

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CMS CEP COR LTD. and
CMS CEP COR AMERICAS LLC,
Petitioner,

v.

SANDVIK INTELLECTUAL PROPERTY AB,
Patent Owner.

IPR2024-01380
Patent 9,827,568 B2

Before CYNTHIA L. MURPHY, RICHARD H. MARSCHALL, and
ARTHUR M. PESLAK, *Administrative Patent Judges*.

MARSCHALL, *Administrative Patent Judge*.

PRELIMINARY GUIDANCE
PATENT OWNER'S MOTION TO AMEND
37 C.F.R. § 42.121(e)

I. INTRODUCTION

On March 18, 2025, we instituted trial as to claims 1–10 of U.S. Patent No. 9,827,568 B2. Paper 8. After institution, Patent Owner filed a Motion to Amend that is not contingent on the patentability of claims 1–10. Paper 13 (“Mot.”). Petitioner filed an opposition on September 16, 2025. Paper 15 (“Opp.”).

In the Motion, Patent Owner requested that we provide preliminary guidance concerning the Motion in accordance with 37 C.F.R. § 42.121(a)(1)(ii). Mot. 1; *see* 37 C.F.R. § 42.121(e)(1); *see also Rules Governing Motion to Amend Practice and Procedures in Trial Proceedings under the America Invents Act before the Patent Trial and Appeal Board*, 89 Fed. Reg. 76,421 (Sept. 18, 2024) (“Final Rule”). We have considered Patent Owner’s Motion and Petitioner’s Opposition.

In this Preliminary Guidance, we provide information indicating our initial, preliminary, non-binding views on whether Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend in an *inter partes* review and whether Petitioner establishes a reasonable likelihood that the substitute claims are unpatentable. 37 C.F.R. § 42.121(e)(1), (2); *see also* 35 U.S.C. § 316(d) (statutory requirements for a motion to amend); 37 C.F.R. § 42.121(a)(2), (a)(3), (b) (regulatory requirements and burdens for a motion to amend); *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 (PTAB Feb. 25, 2019) (precedential) (providing information and guidance regarding motions to amend). The reasonable likelihood standard this Preliminary Guidance applies is different than the preponderance of the evidence standard applied when ultimately deciding the Motion. *Compare* 37 C.F.R. § 42.121(e)(1) *with* § 42.121(d). Finally, this preliminary guidance is not a “decision” for purposes of rehearing under 37 C.F.R. § 42.71(d). 37 C.F.R. § 42.121(e)(2).

For purposes of this Preliminary Guidance, we focus on the proposed substitute claims, and specifically on the amendments proposed in the Motion. *See* 37 C.F.R. § 42.121(e)(1); Final Rule, 89 Fed. Reg. at 76,425. We do not address the patentability of the originally challenged claims. Moreover, in formulating our preliminary views on the Motion and Opposition, we have not considered the parties' other substantive papers on the underlying merits of Petitioner's challenges. We emphasize that the views expressed in this Preliminary Guidance are subject to change upon consideration of the complete record, including any revision to the Motion filed by Patent Owner. Thus, this Preliminary Guidance is not binding on the Board when rendering a final written decision or any other subsequent decision in this proceeding. 37 C.F.R. § 42.121(e)(2); *see Medytox, Inc. v. Galderma S.A.*, 71 F.4th 990, 1000 (Fed. Cir. 2023).

II. PRELIMINARY GUIDANCE

A. Statutory and Regulatory Requirements

Patent Owner bears the ultimate burden to show that its motion to amend complies with the requirements of 35 U.S.C. § 316(d)(1), (3) and 37 C.F.R. § 42.121(a)(2), (a)(3), (b)(1), and (b)(2). 37 C.F.R. § 42.121(d)(1). For the reasons discussed below, at this stage of the proceeding, and based on the current record, Patent Owner has shown a reasonable likelihood that it has satisfied the statutory and regulatory requirements associated with filing a motion to amend. *See* 37 C.F.R. § 42.121(e)(1).

1. Reasonable Number of Substitute Claims

A motion to amend must propose a reasonable number of substitute claims. 35 U.S.C. § 316(d)(1)(B); 37 C.F.R. § 42.121(a)(3). Patent Owner proposes no more than one substitute claim for each challenged claim. More particularly, Patent Owner proposes nine substitute claims (11–19) to replace nine challenged

claims (1–6 and 8–10). Petitioner does not argue that the Motion fails to propose a reasonable number of substitute claims. *See generally* Opp. Based on our review of the current record, Patent Owner has shown it proposes a reasonable number of substitute claims.

2. Respond to Ground of Unpatentability

A motion to amend must respond to a ground of unpatentability involved in the proceeding. 37 C.F.R. § 42.121(a)(2)(i). Patent Owner contends that the proposed substitute claims are responsive to the instituted grounds. Mot. 2. Petitioner does not argue that the Motion fails to respond to a ground of unpatentability involved in the proceeding. *See generally* Opp. Based on our review of the current record, the Motion is responsive to a ground of unpatentability involved in this proceeding. For example, the amendment to proposed substitute claim 11 is responsive to the ground of unpatentability based on Polinski and Piepho. *See* Mot. 9–13.

