, even for large substrates or large batches of smaller substrates extending near the outer limits of the chamber." Pet. 35; Ex. 1002 ¶ 125.

Dec. 20–21. Patent Owner does not address this portion of the Decision or our citation to page 35 of the Petition in the section of its Rehearing Request asserting we incorrectly found the Petition asserts a ground of obviousness based on Baalmann alone. Req. Reh'g 7–11.⁵ These portions of the record, which address Petitioner's evidence demonstrating a person of ordinary skill in the art would have had reason to use a particular reactor configuration and plasma zone size, undermine Patent Owner's assertion that "Petitioner's obviousness theory fails to provide any reasoning why a POSA would combine Baalmann's separate and distinct teachings to arrive at the claimed

⁵ We note that Patent Owner does address this portion of the Decision in a separate section, arguing that we overlooked arguments that defeat this theory of obviousness. Req. Reh'g 12–14. We address those arguments below.

method with the combination of a power density of 0.001 to 500 w/m³ in a reactor having a plasma zone of greater than 0.5 m³.” Req. Reh’g 11.

In our Decision, we expressly noted that Petitioner refers to Baalmann’s general disclosure of “applying power to the plasma chamber at power densities ‘between 0.5 kilowatt/m³ and 5 kilowatt/m³.’” Dec. 17 (citing Pet. 37; Ex. 1004 ¶ 18). It is undisputed that this power range is not tied to any particular reactor volume or plasma zone size. Req. Reh’g 7; Prelim. Resp. 18–19 (arguing that Baalmann does not “link its power per chamber volume range with any particular reactor size or plasma zone size”). Taken together with Petitioner’s evidence regarding the use of a chamber configured to provide a plasma zone of 1 m³, we determined Petitioner offered evidence demonstrating sufficiently for purposes of institution that a person of ordinary skill in the art would have had reason to combine the various disclosures within Baalmann to arrive at the claimed invention. Nothing in Patent Owner’s Rehearing Request demonstrates persuasively that this initial determination was incorrect or that we erred in instituting trial based on Baalmann alone.

3. Whether the Board Overlooked Arguments that Defeat Any Theory of Obviousness Based on Baalmann Alone

Patent Owner contends that we overlooked arguments and evidence provided in the Preliminary Response that refute a theory of obviousness based on Baalmann alone. Req. Reh’g 12. In particular, Patent Owner contends that it presented evidence that Baalmann’s 1 m³ reactor with an outer wall electrode configuration would not have a plasma zone of 1 m³, evidence that “Baalmann teaches away from the claimed method because in Baalmann discloses applying a power of 2kW in its only example using a

reactor large enough to potentially satisfy claim 1's plasma zone volume requirement," and evidence that a person of ordinary skill in the art "would not have been motivated to use powers within the claimed range in a large scale reactor, because the prior art, including Baalmann, consistently disclosed use of power densities outside the claimed range for larger reactors." Req. Reh'g 12–14 (citing Prelim. Resp. 20–24, 54–56).

We disagree that we overlooked Patent Owner's arguments and evidence regarding the plasma zone volume of Baalmann's 1 m³ reactor. To the contrary, we discussed Patent Owner's arguments and evidence on this topic on pages 19 through 21 of our Decision. *See* Dec. 19–21 (including citations to pages 20–24 of the Preliminary Response). After considering these arguments, we determined that Petitioner had directed us to evidence sufficient to establish a reasonable likelihood of prevailing in its obviousness challenge of claim 1 based on Baalmann alone, and proceeded to explain the basis for our determination. Dec. 20–23 (citing Pet. 34–35; Prelim. Resp. 22–23).