3. Scope of Amended Claims

A motion to amend may not enlarge the scope of the claims of the patent. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii). Patent Owner contends that proposed “[s]ubstitute independent claim 11 adds further recitations to challenged independent claim 1 and thus does not enlarge the scope of the claims.” Mot. 2 (emphasis omitted). Petitioner does not argue that the Motion enlarges the scope of the claims of the patent. *See generally* Opp. Proposed substitute independent claim 11 is amended to add various limitations including “wherein the external facing surface from the first sleeve end to the second sleeve end is parallel to the longitudinal axis of the sleeve such that the external facing surface of the sleeve when viewed externally has a cylindrical geometry.” Mot. 27–28. Each of proposed substitute claims 12–19 depends, directly or indirectly, from proposed

substitute claim 11. Accordingly, based on the current record, Patent Owner's Motion has not enlarged the scope of the claims of the patent.

4. New Matter

A motion to amend may not introduce new subject matter. 35 U.S.C. § 316(d)(3); 37 C.F.R. § 42.121(a)(2)(ii). In the Motion, Patent Owner identifies support for each proposed substitute claim in U.S. App. No. 14/418,535 (Ex. 2004, the "'535 application") and EP Application No. 12179089.3 (Ex. 2003). Mot. 3–6. Patent Owner explains that "[t]he '535 application is a national stage entry of PCT/EP2013/062861 (Ex. 2005), filed on June 20, 2013, which claims priority to EP Application No. 12179089.3 (Ex. 2003), filed August 2, 2012." *Id.* at 3. Petitioner does not argue that the proposed amendments introduce new subject matter. *See generally* Opp. In the absence of any dispute, at this preliminary stage, Patent Owner has shown sufficient support for the proposed substitute claims in the originally-filed specification. Accordingly, based on the current record, Patent Owner's Motion has not introduced new subject matter.

B. Objective Indicia of Nonobviousness

Patent Owner did not file a Patent Owner Response in this case. In its Motion to Amend, Patent Owner offers evidence of copying by Petitioner. Mot. 17–25. In particular, Patent Owner's "copying evidence is tied to Sandvik's CH440 main shaft sleeve and accompanying main shaft." *Id.* at 17. According to Patent Owner, "[t]he CH440 main shaft sleeve and its shaft embody substitute claim 11 and are coextensive with the claim recitations as shown" in pages 18–22 of the Motion. *Id.* at 18. Patent Owner's contentions are supported by the declaration of Harri Kytömaa, Ph.D. *See* Ex. 2001 ¶¶ 76–141.

Petitioner contends that Patent Owner's evidence of copying is "irrelevant." Opp. 24–25. According to Petitioner, "[a] claim of objective indicia of non-

obviousness does not overcome the primary prima facie case of obviousness as presented” in the Opposition. *Id.* at 25. Petitioner further contends that “when considering the totality of the evidence presented by the Patent Owner, the biases of its expert renders [sic] should further nullify this defense.” *Id.*; *see also id.* at 2–7 (arguing alleged biases of Dr. Kytömaa).

Objective evidence of non-obviousness “may often be the most probative and cogent evidence in the record” and “may often establish that an invention appearing to have been obvious in light of the prior art was not.” *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012). In order for objective indicia to be entitled to substantial weight, a proponent must establish a nexus between the evidence and the merits of the claimed invention. *ClassCo, Inc. v. Apple, Inc.*, 838 F.3d 1214, 1220 (Fed. Cir. 2016). Nexus is a legally and factually sufficient connection between the objective evidence and the claimed invention, such that the objective evidence should be considered in determining non-obviousness. *Demaco Corp. v. F. Von Langsdorff Licensing Ltd.*, 851 F.2d 1387, 1392 (Fed. Cir. 1988).

“Copying may indeed be another form of flattering praise for inventive features.” *Crocs, Inc. v. Int’l Trade Comm’n*, 598 F.3d 1294, 1311 (Fed. Cir. 2010). “[C]opying requires evidence of efforts to replicate a specific product.” *Wyers v. Master Lock Co.*, 616 F.3d 1231, 1246 (Fed. Cir. 2010). “This may be demonstrated either through internal documents; direct evidence such as disassembling a patented prototype, photographing its features, and using the photograph as a blueprint to build a virtually identical replica; or access to, and substantial similarity to, the patented product (as opposed to the patent).” *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1325 (Fed. Cir. 2004) (internal citations omitted).

We make the following initial observations based on Patent Owner's evidence of copying and Petitioner's arguments in opposition. As an initial matter, Petitioner does not argue that it did not copy Patent Owner's product, that the copied product fails to include any limitations of proposed amended claim 11, or that Patent Owner fails to show a nexus to the copying evidence. Opp. 25. Instead, Petitioner merely argues the amount of weight that we should give to this objective evidence and that "the biases of [Patent Owner's] expert" "should further nullify this defense." *Id.* Accordingly, the substance of Patent Owner's assertions are largely unrebutted on the current record.

As to Petitioner's arguments concerning Dr. Kytömaa's biases, the arguments go to the weight to be given those opinions. *See* Opp. 2–7. At this stage of the proceeding, we are not persuaded that Dr. Kytömaa's testimony should be disregarded for alleged bias or that his biases "nullify" Patent Owner's arguments. Petitioner's arguments are particularly unconvincing in this context, where Petitioner does not argue that any of opinions supporting Patent Owner's objective indicia arguments lack merit. *See id.* at 25.

At this stage of the proceeding, based on Patent Owner's largely unrebutted showing, we give Patent Owner's objective indicia evidence some weight in our obviousness analysis below. Nevertheless, we keep in mind that often "a showing of copying is only equivocal evidence of nonobviousness in the absence of more compelling objective indicia of other secondary considerations." *See Ecolochem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1380 (Fed. Cir. 2000); *see also In re GPAC Inc.*, 57 F.3d 1573, 1580 (Fed. Cir. 1995) ("[M]ore than the mere fact of copying by an accused infringer is needed to make that action significant to a determination of the obviousness issue." (quoting *Cable Elec. Prods. v. Genmark, Inc.*, 770 F.2d 1015, 1028 (Fed. Cir. 1985))).

C. Unpatentability Arguments by Petitioner

Petitioner bears the ultimate burden to show that any proposed substitute claims are unpatentable. 37 C.F.R. § 42.121(d)(2). For the reasons discussed below, based on the current record,¹ Petitioner has shown a reasonable likelihood that proposed substitute claims 11–19 are unpatentable. *See* 37 C.F.R. § 42.121(e)(1).

1. Improper incorporation by reference of arguments and analysis

We first address Petitioner’s approach to citing and incorporating arguments in its Opposition. Petitioner provides limited explanation for its obviousness arguments in the opposition brief, and relies mostly on extensive claim charts. Opp. 16–24. Instead of including a complete analysis in its opposition brief, Petitioner repeatedly states “[f]or further details *see* Ex. 1043” (Second Declaration of Mr. Smith). *See, e.g., id.* at 19. The cited declarant testimony includes analysis, citations, and explanation not found in the Opposition brief. *See generally* Ex. 1043; *see also id.* at 45 (raising “design choice” argument not set forth in the Opposition).

This sort of incorporation by reference is not acceptable practice under the Board’s rules. A declaration may provide evidentiary support for an argument in a brief, but a party may not incorporate arguments made in a declaration by reference. *See* 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another document.”). Nevertheless, for purposes of this preliminary guidance we will consider Petitioner’s arguments set forth in the declarations of Mr. Smith. The parties are reminded that improperly

¹ We express no view on the patentability of original claims 1–10 in this Preliminary Guidance. Instead, we focus on limitations added to those claims in the Patent Owner’s Motion to Amend.

incorporated arguments from a declaration in violation of 37 C.F.R. § 42.6(a)(3) may not be considered by the Board. If the briefing limits imposed by our Rules are too difficult to meet given the number of issues, the parties may seek leave for additional pages rather than resorting to improper incorporation by reference.

To minimize the prejudice to Patent Owner, we *sua sponte* grant Patent Owner 15 additional pages in Patent Owner’s Reply or a revised MTA. If Patent Owner uses the additional pages, Petitioner may include an equal number of additional number of pages in its Sur-reply or Opposition to a revised MTA. The parties are reminded that the focus should be on the amended limitations rather than limitations found in the original claims.

2. Claim Construction

In an *inter partes* review, we apply the same claim construction standard as would be used by a district court to construe a claim in a civil action involving the validity or infringement of a patent. 37 C.F.R. § 42.100(b). Under that standard, claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *Id.*; see also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc); *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012). “The Board is required to construe ‘only those terms ... that are in controversy, and only to the extent necessary to resolve the controversy.’” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (alteration in original) (quoting *Vivid Techs., Inc. v. Am. Sci. Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

Patent Owner proposes an explicit construction for the term “end,” and Petitioner disagrees. Mot. 6–8; Opp. 7–11.

i. “end”

Patent Owner “submits that the ‘end’ of a sleeve is properly construed as an extremity of the sleeve under its plain and ordinary meaning.” Mot. 6. According to Patent Owner, its “proposed construction is consistent with the claim language, the specification of the ’568 Patent, and a common dictionary definition.” *Id.*

Petitioner disagrees and argues that Patent Owner construes the term “end” unduly narrowly. Opp. 7–11. Petitioner contends that the specification of the ’568 patent frequently uses the term “end” to refer “to a region of the shaft” and not “to an extreme surface of the shaft.” *Id.* at 9–10.