We have also reconsidered Patent Owner's arguments anew, but, nevertheless, determine that our previous analysis of and disagreement with Patent Owner's assertions is still correct. Specifically, at this stage of the proceeding, we are unpersuaded by the evidence from Patent Owner's declarant, Dr. Parsons, indicating that there would be regions within Baalmann's 1 m³ reactor that would be incapable of forming the plasma zone. Req. Reh'g 12–13 (citing Ex. 2001 ¶¶ 78–79). Dr. Parson's opinions appear conclusory and do not include the underlying facts on which his opinions are based. 37 C.F.R. § 42.65(a). We balance this against the evidence submitted by Petitioner, most of which comes from Baalmann

itself or is not specifically disputed. For example, Petitioner’s evidence includes (1) Baalman’s disclosure of using a plasma reactor with “an evacuable chamber with a volume of 1 m³,” (Pet. 34–35 (citing Ex. 1004 ¶ 47)); (2) evidence that to a person of ordinary skill in the art, “evacuatable chamber volume identifies the internal volume of a chamber that can be occupied by a gas” (Pet. 25 (citing Ex. 1002 ¶¶ 49, 102)); (3) Baalman’s disclosure of using an electrode configuration that has one electrode formed by the chamber wall (Pet. 24 (citing Ex. 1004 ¶¶ 35, 61), 34–35); and (4) evidence that an outer-electrode configuration would have created an electric field, and therefore generated plasma, throughout the chamber’s full volume during operation (Pet. 25 (citing Ex. 1004 ¶¶ 35, 47, 61; Ex. 1002 ¶ 103), 34–35). In view of this, we remain persuaded that Petitioner has demonstrated sufficiently, for purposes of institution, that Baalman discloses or suggests a plasma zone of 1 m³. Dec. 20–21.

We also disagree with Patent Owner’s argument that we overlooked evidence of teaching away in Baalman. Req. Reh’g 14. In rendering a decision, the Board is not required to “address every argument raised by a party or explain every possible reason supporting its conclusion.” *Synopsys, Inc. v. Mentor Graphics Corp.*, 814 F.3d 1309, 1322 (Fed. Cir. 2016). Although we did not expressly discuss Petitioner’s specific arguments, our determination that Baalman does disclose or suggest the use of power density values within the claimed range in a large scale reactor was a clear indication that we disagreed with Patent Owner’s position. As noted in the Decision, our determination regarding the use of a power density falling within the claimed range in a large scale reactor was based on undisputed facts relating to Baalman’s disclosure: (1) Baalman discloses applying

power to the plasma chamber at power densities between 0.5 kilowatt/m³ (500 W/m³) and 5 kilowatt/m³ (Dec. 21–22 (citing Pet. 37; Ex. 1004 ¶ 18; Prelim. Resp. 18–19)); (2) Baalmann’s disclosure of this power density is not tied to any particular reactor volume (Dec. 12 (citing Prelim. Resp. 19)); and (3) Baalmann discloses the use of a 1 m³ plasma reactor (Dec. 20). As discussed above, we also determined that Petitioner provided a reason why a person of ordinary skill in the art would have had reason to use a large scale reactor. Dec. 20–21. We determined this evidence was sufficiently persuasive to demonstrate that the subject matter of claim 1 would have been obvious to a person of ordinary skill in the art in view of Baalmann, even in view of Patent Owner’s arguments and evidence regarding Baalmann’s disclosure of one example using a 1 m³ chamber and a power density of 2kW. Dec. 22.

Nevertheless, because we did not expressly discuss Patent Owner’s teaching away argument in the Decision, we will do so here. With regard to Patent Owner’s contention that “Baalmann teaches away from the claimed method because . . . Baalmann discloses applying a power of 2kW in its only example using a reactor large enough to potentially satisfy claim 1’s plasma zone volume requirement, which would result in a plasma power density well outside the claimed range” (Req. Reh’g 14), we note that a reference teaches away from a claimed invention if it “criticize[s], discredit[s], or otherwise discourage[s]” modifying the reference to arrive at the claimed invention. *In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004). Patent Owner does not direct us to any such evidence in Baalmann, and we will not “read into a reference a teaching away . . . where no such language exists.”

DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co., 464 F.3d 1356, 1364 (Fed. Cir. 2006).