For purposes of this preliminary guidance, we do not adopt an explicit construction for any claim terms. We note that this claim construction issue may be a key dispute when addressing the original claims here or the claims in the related IPR2024-01381, and it would be inappropriate to finally decide such an issue based on such limited briefing available here. As discussed below, we need not to come to a conclusion on this issue at this time because Petitioner shows the unpatentability of the proposed substitute claims even if we adopted Patent Owner’s proposed construction for “end,” which does not appear to have any impact on several of Petitioner’s challenges, based on the current record.

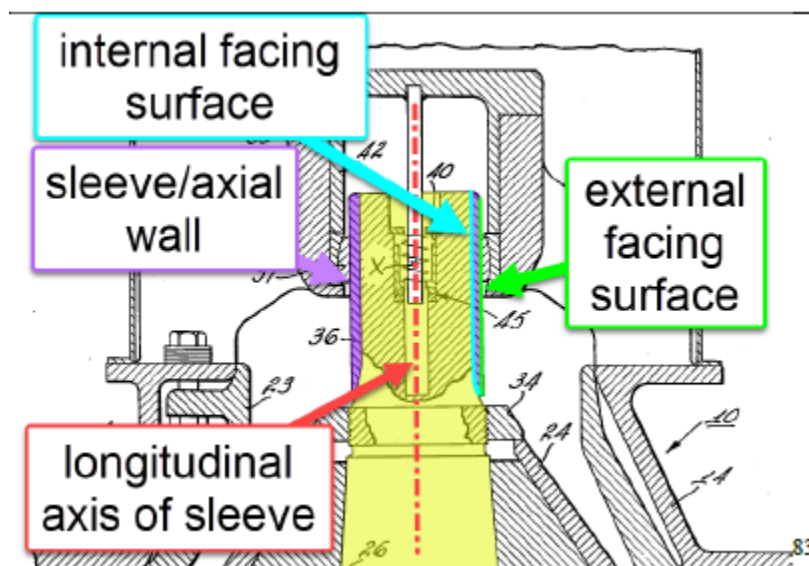
3. Obviousness of Proposed Substitute Claims 11, 12, 14–16, 18, and 19 over Coxhill and Piepho

Proposed substitute claim 11 is a substitute for challenged claim 1 and contains the newly added limitation “wherein the external facing surface from the first sleeve end to the second sleeve end is parallel to the longitudinal axis of the sleeve such that the external facing surface of the sleeve when viewed externally has a cylindrical geometry.” Mot. 27–28. Patent Owner refers to the wherein clause as limitation [11e]. *See, e.g., id.* at 9–11.

Petitioner argues that proposed substitute claims 11, 12, 14–16, 18, and 19 would have been obvious over the combination of Coxhill and Piepho. Opp. 21–24. Petitioner refers to the newly added wherein clause as limitation “11b9.” *See, e.g., id.* at 18. Petitioner’s expert, Mr. Smith, presents a detailed analysis showing how the combination of Coxhill and Piepho meets every limitation of proposed substitute claims 11, 12, 14–16, 18, and 19. Ex. 1043, 63–82.

We have reviewed the disclosures of Coxhill and Piepho and they appear to support Petitioner’s arguments. For example, Mr. Smith explains that “the main shaft of Piepho is tapered on the second end of the shaft body,” “the taper is in an axial direction,” and “[d]ue to this taper, the cross-sectional area of the shaft body decreases as shown by the orange highlighted area” in Petitioner’s annotated version of Figure 3 of Piepho. Ex. 1043, 66. According to Mr. Smith, a person of ordinary skill in the art “would have been motivated to combine the tapered end on the main shaft of Piepho with the main shaft on Coxhill” because the “combination would have been nothing more than combining known elements according to known methods to yield predictable results.” *Id.*

Petitioner’s annotated version of Figure 1 of Coxhill is reproduced below.



The annotated version of Coxhill’s Figure 1 includes labels identifying “internal facing surface,” “sleeve/axial wall,” “external facing surface,” and “longitudinal axis of sleeve.” Ex. 1043, 71. Mr. Smith explains that “Coxhill discloses the sleeve having an external facing surface facing away from the longitudinal axis of the sleeve” (*id.* at 70) and “also discloses the axial wall of the sleeve extending between the internal and external facing surfaces” as shown in Figure 1 (*id.* at 71). According to Mr. Smith, “[b]oth Coxhill and Piepho disclose that the external facing surface from the first sleeve end to the second sleeve end is parallel to the longitudinal axis of the sleeve such that the external facing surface of the sleeve when viewed externally has a cylindrical geometry.” *Id.* at 75.

We acknowledge that Patent Owner has not yet had the opportunity to address fully Petitioner’s arguments with regard to the combination of Coxhill and Piepho, including related grounds based on Coxhill that we address below, or address how its proposed construction of “end” may impact this analysis, if at all. Patent Owner will have the opportunity to do so in its reply to Petitioner’s Opposition (or in a revised motion to amend). *See Notice, passim.*

At this stage of the proceeding, based on the current record, Petitioner has shown a reasonable likelihood that proposed substitute claim 11, 12, 14–16, 18, and 19 are unpatentable as obvious over Coxhill and Piepho.

4. Obviousness of Proposed Substitute Claim 13 over Coxhill, Piepho, and Polinski

Petitioner argues that proposed substitute claim 13 would have been obvious over the combination of Coxhill, Piepho, and Polinski. Opp. 24.

We have reviewed the disclosures of Coxhill, Piepho, and Polinski and they appear to support Petitioner’s arguments. For example, Mr. Smith explains that

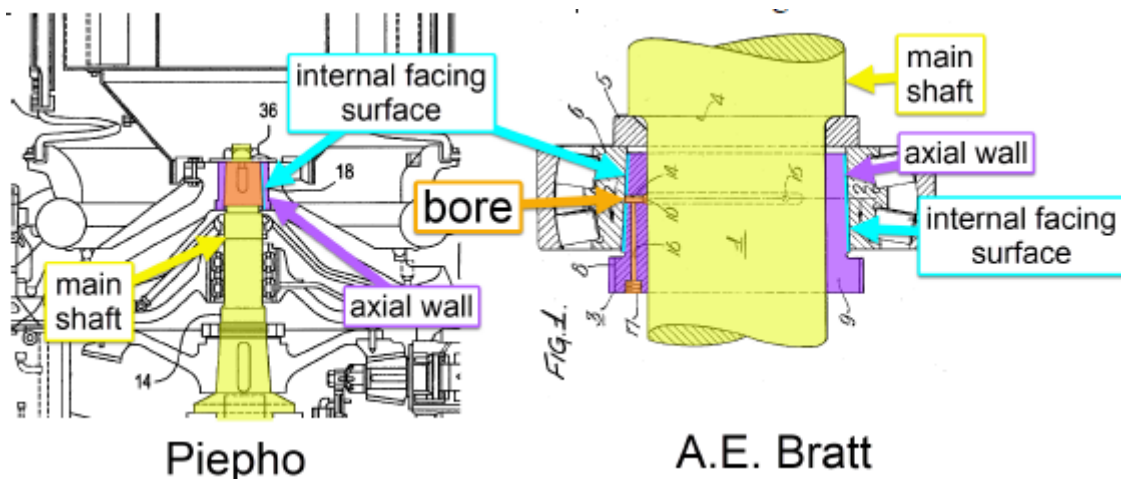
“the radial wall of Polinski is positioned at the second end of the sleeve” and “extends inwardly towards the longitudinal axis.” Ex. 1043, 84.

At this stage of the proceeding, and based on the current record, Petitioner has shown a reasonable likelihood that proposed substitute claim 13 is unpatentable as obvious over Coxhill, Piepho, and Polinski.

5. Obviousness of Proposed Substitute Claim 17 over Coxhill, Piepho, and Bratt

Petitioner argues that proposed substitute claim 17 would have been obvious over the combination of Coxhill, Piepho, and Bratt. Opp. 24.

We have reviewed the disclosures of Coxhill, Piepho, and Bratt and they appear to support Petitioner’s arguments. For example, Mr. Smith explains that “Bratt discloses a tapered sleeve on a shaft, and a bore provided through the axial wall allow the passage of a fluid to the internal facing surface between the sleeve and the shaft.” Ex. 1043, 85. Mr. Smith’s annotated version of Figure 1 of Piepho side-by-side with Figure 1 of Bratt is reproduced below.



The annotated version of Piepho’s Figure 1 includes labels for “main shaft,” “axial wall,” and “internal facing surface,” while the annotated version of Bratt’s Figure 1 includes labels for “internal facing surface,” “bore,” “main shaft,” “axial wall,” and

“internal facing surface.” *Id.* According to Mr. Smith, a person of ordinary skill in the art would have been

motivated to implement the well-known hydraulic processes for making and breaking interference fits, for example between the sleeve and the shaft, as they are well known to protect the shaft from damage, they are able to be used in more locations as they do not require presses and gear pullers, does not require the maintenance that presses and gear pullers do, and make removing components on a tapered shaft particularly easy.

Id. at 86.

At this stage of the proceeding, and based on the current record, Petitioner has shown a reasonable likelihood that proposed substitute claim 17 is unpatentable as obvious over Coxhill, Piepho, and Bratt.

6. Obviousness of Proposed Substitute Claims 11–16 over Polinski and Piepho and Proposed Substitute Claim 17 over Polinski, Piepho, and Bratt.