Additionally, although the one example of a 1 m³ reactor in Baalman involved using a power density that did not fall within the claimed range, for purposes of an obviousness analysis, we cannot ignore the broader disclosure of Baalman regarding the use of power densities in the range of between 0.5 kW/m³ and 5kW/m³, which does overlap the claimed range. *See In re Wesslau*, 353 F.2d 238, 241 (CCPA 1965) (“It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.”).

We turn next to Patent Owner’s argument that we overlooked evidence that

despite Baalman’s generic teaching of a range of power input per reactor volume of 0.5 to 5 kW/m³, a POSA would not have been motivated to use powers within the claimed range in a large scale reactor, because the prior art, including Baalman, consistently disclosed use of power densities outside the claimed range for larger reactors.

Req. Reh’g 14. Patent Owner cites to pages 54–56 of the Preliminary Response as the source for this argument and evidence. Although these pages do provide a discussion of the use of certain power densities in prior art references, this portion of the Preliminary Response primarily addresses Patent Owner’s arguments regarding whether a person of ordinary skill in the art “would have had a reasonable expectation of success when combining the disparate process of Coulson and Baalman,” not what a person of ordinary skill in the art would have been “motivated” to do.

Prelim. Resp. 56; *see Par Pharmaceutical v. Twi Pharmaceuticals, Inc.*, 773 F.3d 1186, 1196 (Fed. Cir. 2014) (noting the proper analysis under § 103 requires “consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success”) (quoting *Medichem, S.A. v. Rolabo S.L.*, 437 F.3d 1157, 1164 (Fed. Cir. 2006)). As such, Patent Owner appears to present a new argument for the first time in the Rehearing Request. Not only is such an argument improper (*see* 37 C.F.R. § 42.71(d)), but the fact that it was raised for the first time in the rehearing means it is not something we could have overlooked.

Even if Patent Owner had presented this “motivation” argument in the Preliminary Response, we remain unpersuaded of any error in our Decision. Patent Owner fails to explain sufficiently why a person of ordinary skill in the art would look to other prior art references for guidance regarding the use of a particular power density in large scale reactors in view of our determination that Baalmann itself discloses the use of a power density in the claimed range in a large scale reactor.

4. Alleged Error in Discussing Challenges Based on Coulson and Baalmann

In our Decision, we agreed with Patent Owner that Petitioner failed to show Coulson discloses a power density value falling within the scope of the claimed range. Dec. 27. We also noted, however, that we are required to institute *inter partes* review on all challenges and all claims raised in the Petition. Dec. 24 n.6. As a result, despite our preliminary determination

regarding deficiencies in Coulson's disclosure, Petitioner's challenge based on the combined disclosure of Coulson and Baalmann remains part of this *inter partes* review.

Furthermore, we stated that "we have not made a final determination with respect to the patentability of any challenged claim or any underlying factual or legal issues." Dec. 33. Thus, to the extent Petitioner wishes to address our preliminary determination regarding Coulson's disclosure, it may. Accordingly, we deemed it appropriate to provide the parties with guidance regarding the evidence presented addressing reasons why a person of ordinary skill in the art would have combined the teachings of Coulson and Baalmann, and whether a skilled artisan would have had a reasonable expectation of success. This evidence is different from the evidence regarding whether Coulson discloses a power density value falling with the scope of the claimed range. Therefore, even in view of our statement that "Petitioner and Dr. Gleason present substantial reasons why a person of ordinary skill in the art would have combined the teachings of Coulson and Baalmann, and would have had a reasonable expectation of successfully arriving at the claimed invention" (Dec. 29), we maintain that our preliminary determination in the Decision that Petitioner failed to show that Coulson discloses a power density value falling with the scope of the claimed range is correct.

V. CONCLUSION

For all of the foregoing reasons, Patent Owner has not demonstrated that we abused our discretion in instituting *inter partes* review of claims 1–17 of the '070 patent.

VI. ORDER

For the reasons given, it is:

ORDERED that Patent Owner's Request for Rehearing is denied.

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