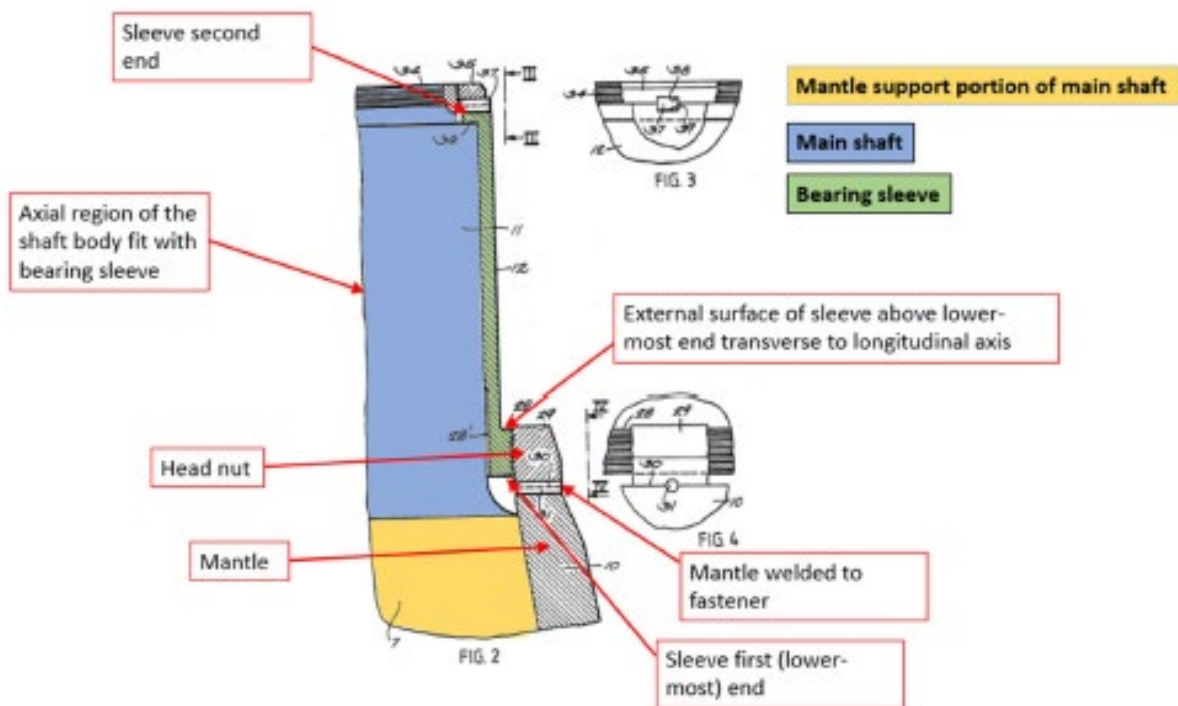
i. Proposed Substitute Claim 11

Petitioner contends that proposed substitute claim 11 would have been obvious over Polinski and Piepho. Opp. 16–18. Petitioner’s position for proposed substitute claim 11 is substantially the same as Petitioner’s position for claim 1 as set forth in the Petition (*see* Pet. 17–31; Opp. 16–18). Petitioner contends that “[b]oth Polinski and Piepho disclose” the newly added wherein clause, identified by Petitioner as limitation “11b9.” Opp. 18. Petitioner’s expert contends:

To the extent it might be argued that because the diameter of the cylindrical outer surfaces change, in Polinski and Peipho [sic: Piepho], that this element is not met, it would be obvious to a POSITA that the inclusion of a flange on a bushing, such as that of Peipho [sic: Piepho], is a design choice and typically dependent on features external to the shaft and bushing.

Ex. 1043, 45. Petitioner’s expert additionally opines that a person of ordinary skill in the art would have recognized “that the threads on the end of Polinski are a design choice and bushings for rock crushers can include or not include them as shown in” Pollak. *Id.* Mr. Smith also reproduces a screenshot from McMastercarr.com, an online website that sells bushings with and without flanges. *Id.*

Patent Owner argues that Polinski and Piepho fail to disclose the wherein clause. Figure 2 of Polinski, as annotated by Patent Owner, is reproduced below.



Mot. 10. The annotated version of Polinski’s Figure 2 includes coloring and a number of labels, including a green structure identified as the “Bearing sleeve.” *Id.* According to Patent Owner, Polinski’s “external facing surface from the first sleeve end (the lower-most end of the sleeve) to the second sleeve end (the top-most end) is *not* parallel to a longitudinal axis of the sleeve” and “threaded shoulder 28 is at least partially transverse to the longitudinal axis of the sleeve.”

Id. (citing Ex. 2001 ¶¶ 37–38, 53–54). Patent Owner then addresses Piepho’s similar sleeve shape and argues that Piepho’s sleeve has an “external facing surface from the first end of the yoke bushing 18 (the lower-most end) to the second end of the yoke bushing 18 (the top-most end) is not parallel to a longitudinal axis of the yoke bushing 18.” *Id.* at 11.

Patent Owner further argues that “it would not have been obvious to modify Polinski in view of Piepho to meet [11e], because such a modification would change Polinski’s principle of operation.” Mot. 11–12 (citing *In re Ratti*, 270 F.2d 810 (CCPA 1959)). According to Patent Owner, “[m]odifying Polinski to have a cylindrical geometry would eliminate the sleeve’s threaded shoulder 28 that is used to secure, via head nut 29, the mantle 10 to a tapered mantle support portion 8 of the shaft 7.” *Id.* at 12 (citing Ex. 2001 ¶¶ 57–61). As support, Patent Owner quotes the deposition of Mr. Smith as an admission that “Polinski’s design rests on engagement of the sleeve’s threaded shoulder 28 with head nut 29.” *Id.* (quoting Ex. 2006, 53:20–54:2).

Here, Mr. Smith testified that “Polinski adds the threads to the lower portion of the sleeve that fits over the shaft . . . [a]nd the mantle attaches to those threads, rather than directly to the shaft.” Ex. 2006, 53:20–54:2. On this record, we are not persuaded that Mr. Smith’s statement about the arrangement of parts in Polinski amounts to an admission that Petitioner’s proposed modification would require changing Polinski’s principle of operation as Patent Owner alleges. *See* Mot. 12.²

² Patent Owner relies on *Ratti*, but the court in *Ratti* reversed the Office’s decision to uphold an obviousness rejection where the “suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the prior art] as well as a change in the basic principles under which [the prior art’s] construction was designed to operate.” *In re Ratti*, 270 F.2d at 813.

Notably, Patent Owner has not had the opportunity to address Petitioner's arguments that it would have been obvious to use a flange-less sleeve as a matter of design choice, and its reliance on secondary references to support this argument. *See* Ex. 1043, 45. Those arguments are un rebutted on the current record.

At this stage of the proceeding, and on this record, Petitioner has shown a reasonable likelihood that the inclusion or absence of a flange on Piepho's yoke bushing 18 would have been an obvious design choice. Similarly, we tend to agree with Petitioner that the inclusion or absence of threaded shoulder 28 on Polinski's sleeve 12 would have been an obvious design choice. Thus, based on the current record, Petitioner has shown a reasonable likelihood that proposed substitute claim 11 would have been unpatentable over Polinski and Piepho.

ii. Proposed Substitute Claim 12

Petitioner argues that proposed substitute dependent claim 12 would have been unpatentable over Polinski and Piepho. Opp. 18. Petitioner's expert presents a detailed analysis showing how the combination meets every limitation of proposed substitute claim 12. Ex. 1043, 45–47. Patent Owner's arguments for proposed substitute claim 12 are essentially the same as for proposed substitute independent claim 11. *See* Mot. 13–15 (citing Ex. 2001 ¶¶ 66–69).

Accordingly, on this preliminary record, Petitioner has shown a reasonable likelihood that proposed substitute claim 12 would have been unpatentable over Polinski, Piepho for the same reasons discussed above for claim 12.

iii. Proposed Substitute Claims 13–17

Patent Owner argues that “Polinski and Piepho fail to disclose or suggest the limitations of substitute claims 13–17 for at least the reasons set forth above based on their respective dependencies.” Mot. 15.

Petitioner argues that claims 13–16 would have been obvious over Polinski and Piepho and that claim 17 would have been obvious over Polinski, Piepho, and Bratt. Opp. 18–20. Petitioner’s expert presents a detailed analysis showing how the combination meets every limitation of proposed substitute claims 13–17. Ex. 1043, 47–57.

On this preliminary record, Petitioner has shown a reasonable likelihood that proposed substitute claims 13–17 would have been unpatentable.

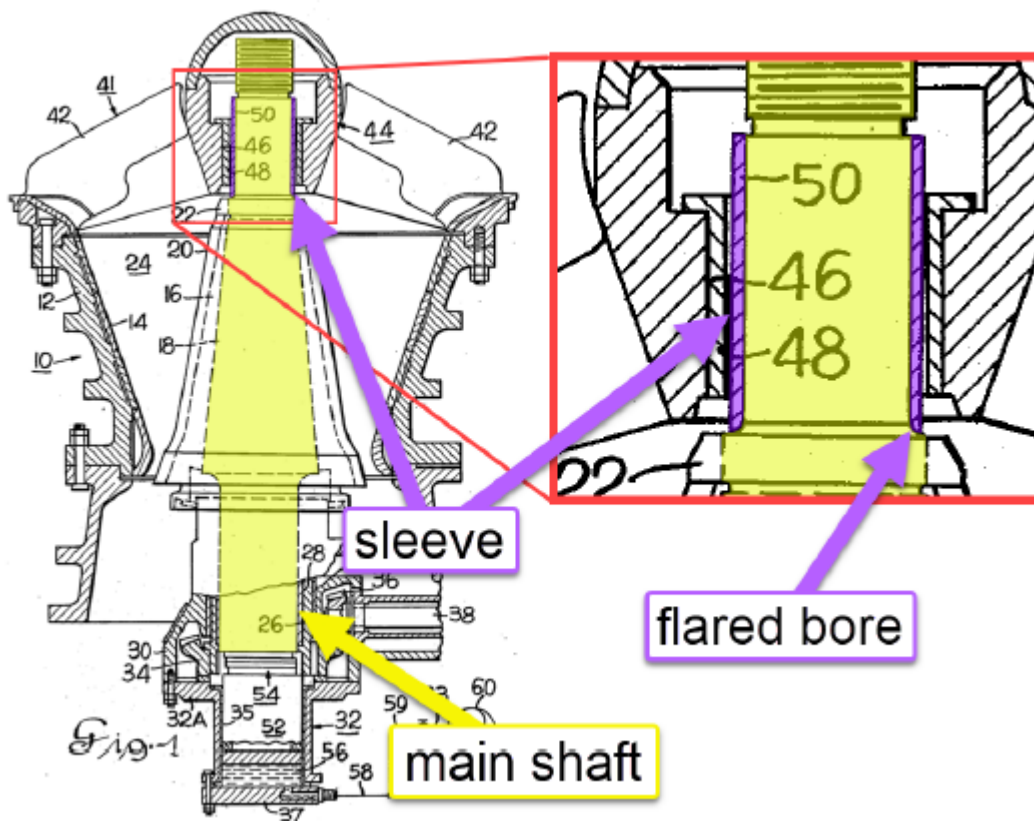
7. Obviousness of Proposed Substitute Claims 18 and 19 over Polinski, Piepho, and Pollak

i. Proposed Substitute Claim 18

Petitioner argues that proposed substitute claim 18 would have been obvious over the combination of Polinski, Piepho, and Pollak. Opp. 20.

Patent Owner argues that “Pollak does not disclose the limitations of substitute claim 18” because “Pollak discloses a sleeve without a taper and a fillet or rounded edge at the bottom end of its sleeve.” Mot. 16.

At this preliminary stage, we tend to agree with Petitioner. Petitioner’s expert presents a detailed analysis showing how the combination meets every limitation of proposed substitute claim 18. Ex. 1043, 57–61. Figure 1 of Pollak, annotated by Petitioner, is reproduced below.



Id. at 58. The annotated version of Pollak’s Figure 1 shows a “sleeve” colored purple, with the bottom right corner of the sleeve labelled “flared bore.” *Id.* According to Mr. Smith, “the bore of the Pollak sleeve is flared outwardly on the lowermost portion” and “[t]his outward flare gradually reduces the wall thickness of the sleeve allowing it to fully seat on the corresponding geometry of the main shaft.” *Id.* at 58–59. While this “flared bore” may also be described as a “rounded edge” as Patent Owner asserts, Patent Owner’s argument fails to explain how such a rounded edge would fail to meet the limitations of the claim. *See* Mot. 15–16.

On this preliminary record, Petitioner has shown a reasonable likelihood that proposed substitute claim 18 would have been unpatentable.

ii. Proposed Substitute Claim 19

Petitioner argues that proposed substitute claim 19 would have been obvious over the combination of Polinski, Piepho, and Pollak. Opp. 20–21.

Patent Owner’s argument is similar to Patent Owner’s argument for claim 11 discussed above, namely that the proposed “modification would change Polinski’s core principle of operation.” Mot. 16. For the reasons discussed above, on this record, we are not persuaded that the proposed modification would change Polinski’s core principle of operation.

On this preliminary record, Petitioner has shown a reasonable likelihood that proposed substitute claim 19 would have been unpatentable.

III. CONCLUSION

This concludes our Preliminary Guidance. Patent Owner has the option to reply to this Preliminary Guidance or to file a revised MTA by DUE DATE 3. 37 C.F.R. § 42.121(e)(3), (f); Papers 9, 11. Patent Owner’s reply or revised MTA may only respond to this Preliminary Guidance or Petitioner’s Opposition and may be accompanied by new evidence (including declarations). 37 C.F.R. § 42.121(e)(3). Petitioner has the option to file a sur-reply responsive to this Preliminary Guidance or Patent Owner’s reply. 37 C.F.R. § 42.121(e)(3). Petitioner may also file a reply to the preliminary guidance in the case Patent Owner does not file a reply or revised MTA. 37 C.F.R. § 42.121(e)(4). If Patent Owner files a revised MTA, that motion replaces the original MTA and Petitioner may file an opposition to the revised MTA in accordance with any new scheduling order issued after the filing of a revised motion to amend. 37 C.F.R. § 42.121(f)(1)–(3).

In addition, Patent Owner is reminded that amendments of the challenged claims may also be pursued in a separate reissue or reexamination proceeding before, during, or after an AIA trial proceeding, including subsequent to the

issuance of the Final Written Decision. We draw Patent Owner's attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

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